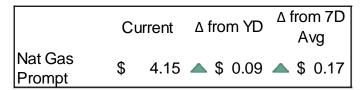


26 July 2021



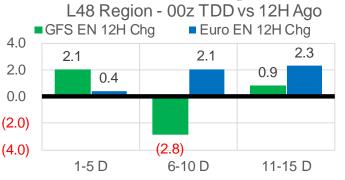
	С	urrent	Δ from YD	Δ from Av	
WTI Prompt	\$	71.66	\$ (0.41)	\$	1.3

	_	urrant	Δ from YD	∆ fron	ո 7D
		ם ווטוו ום	Avg		
Brent Prompt	\$	73.81	\$ (0.29)	\$	1.5
Prompt	-		, ,	-	

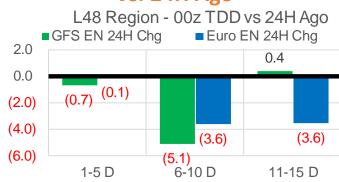
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Short-term Weather Model Outlooks
Lower 48 Component Models
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Supply – Demand Trends
Nat Gas Options Volume and Open Interest
Nat Gas Futures Open Interest
Price Summary

Vs. 12H Ago



Vs. 24H Ago



	Current	Δ from YD	Δ from 7D Avg
US Dry Production	91.4	▼ -0.82	▼ -0.79

	Current	Δ from YD	Δ from 7D Avg
US ResComm	8.2	a 0.20	▼ -0.01

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	10.9	▲ 0.04	a 0.37

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	41.5	▲ 0.08	1.23

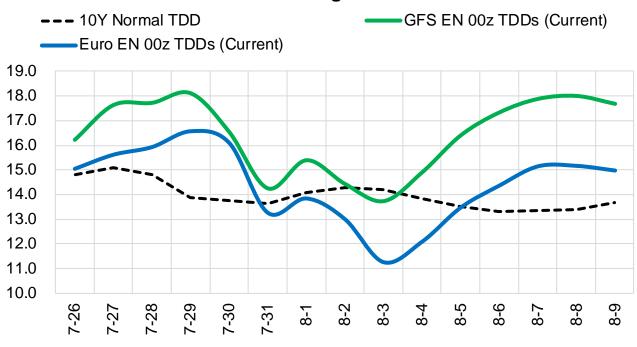
	Current	Δfı	rom YD	rom 7D Avg
Canadian Imports	5.7		0.28	0.59

	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.7	0.22	▼ -0.26

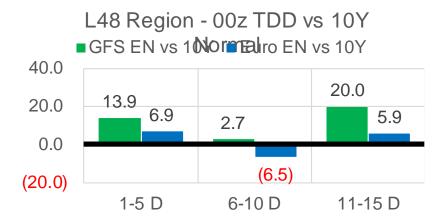


Short-term Weather Model Outlooks (00z)

L48 Region



Vs. 10Y Normal



Source: WSI, Bloomberg



Lower 48 Component Models

Daily Balances

	20-Jul	21-Jul	22-Jul	23-Jul	24-Jul	25-Jul	26-Jul	DoD	vs.7D
Lower 48 Dry Production	92.3	91.3	92.4	92.3	92.1	92.2	91.4	▼-0.8	▼ -0.7
Canadian Imports	5.3	5.0	4.7	5.1	5.3	5.4	5.7	0.3	0.6
L48 Power	41.1	39.5	39.6	39.9	40.0	41.4	41.5	0.1	1.2
L48 Residential & Commercial	8.6	8.4	8.3	7.9	7.8	8.0	8.2	0.2	0.0
L48 Industrial	19.4	19.5	19.8	20.0	20.2	20.5	20.7	0.2	8.0
L48 Lease and Plant Fuel	5.1	5.1	5.1	5.1	5.1	5.1	5.1	▼ 0.0	▼ 0.0
L48 Pipeline Distribution	2.4	2.3	2.3	2.3	2.3	2.3	2.3	0.0	0.1
L48 Regional Gas Consumption	76.5	74.7	75.1	75.1	75.4	77.3	77.7	0.4	2.0
Net LNG Delivered	10.30	9.79	10.86	10.60	10.88	10.82	10.86	0.0	0.3
Total Mexican Exports	7.4	6.9	7.4	7.1	6.6	6.5	6.7	0.2	▼ -0.3
Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error	3.4	4.9	3.7	4.5	4.5	3.0	1.7		

