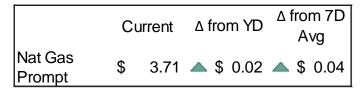


14 July 2021



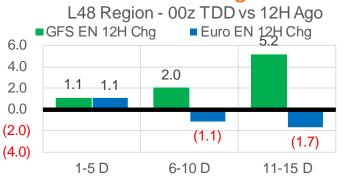
	С	urrent	Δ from YD	Δ from Av	
WTI Prompt	\$	74.95	\$ (0.30)	\$	0.9

	С	urrent	Δ from YD	Δ fron Αν	n 7D ra
Brent Prompt	\$	76.36	\$ (0.13)		O

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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

L48 Region - 00z TDD vs 24H Ago

GFS EN 24H Chg

Euro EN 24H Chg

2.2

1.0

0.6

0.5

(1.2)

(1.4)

1-5 D

6-10 D

11-15 D

	Current	Δ from YD	Δ from 7D Avg
US Dry Production	90.7	▼ -0.73	▼ -1.39

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	39.7	▼ -0.38	1.21

	Current	Δ from YD	Δ from 7D Avg		
US ResComm	8.4	▲ 0.09	a 0.22		

	Current	Δ from YD	Δ from 7D Avg		
Canadian Imports	5.6	▲ 0.06	a 0.46		

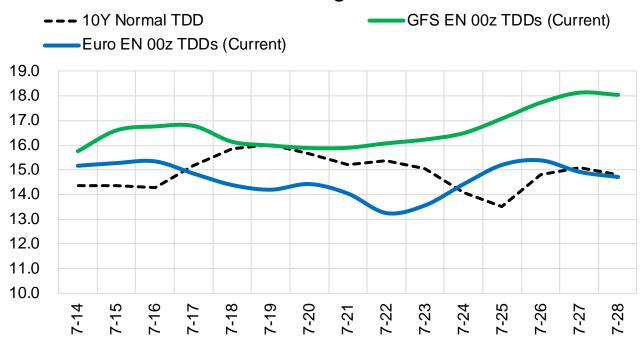
	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	11.1	0.19	▲ 0.22

	Current	∆ fr	om YD	rom 7D Avg
Mexican Exports	7.2		0.10	0.01

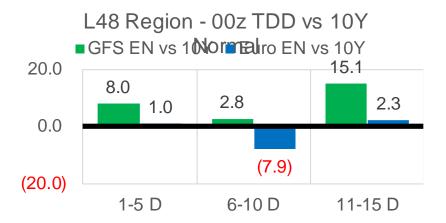


Short-term Weather Model Outlooks (00z)

L48 Region



Vs. 10Y Normal



Source: WSI, Bloomberg



Lower 48 Component Models

Daily Balances

	8-Jul	9-Jul	10-Jul	11-Jul	12-Jul	13-Jul	14-Jul	DoD	vs.7D
Lower 48 Dry Production	92.4	92.8	92.3	92.1	91.7	91.4	90.7	▼ -0.7	▼-1.4
Canadian Imports	5.2	5.1	4.8	4.9	5.1	5.6	5.6	0.1	0.5
L48 Power	38.7	38.2	36.2	36.2	39.3	40.0	39.7	▼-0.4	1.6
L48 Residential & Commercial	8.5	8.3	7.8	7.8	8.4	8.4	8.4	0.1	0.3
L48 Industrial	20.0	20.1	20.1	20.1	20.1	19.9	19.7	▼ -0.2	▼ -0.3
L48 Lease and Plant Fuel	5.1	5.1	5.1	5.1	5.1	5.1	5.0	▼ 0.0	▼ -0.1
L48 Pipeline Distribution	2.2	2.2	2.1	2.1	2.3	2.3	2.3	▼ 0.0	0.1
L48 Regional Gas Consumption	74.5	73.9	71.4	71.2	75.1	75.6	75.1	▼-0.5	1.5
Net LNG Delivered	11.16	10.92	10.84	10.55	10.49	10.87	11.06	0.2	0.3
Total Mexican Exports	7.5	7.2	7.0	6.8	7.2	7.1	7.2	0.1	▲ 0.1
Implied Daily Storage Activity	4.4	5.8	7.9	8.4	4.0	3.4	3.0		
EIA Reported Daily Storage Activity Daily Model Error									

