

Market Report

9 August 2021



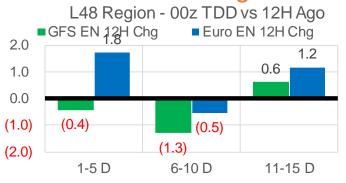
	С	urrent	Δ from YD		m 7D vg
WTI Prompt	\$	65.69	\$ (2.59)	- \$	(3.4)

	_	urront	Δ from YD	∆ fro	m 7D
	Current	ם ווטוו דם	Avg		
Brent	\$	68.07	\$ (2.63)	- \$	(3.2)
Prompt	Ψ	00.01	Ψ (Ξ.55)	Ψ	(0.2)

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Price Summary

Vs. 12H Ago



Vs. 24H Ago

L48 Region - 00z TDD vs 24H Ago GFS EN 24H Chg ■ Euro EN 24H Chg 2.0 0.0 0.0 (0.4)(2.0)(1.1)(4.0)(3.4)(3.4)(6.0)(5.9)(8.0)1-5 D 6-10 D 11-15 D

	Current		Δ from 7D Avg		
US Dry Production	92.0	▲ 0.02	a 0.21		

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		Current	Δ from YD	Δ from 7D Avg
	US	77	a 0.35	Avg ▲ 0.04

ResComm

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	9.7	▼ -0.39	▼ -0.65

	Current	Δfı	rom YD	rom 7D Avg
US Power Burns	39.9		1.14	1.46

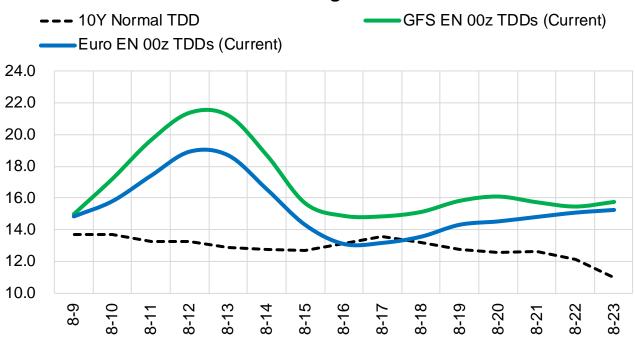
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	4.8	-0.03	▼ -0.13

	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.9	a 0.36	- 0.09

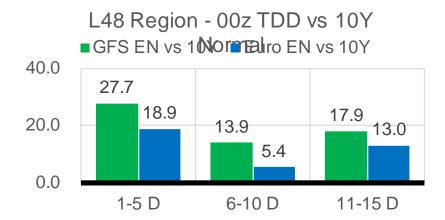


Short-term Weather Model Outlooks (00z)

L48 Region



Vs. 10Y Normal



Source: WSI, Bloomberg



Market Report

Lower 48 Component Models

Daily Balances

	3-Aug	4-Aug	5-Aug	6-Aug	7-Aug	8-Aug	9-Aug	DoD	vs.7D
Lower 48 Dry Production	91.5	91.3	91.8	92.4	91.7	92.0	92.0	▲ 0.0	▲ 0.2
Canadian Imports	5.2	5.0	4.6	4.8	4.9	4.8	4.8	▼ 0.0	▼ -0.1
L48 Power	37.2	37.5	38.9	39.9	38.4	38.7	39.9	1.1	1.4
L48 Residential & Commercial	8.0	7.8	7.7	7.5	7.3	7.4	7.7	0.3	0.1
L48 Industrial	20.4	20.8	21.4	21.9	22.2	22.4	22.7	0.3	1.2
L48 Lease and Plant Fuel	5.1	5.0	5.1	5.1	5.1	5.1	5.1	0.0	0.0
L48 Pipeline Distribution	2.2	2.2	2.3	2.3	2.2	2.2	2.3	0.1	0.1
L48 Regional Gas Consumption	72.8	73.4	75.5	76.7	75.1	75.8	77.7	1.9	2.8
Net LNG Delivered	10.46	10.34	10.37	10.44	10.40	10.08	9.69	▼-0.4	▼ -0.7
Total Mexican Exports	7.1	7.6	7.3	7.4	6.4	6.6	6.9	0.4	▼ -0.1
Implied Daily Storage Activity	6.3	4.9	3.3	2.7	4.6	4.3	2.5		
EIA Reported Daily Storage Activity Daily Model Error									