EIA Storage Week Balances

	18-Jun	25-Jun	2-Jul	9-Jul	16-Jul	23-Jul	WoW	vs. 4W
Lower 48 Dry Production	92.3	93.2	92.2	91.8	92.3	92.2	▼ -0.1	▼-0.2
Canadian Imports	5.1	4.7	5.2	5.1	5.2	4.9	▼-0.3	▼-0.1
L48 Power	34.8	34.4	39.7	37.1	38.7	39.7	1.0	2.2
L48 Residential & Commercial	8.3	8.4	8.3	7.9	8.2	8.3	0.0	0.0
L48 Industrial	22.4	20.0	21.5	19.7	19.8	19.4	▼ -0.4	▼-0.8
L48 Lease and Plant Fuel	5.1	5.2	5.1	5.1	5.1	5.1	▼ 0.0	▼ 0.0
L48 Pipeline Distribution	2.1	2.1	2.4	2.1	2.2	2.3	0.0	0.1
L48 Regional Gas Consumption	72.7	70.1	77.0	72.0	74.0	74.7	0.7	1.5
Net LNG Exports	9.6	10.3	11.2	11.0	10.8	10.5	▼ -0.3	▼-0.3
Total Mexican Exports	7.5	7.6	7.2	7.1	7.1	7.0	▼ -0.1	▼-0.2
Implied Daily Storage Activity	7.6	9.9	2.0	6.8	5.5	4.9	-0.7	
EIA Reported Daily Storage Activity	7.9	10.9	2.3	7.9	7.0			
Daily Model Error	-0.2	-0.9	-0.2	-1.1	-1.5			

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	92.2	92.8	92.0	▼ -0.8	2.9
Canadian Imports	5.0	4.4	4.8	4.7	4.5	4.9	5.1	0.3	0.7
L48 Power	40.8	43.7	24.3	25.0	27.1	35.3	38.8	3.5	▼ -4.8
L48 Residential & Commercial	8.0	7.9	29.3	19.7	13.4	8.4	8.1	▼ -0.3	0.2
L48 Industrial	21.6	20.4	19.3	21.2	19.2	21.0	19.8	▼ -1.3	- 0.6
L48 Lease and Plant Fuel	5.0	4.9	5.0	5.1	5.1	5.1	5.1	▼ 0.0	0.2
L48 Pipeline Distribution	2.3	2.4	2.5	2.3	2.1	2.2	2.2	0.1	▼ -0.2
L48 Regional Gas Consumption	77.8	79.4	80.6	73.3	66.7	72.0	74.0	2.0	▼ -5.3
Net LNG Exports	6.0	3.3	11.1	11.5	10.8	10.2	10.8	0.6	7.5
Total Mexican Exports	5.3	5.9	6.5	6.7	6.8	7.4	7.0	▼-0.4	1.2
Implied Daily Storage Activity	7.8	5.0	-2.0	5.5	12.4	8.0	5.2		
EIA Reported Daily Storage Activity Daily Model Error									



Daily Average Generation Data

Nuclear Generation Daily Average - GWh (NRC)

	19-Jul	20-Jul	21-Jul	22-Jul	23-Jul	24-Jul	25-Jul	DoD	vs. 7D
NRC Nuclear Daily Output	91.7	91.8	90.3	88.2	88.1	88.1	88.1	0.0	-1.6
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	13.2	13.1	14.6	16.7	16.8	16.8	16.8	0.0	1.6
NRC % Nuclear Cap Utilization	93.3	93.3	91.8	89.7	89.6	89.6	89.6	0.0	-1.6

Wind Generation Daily Average - MWh (EIA)

	19-Jul	20-Jul	21-Jul	22-Jul	23-Jul	24-Jul	25-Jul	DoD	vs. 7D
CALI Wind	1540	2627	2516	2234	2083	2283	2283	0	69
TEXAS Wind	4361	4154	3557	8911	15356	12202	12202	0	4111
US Wind	16257	21754	26199	36855	44311	35200	35200	0	5104

Generation Daily Average - MWh (EIA)

	19-Jul	20-Jul	21-Jul	22-Jul	23-Jul	24-Jul	25-Jul	DoD	vs. 7D
US Wind	16257	21754	26199	36855	44311	35200	35200	0	5104
US Solar	12282	13229	13910	13963	13713	13420	13420	0	0
US Petroleum	4452	4887	3851	3859	4240	4458	4458	0	167
US Other	9543	9037	8963	8944	8939	8889	8889	0	-163
US Coal	138908	140677	140467	132769	136904	136218	136218	0	-1439
US Nuke	94763	93664	92831	88833	90641	91058	91058	0	-907
US Hydro	31047	31422	31536	29420	30221	27820	27820	0	-2424
US Gas	218429	216969	212350	198600	203302	202101	202101	0	-6524