EIA Storage Week Balances

	4-Jun	11-Jun	18-Jun	25-Jun	2-Jul	9-Jul	WoW	vs. 4W
Lower 48 Dry Production	92.2	92.6	92.0	93.0	92.0	91.5	▼ -0.4	▼-0.8
Canadian Imports	3.9	4.8	5.1	4.7	5.2	5.1	▼ 0.0	▲ 0.2
L48 Power	27.8	34.4	34.8	34.6	39.9	37.3	▼ -2.6	1.4
L48 Residential & Commercial	11.9	8.5	8.3	8.4	8.3	7.9	▼-0.4	▼ -0.4
L48 Industrial	17.8	21.3	22.1	19.7	21.4	19.5	▼ -1.9	▼ -1.7
L48 Lease and Plant Fuel	5.1	5.1	5.1	5.1	5.1	5.1	▼ 0.0	▼ 0.0
L48 Pipeline Distribution	2.0	2.1	2.1	2.1	2.4	2.1	▼-0.2	▼ 0.0
L48 Regional Gas Consumption	64.7	71.5	72.4	69.8	77.1	72.0	▼ -5.2	▼-0.8
Net LNG Exports	11.0	9.4	9.6	10.3	11.2	11.0	▼ -0.1	▲ 0.9
Total Mexican Exports	7.2	7.3	7.5	7.6	7.2	7.1	▼ -0.1	▼-0.3
Implied Daily Storage Activity	13.3	9.1	7.6	9.9	1.7	6.6	4.9	
EIA Reported Daily Storage Activity	14.0	2.3	7.9	10.9	2.3			
Daily Model Error	-0.7	6.9	-0.2	-0.9	-0.6			

Monthly Balances									
•	2Yr Ago	LY					MTD		
	Jul-19	Jul-20	Mar-21	Apr-21	May-21	Jun-21	Jul-21	MoM	vs. LY
Lower 48 Dry Production	91.9	89.1	91.5	92.3	92.0	92.5	91.5	▼-1.0	2.4
Canadian Imports	5.0	4.4	4.8	4.7	4.5	4.9	5.2	0.3	▲ 0.8
L48 Power	40.8	43.6	24.3	25.1	27.0	35.4	37.8	2.5	▼-5.8
L48 Residential & Commercial	8.0	7.9	29.3	19.7	13.3	8.4	8.1	▼ -0.3	0.1
L48 Industrial	21.6	20.4	19.4	21.2	19.0	20.8	19.8	▼ -1.1	- 0.7
L48 Lease and Plant Fuel	5.0	4.9	5.0	5.1	5.0	5.1	5.1	▼ 0.0	0.1
L48 Pipeline Distribution	2.3	2.4	2.5	2.3	2.1	2.2	2.2	0.0	▼-0.3
L48 Regional Gas Consumption	77.8	79.4	80.6	73.3	66.5	71.9	72.9	1.0	▼ -6.5
Net LNG Exports	6.0	3.3	11.1	11.5	10.8	10.2	10.9	8.0	7.7
Total Mexican Exports	5.3	5.9	6.5	6.7	6.8	7.4	7.1	▼ -0.3	1.2
Implied Daily Storage Activity	7.8	5.0	-2.0	5.4	12.4	7.9	5.7		
EIA Reported Daily Storage Activity Daily Model Error									



Daily Average Generation Data

Nuclear Generation Daily Average - GWh (NRC)