EIA Storage Week Balances

	2-Jul	9-Jul	16-Jul	23-Jul	30-Jul	6-Aug	WoW	vs. 4W
Lower 48 Dry Production	92.2	91.8	92.4	92.4	92.5	91.9	▼ -0.6	▼-0.3
Canadian Imports	5.1	5.1	5.2	4.9	5.5	5.1	▼ -0.5	▼-0.1
L48 Power	39.8	37.2	38.7	39.7	42.2	38.4	▼-3.7	▼ -1.0
L48 Residential & Commercial	8.6	8.2	8.4	8.4	8.3	7.8	▼ -0.5	▼-0.5
L48 Industrial	21.1	19.4	19.5	19.5	20.8	20.5	▼-0.2	0.7
L48 Lease and Plant Fuel	5.1	5.1	5.1	5.1	5.1	5.1	▼ 0.0	▼ 0.0
L48 Pipeline Distribution	2.4	2.1	2.2	2.3	2.4	2.2	▼-0.2	▼ 0.0
L48 Regional Gas Consumption	76.9	71.9	74.0	75.1	78.8	74.1	▼ -4.6	▼-0.8
Net LNG Exports	11.2	11.0	10.8	10.5	10.8	10.6	▼ -0.3	▼-0.2
Total Mexican Exports	7.2	7.1	7.1	7.1	7.0	6.9	▼ -0.1	▼-0.2
Implied Daily Storage Activity	2.0	6.8	5.6	4.6	1.5	5.4	3.9	
EIA Reported Daily Storage Activity	2.3	7.9	7.0	5.1	1.9			
Daily Model Error	-0.2	-1.1	-1.4	-0.5	-0.4			

Monthly Balances									
•	2Yr Ago	LY					MTD		
	Aug-19	Aug-20	Apr-21	May-21	Jun-21	Jul-21	Aug-21	MoM	vs. LY
Lower 48 Dry Production	94.7	89.6	92.3	92.7	92.8	92.2	91.8	▼ -0.4	2.2
Canadian Imports	4.4	4.9	4.6	4.5	4.8	5.2	4.9	▼ -0.3	0.1
L48 Power	41.0	40.9	24.9	26.7	35.3	39.4	38.5	▼-1.0	▼ -2.4
L48 Residential & Commercial	7.8	7.7	19.5	13.2	8.8	8.3	7.7	▼ -0.6	▼ 0.0
L48 Industrial	23.5	21.9	21.2	20.3	20.8	19.8	21.3	1.5	- 0.5
L48 Lease and Plant Fuel	5.2	5.0	5.1	5.1	5.1	5.1	5.1	▼ 0.0	0.1
L48 Pipeline Distribution	2.4	2.4	2.3	2.1	2.2	2.3	2.2	▼ 0.0	▼ -0.1
L48 Regional Gas Consumption	79.9	77.7	73.0	67.2	72.1	75.0	74.8	▼ -0.2	▼ -2.9
Net LNG Exports	5.2	4.0	11.5	10.8	10.2	10.8	10.3	▼ -0.5	▲ 6.2
Total Mexican Exports	5.3	6.0	6.7	6.8	7.4	7.0	6.9	▼ -0.1	▲ 0.9
Implied Daily Storage Activity	8.8	6.7	5.7	12.4	8.0	4.5	4.7		
EIA Reported Daily Storage Activity Daily Model Error									



Daily Average Generation Data

Nuclear Generation Daily Average - GWh (NRC)

	1-Aug	2-Aug	3-Aug	4-Aug	5-Aug	6-Aug	7-Aug	DoD	vs. 7D
NRC Nuclear Daily Output	90.3	90.8	91.6	90.8	90.9	89.9	89.9	0.0	-0.8
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	14.5	14.1	13.3	14.1	14.0	15.0	15.0	0.0	8.0
NRC % Nuclear Cap Utilization	91.8	92.3	93.1	92.3	92.4	91.4	91.4	0.0	-0.8