See National Wind and Nuclear daily charts



Storage Week Average Generation Data

Nuclear Generation Weekly Average - GWh (NRC)

	18-Jun	25-Jun	2-Jul	9-Jul	16-Jul	23-Jul	WoW	WoW Bcf/d Impact
NRC Nuclear Daily Output	86.7	89.9	89.1	89.5	90.7	90.7	0.1	0.0
NRC Nuclear Max Capacity	104.9	104.9	104.9	104.9	104.9	104.9	0.0	
NRC Nuclear Outage	18.1	15.0	15.7	15.4	14.2	14.2	-0.1	
NRC % Nuclear Cap Utilization	0.1	0.1	0.1	0.1	0.1	0.1	0.0	

Wind Generation Weekly Average - MWh (EIA)

	18-Jun	25-Jun	2-Jul	9-Jul	16-Jul	23-Jul	WoW	WoW Bcf/d Impact
CALI Wind	2494	2568	2588	2604	3004	2064	-940	0.2
TEXAS Wind	7683	13415	8326	3739	10817	7162	-3655	0.6
US Wind	34128	49248	27216	25698	36364	26445	-9919	1.7

Generation Weekly Average - MWh (EIA)

								WoW
	18-Jun	25-Jun	2-Jul	9-Jul	16-Jul	23-Jul	WoW	Bcf/d
								Impact
US Wind	34128	49248	27216	25698	36364	26445	-9919	1.7
US Solar	15395	14070	14060	14162	14489	13855	-634	0.1
US Petroleum	3894	3331	5142	4035	4282	3892	-391	0.1
US Other	7784	8246	8886	9159	9554	9234	-321	0.1
US Coal	124096	118233	136480	131305	131524	137036	5512	-0.9
US Nuke	90270	93426	92257	92359	93735	93171	-563	0.1
US Hydro	31628	32185	33024	30127	30415	30028	-387	0.1
US Gas	193858	180182	208732	194610	199730	209066	9336	

See National Wind and Nuclear daily charts

Monthly Average Generation Data

Nuclear Generation Monthly	y Average -	GWh (Ni	RC)						
	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	94.9	91.6	75.9	81.8	88.7	89.9	89.8	1.2	-1.8
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	10.0	13.2	29.0	23.1	16.2	15.0	15.1	-1.2	1.8
NRC % Nuclear Cap Utilization	96.5	93.2	77.1	83.2	90.2	91.4	91.3	1.2	-1.9

Wind Generation Monthly Average - 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
CALI Wind	2734	2598	3113	3402	2913	2483	2464	-430	-134
TEXAS Wind	8111	10656	12104	12259	9675	8020	7591	-1655	-3065
US Wind	28214	34019	50706	46081	37299	30464	28946	-6835	-5073

Generation Monthly Average - MWh (EIA)

Generation Monthly Average -	INIAAU (⊏I	A)							
	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
US Wind	28214	34019	50706	46081	37299	30464	28946	▼-1518.6	▼ -5073
US Solar	9639	12375	13194	14486	14564	14097	14013	▼ -83.4	1639
US Petroleum	5155	4929	2652	3012	4149	4131	4378	247	▼ -551
US Other	8838	9891	7154	7438	8157	9261	9237	▼ -25	▼ -655
US Coal	132197	117073	75976	86422	121348	134114	135259	1144	18186
US Nuke	101651	94032	79237	85517	92175	92722	92662	-60	▼ -1370
US Hydro	34477	33718	28444	30666	32574	29992	30488	496	▼ -3230
US Gas	210547	222626	133124	139477	188818	201528	204502	200	▼-18124
US Total	532286	528387	390883	413557	499432	517052	520155	1919	▼ -8232