	8-Jul	9-Jul	10-Jul	11-Jul	12-Jul	13-Jul	14-Jul	DoD	vs. 7D
NRC Nuclear Daily Output	89.8	89.3	89.3	89.3	90.9	91.7	91.7	0.0	1.7
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	15.1	15.6	15.6	15.6	14.0	13.1	13.1	0.0	-1.7
NRC % Nuclear Cap Utilization	91.3	90.8	90.8	90.8	92.4	93.3	93.3	0.0	1.7

Wind Generation Daily Average - MWh (Genscape)

	8-Jul	9-Jul	10-Jul	11-Jul	12-Jul	13-Jul	14-Jul	DoD	vs. 7D
CAISO Wind	4583	4583	4583	4583	4583	4583	4583	0	0
ERCOT	12482	11473	13533	6601	10291	17483	12739	-4744	762
Genscape US Wind	20980	36716	37831	33303	21281	21281	21281	0	-7284

Generation Daily Average - MWh (Genscape)

	8-Jul	9-Jul	10-Jul	11-Jul	12-Jul	13-Jul	14-Jul	DoD	vs. 7D
Genscape US Wind	20980	36716	37831	33303	21281	21281	21281	0	-7284
Genscape US Solar	20071	20447	19737	22172	22066	22066	22066	0	973
Genscape US Other	4960	5006	4846	5321	5101	5101	5101	0	45
Genscape US Coal	130713	124219	117914	118248	129278	129278	129278	0	4336
Genscape US Nuke	93803	93210	92877	94143	94773	94773	94773	0	843
Genscape US Hydro	23292	22914	22377	22571	23103	23103	23103	0	210
Genscape US Gas	233922	224794	209372	211050	225692	225692	225692	0	3938

See National Wind and Nuclear daily charts



Storage Week Average Generation Data

Nuclear Generation Weekly Average - GWh (NRC)

	4-Jun	11-Jun	18-Jun	25-Jun	2-Jul	9-Jul	WoW	WoW Bcf/d Impact
NRC Nuclear Daily Output	89.2	88.6	86.7	89.9	89.1	89.5	0.3	-0.1
NRC Nuclear Max Capacity	104.9	104.9	104.9	104.9	104.9	104.9	0.0	
NRC Nuclear Outage	15.7	16.3	18.1	15.0	15.7	15.4	-0.3	
NRC % Nuclear Cap Utilization	0.1	0.1	0.1	0.1	0.1	0.1	0.0	

Wind Generation Weekly Average - MWh (Genscape)

	4-Jun	11-Jun	18-Jun	25-Jun	2-Jul	9-Jul	WoW	WoW Bcf/d Impact
CAISO Wind	4012	4607	3723	3254	4655	4583	-72	0.0
ERCOT	9217	17072	10749	16549	10225	6583	-3641	0.6
Genscape US Wind	29242	43337	32707	50972	25398	24364	-1034	0.2

Generation Weekly Average - MWh (Genscape)

	4-Jun	11-Jun	18-Jun	25-Jun	2-Jul	9-Jul	WoW	WoW Bcf/d Impact
Genscape US Wind	29242	43337	32707	50972	25398	24364	-1034	0.2
Genscape US Solar	15426	15643	7817	12070	24039	15619	-8420	1.4
Genscape US Other	5443	5942	5201	4746	4728	4754	26	0.0
Genscape US Coal	91844	118938	120230	118888	132762	121436	-11326	1.9
Genscape US Nuke	93111	92667	90822	93987	93205	93419	214	0.0
Genscape US Hydro	28202	32469	29459	30022	24181	23145	-1036	0.2
Genscape US Gas	167948	212241	210769	202074	238370	218250	-20120	