Wind Generation Daily Average - MWh (EIA)

	1-Aug	2-Aug	3-Aug	4-Aug	5-Aug	6-Aug	7-Aug	DoD	vs. 7D
CALI Wind	2316	1884	2143	2569	3209	3051	2013	-1038	-515
TEXAS Wind	8517	5495	2238	2665	5568	9348	17855	8507	12217
US Wind	29397	15275	15174	21440	23389	40825	54359	13535	30110

Generation Daily Average - MWh (EIA)

	1-Aug	2-Aug	3-Aug	4-Aug	5-Aug	6-Aug	7-Aug	DoD	vs. 7D
US Wind	29397	15275	15174	21440	23389	40825	54359	13535	30110
US Solar	12790	14303	13518	13554	14229	14730	13262	-1468	-592
US Petroleum	3643	4152	4162	3954	4277	4654	3835	-820	-306
US Other	8685	8983	8821	8819	8762	9047	9170	123	317
US Coal	129783	135093	131981	130721	131872	129291	127777	-1514	-3680
US Nuke	92789	93791	93691	93547	93711	92859	93241	382	-157
US Hydro	25284	28163	28371	28161	27911	27143	24700	-2443	-2805
US Gas	184070	201891	203047	201342	208008	205906	181054	-24851	-19656

See National Wind and Nuclear daily charts



Storage Week Average Generation Data

Nuclear Generation Weekly Average - GWh (NRC)

	2-Jul	9-Jul	16-Jul	23-Jul	30-Jul	6-Aug	WoW	WoW Bcf/d Impact
NRC Nuclear Daily Output	89.1	89.5	90.7	90.7	89.3	90.7	1.4	-0.2
NRC Nuclear Max Capacity	104.9	104.9	104.9	104.9	104.9	104.9	0.0	
NRC Nuclear Outage	15.7	15.4	14.2	14.2	15.6	14.2	-1.4	
NRC % Nuclear Cap Utilization	0.1	0.1	0.1	0.1	0.1	0.1	0.0	

Wind Generation Weekly Average - MWh (EIA)

	2-Jul	9-Jul	16-Jul	23-Jul	30-Jul	6-Aug	WoW	WoW Bcf/d Impact
CALI Wind	2588	2604	3004	2064	1905	2237	331	-0.1
TEXAS Wind	8326	3739	10817	7162	7913	5180	-2733	0.5
US Wind	27215	25696	36364	26445	29734	22377	-7358	1.2

Generation Weekly Average - MWh (EIA)

	2-Jul	9-Jul	16-Jul	23-Jul	30-Jul	6-Aug	WoW	WoW Bcf/d Impact
US Wind	27215	25696	36364	26445	29734	22377	-7358	1.2
US Solar	14055	14165	14489	14036	13977	13845	-132	0.0
US Petroleum	5142	4035	4282	3892	4729	4074	-654	0.1
US Other	8886	9159	9554	9336	9280	8891	-389	0.1
US Coal	136486	131306	131524	137617	146400	134732	-11669	2.0
US Nuke	92257	92359	93735	93488	92226	93225	999	-0.2
US Hydro	33030	30129	30421	30193	29205	27734	-1471	0.2
US Gas	208730	194610	199730	210468	224376	204181	-20195	

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	May-21	Jun-21	Jul-21	Aug-21	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY		
NRC Nuclear Daily Output	94.2	91.2	81.8	88.7	90.0	90.4	90.4	0.4	-0.8		
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	10.6	13.7	23.1	16.2	14.9	14.4	14.5	-0.4	0.8		
NRC % Nuclear Cap Utilization	95.8	92.7	83.2	90.2	91.5	92.0	91.9	0.4	-0.8		

Wind Generation Monthly Average - MWh (Genscape)