See National Wind and Nuclear daily charts



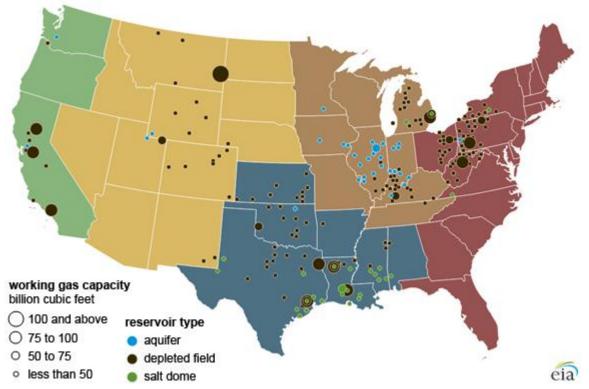
Regional S/D Models Storage Projection

Week Ending 23-Jul

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	4.5	1.3	5.8	41
East	1.7	1.3	3.1	21
Midwest	3.4	-0.4	2.9	21
Mountain	4.3	-4.1	0.3	2
South Central	-4.7	4.5	-0.3	-2
Pacific	-0.1	-0.1	-0.2	-1

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

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



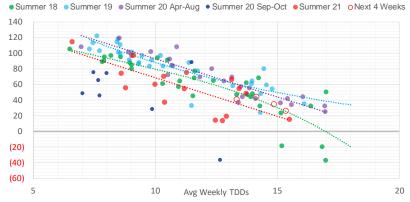


Weather Model Storage Projection

Next r	eport
and b	eyond

Week Ending	GWDDs	Week Storage Projection
23-Jul	13.4	41
30-Jul	15.4	26
06-Aug	14.2	44
13-Aug	14.9	35

Weather Storage Model - Next 4 Week Forecast



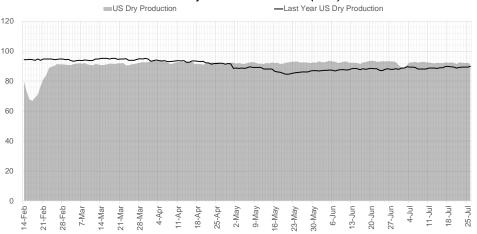
Go to larger image



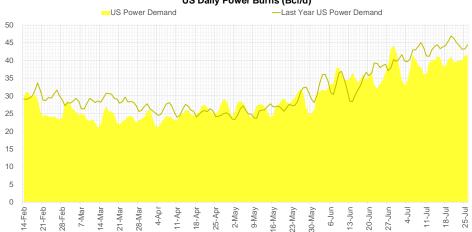


Supply - Demand Trends

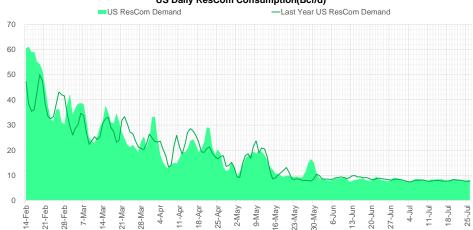
US Dry Natural Gas Production (Bcf/d)



US Daily Power Burns (Bcf/d)



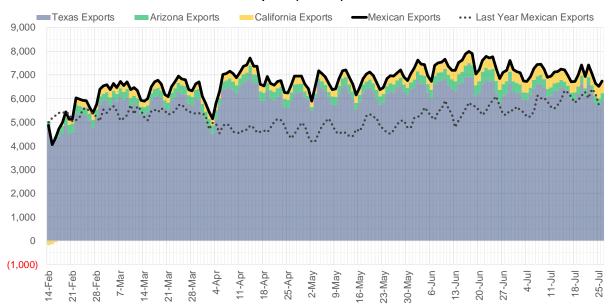
US Daily ResCom Consumption(Bcf/d)



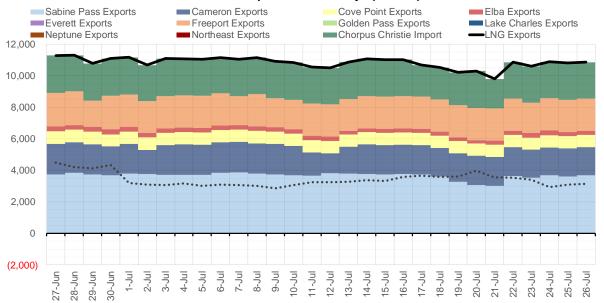
Source: Bloomberg



Mexican Exports (MMcf/d)