See National Wind and Nuclear daily charts



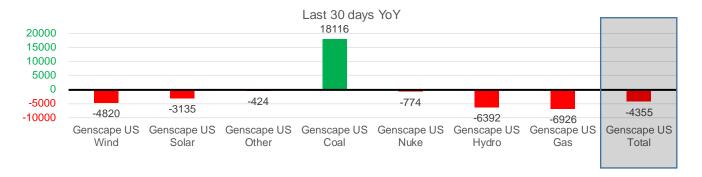
Monthly Average Generation Data

Nuclear Generation Monthly Average - GWh (NRC)										
	2Yr Ago LY						MTD			
	Same 30 days	Same 30 days	Apr-21	May-21	Jun-21	Jul-21	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY	
NRC Nuclear Daily Output	94.5	91.8	75.9	81.8	88.7	89.8	89.5	1.1	-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	10.4	13.0	29.0	23.1	16.2	15.1	15.4	-1.1	2.4	
NRC % Nuclear Cap Utilization	96.1	93.4	77.1	83.2	90.2	91.3	91.0	1.1	-2.4	

Wind Generation Month	ly Average -	MWh ((Genscape	e)
------------------------------	--------------	-------	-----------	----

	2Yr Ago	LY				MTD			
	Same 30 days	Same 30 days	Apr-21	May-21	Jun-21	Jul-21	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY
CAISO Wind	3711	3368	4009	3984	3994	4583	4140	589	772
ERCOT	9959	14647	13820	15379	12995	8880	11092	-4115	-3554
Genscape US Wind	27923	37294	50942	46211	36758	25916	32474	-10843	-4820

Generation Monthly Average -	e - MWh (Genscape) 2Yr Ago LY MTD								
	Same 30 days	Same 30 days	Apr-21	May-21	Jun-21	Jul-21	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY
Genscape US Wind	27923	37294	50942	46211	36758	25916	32474	△ 6558.6	▼ -4820
Genscape US Solar	20564	20449	11261	15499	14357	18589	17314	▼ -1275	▼ -3135
Genscape US Other	5142	5260	4512	5256	5178	4875	4836	-39	▼ -424
Genscape US Coal	127822	106143	73683	87336	119945	123949	124260	311	18116
Genscape US Nuke	96837	94216	79842	85659	92805	93675	93442	▼ -234	▼ -774
Genscape US Hydro	32600	31895	27386	27514	29334	23053	25502	2450	▼ -6392
Genscape US Gas	215128	225907	152976	160888	212447	220294	218981	15506	▼ -6926
Genscape US Total	526016	521165	400602	428362	510825	510350	516810	24453	▼ -4355



See National Wind and Nuclear daily charts



Regional S/D Models Storage Projection

Week Ending 9-Jul

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	6.3	0.8	7.1	50
East	1.2	1.1	2.3	16
Midwest	3.6	-0.4	3.2	23
Mountain	4.7	-3.9	8.0	6
South Central	-3.7	3.8	0.2	1
Pacific	0.5	0.1	0.6	4

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

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



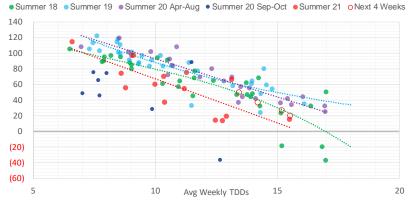


Weather Model Storage Projection

Next r	eport
and b	eyond

Week Ending	GWDDs	Week Storage Projection
09-Jul	13.4	50
16-Jul	14.2	37
23-Jul	15.2	27
30-Jul	15.5	20

Weather Storage Model - Next 4 Week Forecast



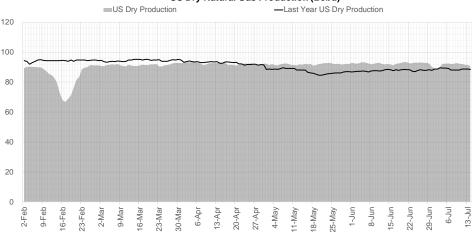
Go to larger image



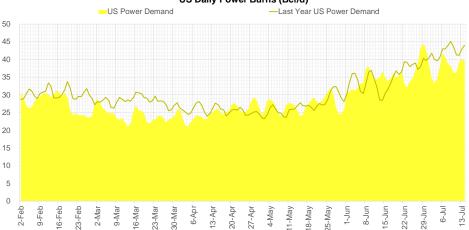


Supply - Demand Trends

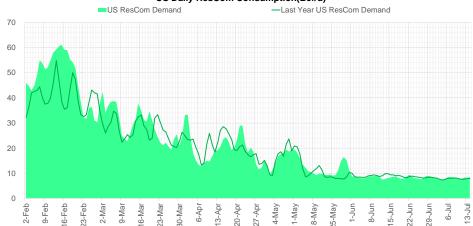
US Dry Natural Gas Production (Bcf/d)