	2Yr Ago	LY				MTD			
	Same 30 days	Same 30 days	May-21	Jun-21	Jul-21	Aug-21	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY
CALI Wind	2307	2639	3402	2913	2338	2357	2257	18	-382
TEXAS Wind	8040	9410	12259	9675	7217	9711	8710	2494	-700
US Wind	26738	31866	46081	37299	29105	34286	31104	5182	-762

Generation Monthly Average - MWh (EIA)

Concration months, 7ttorago	2Yr Ago	LY				MTD			
	Same 30 days	Same 30 days	May-21	Jun-21	Jul-21	Aug-21	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY
US Wind	26738	31866	46081	37299	29105	34286	31104	▼-3182.3	▼ -762
US Solar	9304	12173	14488	14564	14200	13657	13992	335.0	1819
US Petroleum	5450	4550	3012	4149	4233	4038	4250	212	▼ -300
US Other	9192	9877	7439	8162	9324	8958	9259	3 01	▼ -618
US Coal	130953	120150	86422	121351	137225	130230	137006	6776	16856
US Nuke	100812	93357	85517	92175	92897	93346	93235	▼ -110	▼ -122
US Hydro	34090	30865	30677	32578	29937	26570	28833	2263	▼ -2032
US Gas	218811	224098	139477	188815	207790	194158	207719	6593	▼ -16380
US Total	536715	526690	413562	499435	524895	505346	525538	16369	▼ -1152



See National Wind and Nuclear daily charts



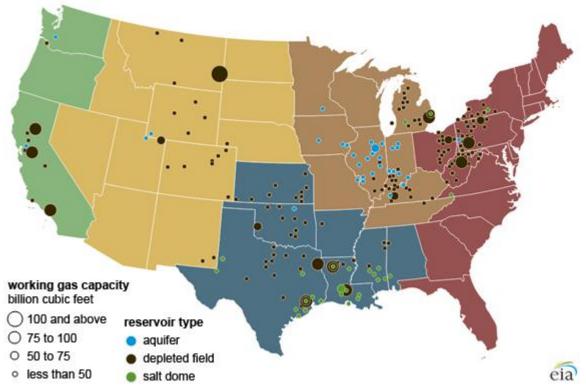
Regional S/D Models Storage Projection

Week Ending 6-Aug

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	5.1	1.0	6.1	42
East	2.3	1.5	3.7	26
Midwest	3.3	-0.3	2.9	21
Mountain	4.3	-4.3	0.0	0
South Central	-4.6	4.2	-0.4	-2
Pacific	-0.2	-0.1	-0.2	-2

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

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



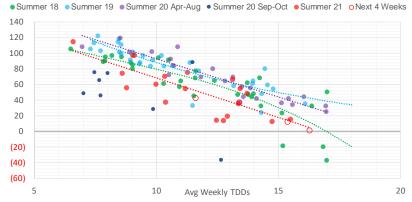


Weather Model Storage Projection

Next report	
and beyond	

Week Ending	GWDDs	Week Storage Projection
06-Aug	11.6	42
13-Aug	16.3	1
20-Aug	15.4	12
27-Aug	13.4	37

Weather Storage Model - Next 4 Week Forecast



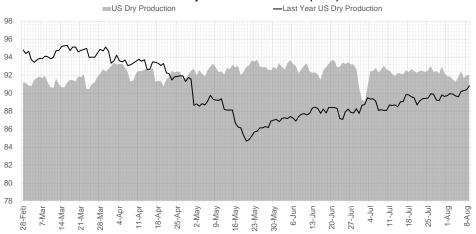
Go to larger image



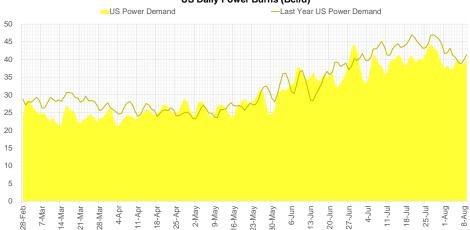


Supply - Demand Trends

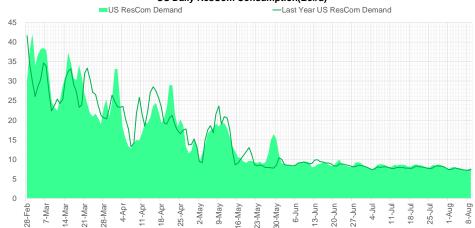
US Dry Natural Gas Production (Bcf/d)