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



Source: Bloomberg



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

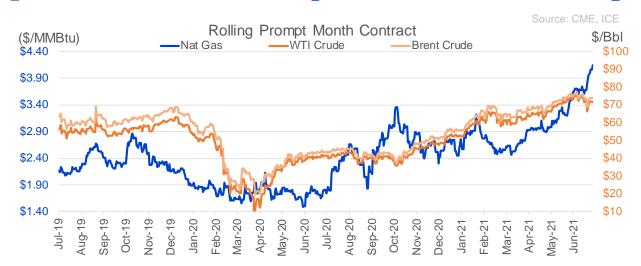
ONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL		CONTRACT MONTH			
8	2021	С	4.25	14264		10	10 2021	10 2021 C	10 2021 C 4.00
8	2021	Ċ	4.50	7184		8			
8	2021	Č	4.10	5542		8			
10	2021	Č	5.00	5306		10			
8	2021	C	4.00	5243		10			
9	2021	P	3.75	5131		9			
						10			
8	2021	С	4.35	4815		8			
8	2021	P -	3.90	4666		10			
9	2021	Р	3.50	4231					
11	2021	Р	3.25	4184		8			
8	2021	Р	4.00	4164		10			
9	2021	С	4.00	3809	10		2021		
8	2021	С	4.15	3788	10		2021		
11	2021	P	3.00	3300	8		2021		
10	2021	Ċ	4.50	3021	8		2021		
9	2021	C	5.00	2923	9	:	2021		
					9	202			
9	2021	С	4.75	2770	8	2021		Č	
8	2021	P	3.80	2721	11	2021		Ċ	
9	2021	С	4.25	2627	10	2021		P	
8	2021	Р	3.85	2605	8	2021		Р	
10	2021	Р	3.50	2513	12	2021		C	
10	2021	С	4.00	2493				P	
9	2021	Р	4.00	2434	9	2021			
9	2021	Р	3.00	2380	9	2021		P	
9	2021	С	4.50	2309	8	2021		C	
11	2021	P	3.50	2110	10	2021		P	
8	2021	C	4.20	2055	8	2021		P	
10	2021	P	3.25	2010	4	2022		С	
10	2021	P	3.25	1806	8	2021		Р	
					8	2021		Р	
3	2022	С	6.00	1715	9	2021		С	C 3.25
9	2021	С	4.10	1706	8	2021		С	C 4.25
3	2022	С	4.00	1640	10	2021		C	
10	2021	Р	2.50	1577	8	2021		P	
9	2021	Р	3.40	1547	11	2021		Р	
9	2021	Р	3.60	1516	10	2021		Р	
1	2022	Р	2.75	1501	8	2021		P	
9	2021	P	3.25	1465	3	2021		C	
10	2021	P	3.00	1440					
3	2021	C	5.00	1375	10	2021		С	
3 10	2022	C	4.60	1301	9	2021		С	
					10	2021		С	
10	2021	С	4.25	1273	9	2021		Р	
12	2021	С	4.50	1250	8	2021		С	
8	2021	С	3.90	1237	11	2021		С	
11	2021	Р	3.75	1204	8	2021		С	
12	2021	Р	4.00	1201	9	2021		С	C 4.25
12	2021	С	8.50	1200	9	2021		С	
8	2021	Р	3.75	1157	1	2022		Ċ	
10	2021	C	6.00	1106	3	2022		Č	
9	2021	Č	4.60	1040	11	2021			
J	2021	Ũ	1.00	1010		2021		Source	C Source: CME, ICE