US Daily Power Burns (Bcf/d)



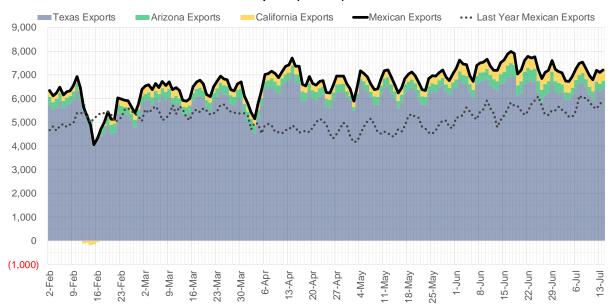
US Daily ResCom Consumption(Bcf/d)



Source: Bloomberg



Mexican Exports (MMcf/d)



Net LNG Exports - Last 30 days (MMcf/d) Sabine Pass Exports Cameron Exports Cove Point Exports Elba Exports Golden Pass Exports Everett Exports Freeport Exports Lake Charles Exports Northeast Exports Chorpus Christie Import LNG Exports Neptune Exports 12,000 10.000 8,000 6,000 4,000 2,000 0 (2,000)

Source: Bloomberg



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

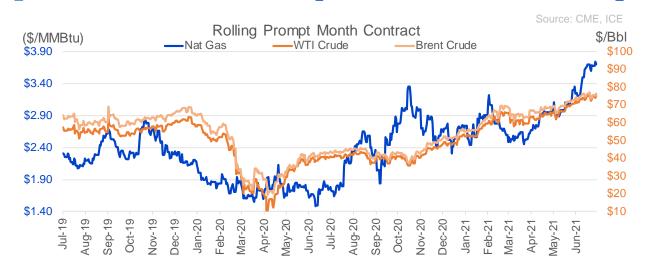
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
		_						100	.=
9	2021	С	4.00	6087	8	2021	С	4.00	47263
8	2021	С	4.00	4292	10	2021	С	4.00	43609
8	2021	С	4.50	3794	8	2021	С	3.50	40862
11	2021	С	5.00	3352	9	2021	С	4.00	35878
8	2021	P	3.50	3224	10 10	2021 2021	C C	3.50 5.00	34096 32875
8	2021	С	4.25	2950	10	2021	P	5.00 2.50	32509
9	2021	С	5.00	2317	8	2021	P	2.50	29351
9	2021	С	6.00	1954	10	2021	C	3.25	28365
10	2021	P	1.50	1740	8	2021	P	3.00	28177
9	2021	С	4.50	1692	8	2021	C	3.75	26851
9	2021	С	3.75	1544	10	2021	P	2.75	26346
11	2021	С	6.00	1501	10	2021	C	4.50	25524
8	2021	P	3.35	1426	10	2021	P	2.00	24789
10	2021	С	4.00	1405	8	2021	P	3.25	24779
10	2021	С	4.50	1364	8	2021	C	4.50	24773
8	2021	С	3.75	1306	9	2021	Č	3.50	24013
10	2021	С	3.75	1271	8	2021	Č	3.25	23782
9	2021	Р	3.25	1173	11	2021	C	4.00	23622
8	2021	Р	3.40	1107	9	2021	P	2.50	23466
10	2021	Р	2.25	1035	8	2021	P	2.90	22603
11	2021	С	4.00	1005	10	2021	P	3.00	22011
9	2021	Р	3.00	954	12	2021	C	4.00	21935
9	2021	Р	3.50	925	9	2021	P	2.00	20427
9	2021	С	4.25	894	9	2021	P	3.00	20217
8	2021	Р	3.30	890	4	2022	C	3.00	19685
8	2021	Р	3.25	868	8	2021	P	2.00	19668
8	2021	Р	3.00	802	8	2021	P	2.25	19478
8	2021	С	4.20	773	10	2021	P	2.25	19196
8	2021	Р	3.70	732	9	2021	C	3.25	19003
9	2021	Р	2.90	722	10	2021	Č	3.00	18500
9	2021	Р	3.20	711	8	2021	P	2.75	18483
10	2021	С	4.25	692	8	2021	P	3.50	18367
9	2021	С	4.75	675	10	2021	C	3.75	16812
9	2021	С	3.50	663	10	2021	Č	6.00	16573
9	2021	Р	2.75	630	8	2021	Č	3.00	15826
10	2021	Р	3.50	605	8	2021	Č	3.30	15351
11	2021	Р	3.00	602	11	2021	Č	3.75	15324
9	2021	С	3.20	600	9	2021	P	2.75	15244
11	2021	Р	3.50	600	9	2021	C	4.50	15074
4	2022	С	5.00	600	1	2022	Ċ	4.00	14593
9	2021	С	3.70	594	3	2022	Č	5.00	14536
8	2021	С	3.50	577	3	2022	Č	3.00	14448
1	2022	С	5.00	550	10	2021	P	3.50	14309
9	2021	Р	3.70	546	11	2021	Р	3.00	14188
10	2021	С	7.00	543	9	2021	C	4.25	14044
9	2021	P	3.45	526	12	2021	P	2.00	13884
10	2021	P	3.00	502	9	2021	P	2.60	13814
9	2021	C	5.50	500	9	2021	Р	1.90	13773
9	2021	Č	7.00	500	2	2022	С	4	13730
-	-	-			_		Source	: CME, ICE	