US Daily Power Burns (Bcf/d)



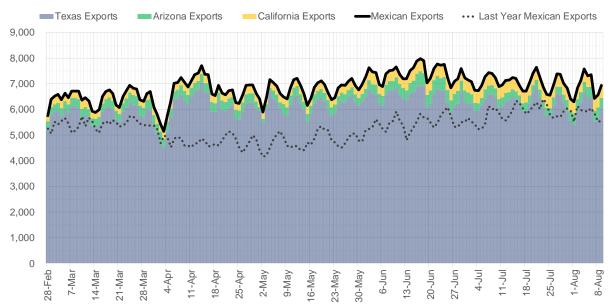
US Daily ResCom Consumption(Bcf/d)



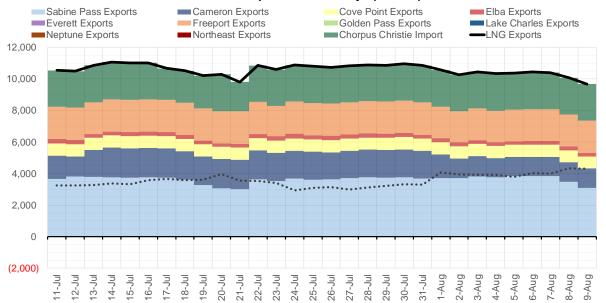
Source: Bloomberg



Mexican Exports (MMcf/d)







Source: Bloomberg





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

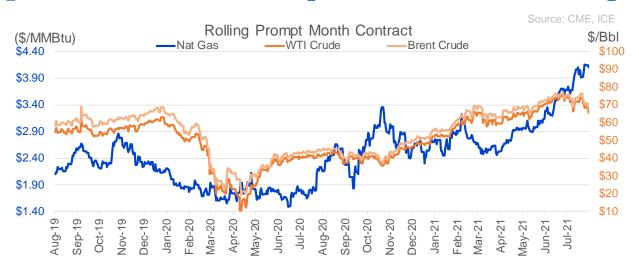
	CONTRACT	PUT/CALL	STRIKE	CUMULATIVE	CONTRACT	CONTRACT	PUT/CALL	STRIKE	CUMULATIVE OI
MONTH	YEAR	1 01/OALL	OTIVILLE	VOL	MONTH	YEAR	1 01/CALL	STRIKE	COMOLATIVE OF
9	2021	С	4.50	9541	12	2021	Р	2.75	41395
11	2021	P	3.00	6689	10	2021	С	4.00	40440
9	2021	С	4.25	5470	10	2021	С	4.50	39889
2	2022	P	3.00	4565	10	2021	С	3.50	33006
2	2022	P	3.50	4550	10	2021	С	5.00	32573
1	2022	P	3.50	4534	10	2021	Р	2.50	30039
3	2022	Р	3.50	4500	12	2021	Р	2.50	29530
9	2021	P	3.75	4484	10	2021	С	3.25	28230
1	2022	P	3.00	4200	9	2021	С	5.00	27487
3	2022	P	3.00	4200	10	2021	Р	2.00	26845
9	2021	C	4.75	3731	9	2021	С	4.00	26739
10	2021	Ċ	4.50	3438	10	2021	Р	2.75	25768
9	2021	P	4.00	3158	10	2021	Р	3.00	25304
2	2022	Р	3.25	3150	10	2021	Р	3.50	25028
10	2021	Р	3.25	3013	12	2021	Р	3.00	24322
10	2021	C	5.00	3010	9	2021	С	4.25	24150
10	2021	P	3.50	2929	9	2021	Р	2.50	23385
12	2021	P	3.00	2750	11	2021	Р	3.00	22626
10	2021	P	3.00	2502	9	2021	С	3.50	22612