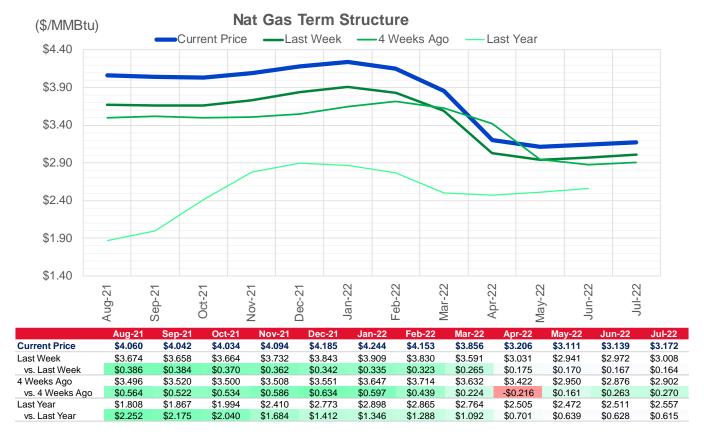
Nat Gas Futures Open Interest

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	
AUG 21	24581	40995	-16414	AUG 21	86658	84310	2348	
SEP 21	337507	333879	3628	SEP 21	90109	89490	619	
OCT 21	163312	161909	1403	OCT 21	103359	102687	672	
NOV 21	114638	110403	4235	NOV 21	70199	72511	-2312	
DEC 21	72351	71293	1058	DEC 21	71861	71350	511	
JAN 22	120163	118151	2012	JAN 22	77843	77853	-10	
FEB 22	49251	48965	286	FEB 22	67548	67403	146	
MAR 22	98743	99659	-916	MAR 22	67752	68111	-359	
APR 22	101803	101005	798	APR 22	64341	65145	-805	
MAY 22	87003	87241	-238	MAY 22	66328	67282	-953	
JUN 22	28647	28052	595	JUN 22	54776	55552	-776	
JUL 22	22900	22686	214	JUL 22	54038	54686	-648	
AUG 22	23986	23892	94	AUG 22	55448	56018	-571	
SEP 22	24502	23777	725	SEP 22	55040	55592	-552	
OCT 22	60813	60387	426	OCT 22	58574	59013	-440	
NOV 22	25114	24926	188	NOV 22	47935	47917	18	
DEC 22	21419	20926	493	DEC 22	50120	50495	-375	
JAN 23	15782	15716	66	JAN 23	29788	29580	208	
FEB 23	5504	5473	31	FEB 23	25752	25591	161	
MAR 23	7196	7026	170	MAR 23	27934	28418	-485	
APR 23	9379	9278	101	APR 23	22070	22016	54	
MAY 23	5750	5680	70	MAY 23	23334	23408	-74	
JUN 23	2353	2355	-2	JUN 23	21655	21534	122	
JUL 23	2569	2598	-29	JUL 23	21949	21617	333	
AUG 23	1770	1779	-9	AUG 23	21814	21653	161	
SEP 23	2014	2015	-1	SEP 23	21342	21213	130	
OCT 23	2647	2646	1	OCT 23	22761	22531	230	
NOV 23	1113	1113	0	NOV 23	22225	20201	2024	
DEC 23	1742	1742	0	DEC 23	21635	21565	70	
JAN 24	993	993	0	JAN 24	12794	12665	129	







		Cash	Prompt	Cash to
	Units	Settled	Settle	Prompt
AGT Citygate	\$/MMBtu	3.35	3.35	0.00
TETCO M3	\$/MMBtu	3.41	3.27	-0.14
FGT Zone 3	\$/MMBtu	3.54	3.75	0.21
Zone 6 NY	\$/MMBtu	3.54	3.25	-0.29
Chicago Citygate	\$/MMBtu	3.88	3.52	-0.36
Michcon	\$/MMBtu	3.83	3.48	-0.35
Columbia TCO Pool	\$/MMBtu	3.44	3.05	-0.39
Ventura	\$/MMBtu	3.62	3.45	-0.17
Rockies/Opal	\$/MMBtu	3.81	3.41	-0.40
El Paso Permian Basin	\$/MMBtu	3.60	3.52	-0.08
Socal Citygate	\$/MMBtu	6.41	5.36	-1.05
Malin	\$/MMBtu	3.90	3.99	0.09
Houston Ship Channel	\$/MMBtu	4.00	3.65	-0.35
Henry Hub Cash	\$/MMBtu	3.98	3.44	-0.53
AECO Cash	C\$/GJ	3.25	2.83	-0.42
Station2 Cash	C\$/GJ	3.26	3.80	0.54
Dawn Cash	C\$/GJ	3.81	3.81 3.50	

Source: CME, Bloomberg



					Ve	. 4 Weeks		
	Units	Current Price	vs.	Last Week	Va	Ago	vs	. Last Year
NatGas Jul21/Oct21	\$/MMBtu	0.417		0.370		0.405		0.400
NatGas Oct21/Nov21	\$/MMBtu	0.060	~	-0.008		0.017		0.012
NatGas Oct21/Jan22	\$/MMBtu	0.210		-0.035		0.004		-0.069
NatGas Apr22/Oct22	\$/MMBtu	-0.030		-0.026	•	-0.039		-0.099
WTI Crude	\$/Bbl	72.07		0.260	•	-1.980		30.780
Brent Crude	\$/Bbl	74.10		0.510		-2.080		30.760
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18		0.000		0.000		0.000
Heating Oil	cents/Gallon	213.39		2.060		-1.540		87.760
Propane, Mt. Bel	cents/Gallon	1.09		-0.010		0.124		0.597
Ethane, Mt. Bel	cents/Gallon	0.31		0.007		0.036		0.097
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