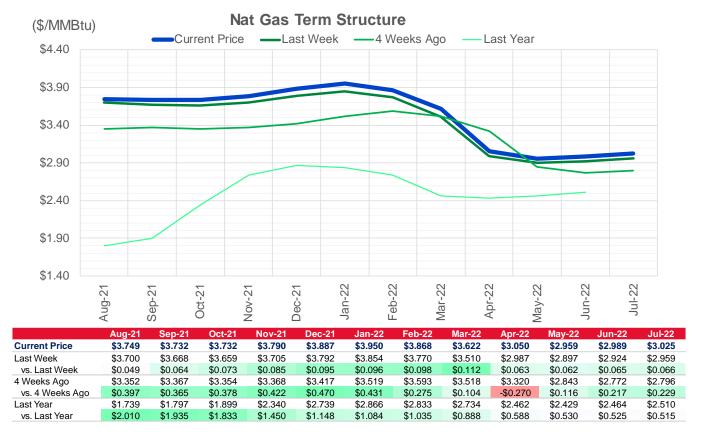
Nat Gas Futures Open Interest

CME, and ICE Combined

CME Henry Hub Futures (10,000 MMBtu) ICE Henry Hub Futures Contract Equivalent (10,000 MM							
	Current	Prior	Daily Change		Current	Prior	Daily Change
AUG 21	145877	161622	-15745	AUG 21	96143	99541	-3399
SEP 21	279424	267924	11500	SEP 21	85619	87915	-2296
OCT 21	155883	155452	431	OCT 21	102021	102208	-187
NOV 21	106253	105050	1203	NOV 21	72100	71901	199
DEC 21	68931	68605	326	DEC 21	70159	69871	288
JAN 22	119153	117188	1965	JAN 22	78769	80009	-1240
FEB 22	47738	46838	900	FEB 22	66446	66614	-169
MAR 22	93938	92755	1183	MAR 22	68115	68215	-100
APR 22	95062	96081	-1019	APR 22	64645	64593	52
MAY 22	83111	82831	280	MAY 22	66002	65804	198
JUN 22	27535	27844	-309	JUN 22	55244	55148	96
JUL 22	22130	22225	-95	JUL 22	54120	53898	222
AUG 22	22999	22985	14	AUG 22	55256	55088	168
SEP 22	22770	22452	318	SEP 22	54974	54781	193
OCT 22	60073	59979	94	OCT 22	58744	58695	49
NOV 22	24032	23978	54	NOV 22	47380	47320	61
DEC 22	20572	20632	-60	DEC 22	49973	49918	55
JAN 23	12993	12808	185	JAN 23	29059	29000	59
FEB 23	4498	4488	10	FEB 23	25026	24941	84
MAR 23	7990	7807	183	MAR 23	27431	27338	93
APR 23	8896	8680	216	APR 23	21936	21924	12
MAY 23	5469	5433	36	MAY 23	22346	22335	12
JUN 23	2182	2184	-2	JUN 23	20831	20827	4
JUL 23	2265	2260	5	JUL 23	20901	20893	9
AUG 23	1400	1400	0	AUG 23	20809	20801	9
SEP 23	1763	1786	-23	SEP 23	20450	20439	12
OCT 23	2401	2401	0	OCT 23	21758	21747	12
NOV 23	1109	1109	0	NOV 23	19749	19709	40