10	2021	P	4.00	2487	9	2021	Р	3.00	22432
9	2021	Ċ	5.00	2150	12	2021	С	4.00	22192
10	2021	C	4.75	2123	11	2021	С	4.00	22044
9	2021	C	6.00	2072	10	2021	С	6.00	21903
11	2021	P	2.70	1900	9	2021	С	4.50	21545
9	2021	C	4.40	1847	9	2021	Р	2.00	20427
9	2021	P	3.70	1709	9	2021	С	4.75	20053
2		P			10	2021	Р	2.25	19900
1	2022 2022	P	4.00 4.00	1595	9	2021	Р	3.25	19653
3		P		1550	4	2022	С	3.00	19610
3	2022 2022	C	4.00	1550	9	2021	С	3.25	18994
		P	10.00	1520	9	2021	Р	3.50	18599
10	2021		3.55	1510	10	2021	С	3.00	18502
12	2021	P	3.50	1509	11	2021	С	5.00	17890
5	2022	С	5.00	1500	10	2021	С	3.75	16814
11	2021	P	3.50	1472	3	2022	С	5.00	16767
9	2021	С	4.60	1362	9	2021	Р	2.75	15816
10	2021	С	5.50	1326	1	2022	С	5.00	15490
9	2021	С	4.00	1304	11	2021	С	3.75	14989
10	2021	P	3.75	1301	2	2022	С	5.00	14731
9	2021	P	3.25	1276	1	2022	С	4.00	14707
9	2021	P	3.50	1273	3	2022	С	3.00	14448
11	2021	С	4.50	1220	3	2022	Р	2.50	13969
12	2021	С	7.00	1131	12	2021	Р	2.00	13889
10	2021	С	6.00	1083	9	2021	Р	2.60	13814
2	2022	P	4.25	1045	9	2021	Р	1.90	13773
10	2021	Р	3.70	1006	11	2021	Р	2.50	13697
11	2021	С	4.90	1000	2	2022	С	4.00	13564
9	2021	C	4.15	998	3	2022	С	4.00	13510
9	2021	С	5.25	956	3	2022	С	8.00	13123
3	2022	Р	2.75	951	5	2022	C Source	: CME, ICE	13050