DEC 23	1758	1758	0	DEC 23	21293	21290	2
JAN 24	793	793	0	JAN 24	12481	12400	81







		Cash	Prompt	Cash to
	Units	Settled	Settle	Prompt
AGT Citygate	\$/MMBtu	3.52	3.32	-0.20
TETCO M3	\$/MMBtu	3.47	3.19	-0.28
FGT Zone 3	\$/MMBtu	3.60	3.76	0.16
Zone 6 NY	\$/MMBtu	3.60	3.16	-0.44
Chicago Citygate	\$/MMBtu	3.52	3.50	-0.02
Michcon	\$/MMBtu	3.53	3.45	-0.08
Columbia TCO Pool	\$/MMBtu	3.21	2.99	-0.22
Ventura	\$/MMBtu	3.47	3.46	-0.01
Rockies/Opal	\$/MMBtu	3.40	3.41	0.01
El Paso Permian Basin	\$/MMBtu	3.36	3.54	0.18
Socal Citygate	\$/MMBtu	6.54	5.08	-1.46
Malin	\$/MMBtu	3.38	4.05	0.67
Houston Ship Channel	\$/MMBtu	3.68	3.66	-0.02
Henry Hub Cash	\$/MMBtu	3.72	3.44	-0.28
AECO Cash	C\$/GJ	3.10	2.78	-0.32
Station2 Cash	C\$/GJ	3.07	3.07 3.83	
Dawn Cash	C\$/GJ	3.54	3.49	-0.05

Source: CME, Bloomberg





					\/C	4 Wooks		
						. 4 Weeks		
	Units	Current Price	VS.	Last Week		Ago	VS	. Last Year
NatGas Jul21/Oct21	\$/MMBtu	0.067		0.081		0.048		0.049
NatGas Oct21/Nov21	\$/MMBtu	0.064		0.012		0.009		0.017
NatGas Oct21/Jan22	\$/MMBtu	0.235		0.030		-0.005	•	-0.036
NatGas Apr22/Oct22	\$/MMBtu	-0.007		0.002		-0.029	•	-0.078
WTI Crude	\$/Bbl	75.25		1.880		3.130		34.960
Brent Crude	\$/Bbl	76.49		1.960		2.500		33.590
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18		0.000		0.000		0.000
Heating Oil	cents/Gallon	218.44		7.950		7.210		96.360
Propane, Mt. Bel	cents/Gallon	1.10		-0.016		0.160		0.618
Ethane, Mt. Bel	cents/Gallon	0.31		0.001		0.029		0.083
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