Nat Gas Futures Open Interest

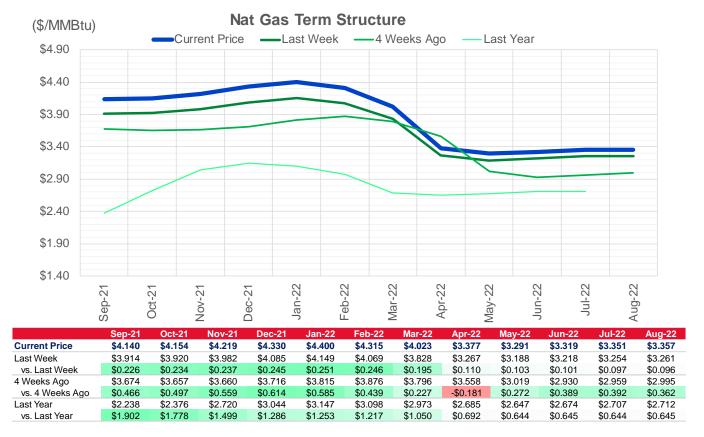
CME, and ICE Combined

CIVIE, AND TOE 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		
SEP 21	275121	306574	-31453	SEP 21	91140	92698	-1557		
OCT 21	168264	169316	-1052	OCT 21	106716	105463	1253		
NOV 21	137512	130696	6816	NOV 21	70083	70098	-15		
DEC 21	73199	73080	119	DEC 21	75757	75289	468		
JAN 22	133174	128856	4318	JAN 22	78686	78344	343		
FEB 22	55257	54419	838	FEB 22	70791	70610	181		
MAR 22	107045	107737	-692	MAR 22	71185	70798	387		
APR 22	108200	106859	1341	APR 22	68959	69047	-88		
MAY 22	88352	85859	2493	MAY 22	67237	66564	673		
JUN 22	29685	28708	977	JUN 22	55218	55121	98		
JUL 22	26335	25827	508	JUL 22	55201	55339	-139		
AUG 22	25407	25162	245	AUG 22	55989	55911	78		
SEP 22	24838	25026	-188	SEP 22	55785	55695	90		
OCT 22	62864	62578	286	OCT 22	62590	62629	-39		
NOV 22	25898	25421	477	NOV 22	49521	49540	-19		
DEC 22	23555	23466	89	DEC 22	52064	52133	-69		
JAN 23	16655	16537	118	JAN 23	32876	32488	388		
FEB 23	5951	6042	-91	FEB 23	27598	27515	83		
MAR 23	8460	8202	258	MAR 23	29455	29269	186		
APR 23	9887	9880	7	APR 23	24027	23792	235		
MAY 23	5640	5608	32	MAY 23	25049	24852	197		
JUN 23	4020	3780	240	JUN 23	23370	23178	193		
JUL 23	3111	3168	-57	JUL 23	23471	23268	204		
AUG 23	2568	2540	28	AUG 23	23290	23086	204		
SEP 23	3024	2908	116	SEP 23	22816	22628	189		
OCT 23	4124	4120	4	OCT 23	24434	24229	205		
NOV 23	1316	1304	12	NOV 23	24452	24377	75		
DEC 23	1840	1778	62	DEC 23	22200	22129	70		
JAN 24	992	992	0	JAN 24	12971	12971	1		
FEB 24	870	870	0	FEB 24	11406	11406	0		





Market Report



		Cash	Prompt	Cash to
	Units	Settled	Settle	Prompt
AGT Citygate	\$/MMBtu	4.07	3.03	-1.04
TETCO M3	\$/MMBtu	3.86	2.74	-1.12
FGT Zone 3	\$/MMBtu	3.90	3.99	0.09
Zone 6 NY	\$/MMBtu	3.90	2.54	-1.36
Chicago Citygate	\$/MMBtu	4.03	3.73	-0.30
Michcon	\$/MMBtu	3.98	3.67	-0.31
Columbia TCO Pool	\$/MMBtu	3.75	2.96	-0.79
Ventura	\$/MMBtu	3.99	3.67	-0.32
Rockies/Opal	\$/MMBtu	3.95	3.59	-0.37
El Paso Permian Basin	\$/MMBtu	3.91	3.69	-0.22
Socal Citygate	\$/MMBtu	5.11	5.17	0.06
Malin	\$/MMBtu	4.10	4.06	-0.04
Houston Ship Channel	\$/MMBtu	4.08	3.90	-0.18
Henry Hub Cash	\$/MMBtu	4.20	3.67	-0.53
AECO Cash	C\$/GJ	2.90	2.87	-0.03
Station2 Cash	C\$/GJ	2.86	3.91	1.05
Dawn Cash	C\$/GJ	3.99	3.99 3.69	

Source: CME, Bloomberg



						4 \Maska		
					VS	s. 4 Weeks		
	Units	Current Price	VS.	Last Week		Ago	VS	. Last Year
NatGas Jul21/Oct21	\$/MMBtu	0.537		0.234		0.494		0.527
NatGas Oct21/Nov21	\$/MMBtu	0.065		0.003		0.009		0.022
NatGas Oct21/Jan22	\$/MMBtu	0.246		0.017		0.030	•	-0.022
NatGas Apr22/Oct22	\$/MMBtu	-0.015		-0.016	\blacksquare	-0.006	\blacksquare	-0.069
WTI Crude	\$/Bbl	68.28		-5.670	•	-6.280		27.060
Brent Crude	\$/Bbl	70.70		-5.630	\blacksquare	-4.850		26.300
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18		0.000		0.000		0.000
Heating Oil	cents/Gallon	208.45		-11.490	\blacksquare	-7.070		86.460
Propane, Mt. Bel	cents/Gallon	1.10		0.001	▼	-0.010		0.594
Ethane, Mt. Bel	cents/Gallon	0.34		0.030		0.037		0.116
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

