

Market Report

4 September 2020

	Cı	ırrent	Δf	roi	m YD	Δ from 7D Avg
Nat Gas Prompt	\$	2.52	_	\$	0.03	▼ \$ (0.07)

	Cı	urrent	Δf	rom	YD		or A	n 7D vg
WTI Prompt	\$	41.67	_	\$ 0	.30	▼ (\$	(0.8)

	С	urrent	Δ1	fror	n YD	Δ1	m 7D va
Brent Prompt	\$	44.32	_	\$	0.25	$\overline{}$	5

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Price Summary

00z GWDD Change

Cooler Change

Warmer Change

ECMWF Ensemble 00z	1-5 Day	6-10 Day	11-15 Day	Total
12 Hr Chg	1.3	0.6	1.6	3.6
24 Hr Chg	0.6	0.4	-1.1	-0.1
GFS Ensemble 00z	1-5 Day	6-10 Day	11-15 Day	Total
GFS Ensemble 00z 12 Hr Chg	1-5 Day 1.1	6-10 Day -1.6	11-15 Day -0.9	Total -1.5

	Current	Δ from YD	Δ from 7D Avg
US Dry Production	85.9	▼ -0.57	▼ -0.36

	Current	Δ from YD	Δ from 7D Avg
US ResComm	7.8	▼ -0.09	a 0.09

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	3.8	▼ -0.09	▲ 0.80

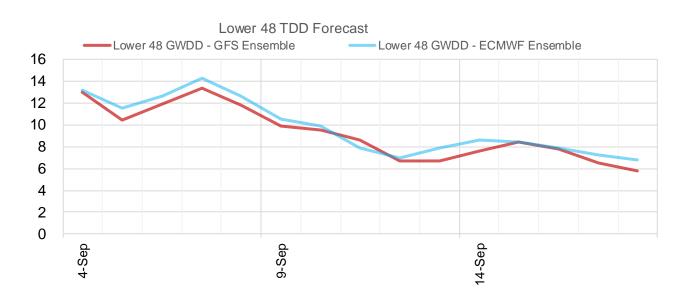
	Current	Δ from YD	Δ from 7D Avg
US Power Burns	38.7	▼ -0.59	1.46

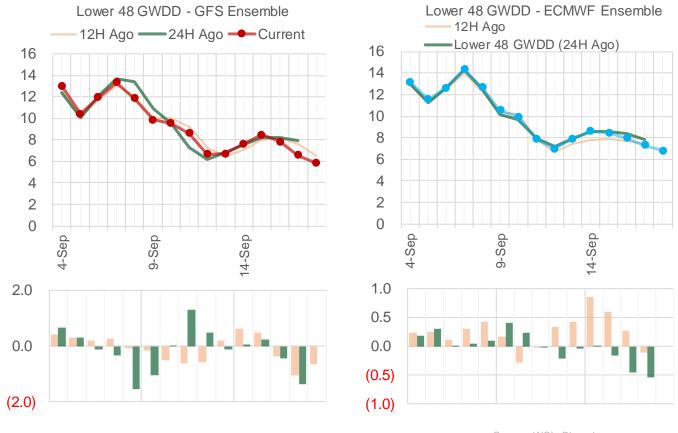
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	3.7	▼ -0.45	▽ -0.71

	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.7	▼ -0.18	a 0.19



Short-term Weather Model Outlooks (00z)





Source: WSI, Bloomberg



Market Report

Lower 48 Component Models

Daily Balances

	29-Aug	30-Aug	31-Aug	1-Sep	2-Sep	3-Sep	4-Sep	DoD	vs.7D
Lower 48 Dry Production	86.0	86.3	86.3	85.6	86.3	86.4	85.9	▽ -0.6	▼ -0.3
Canadian Imports	4.4	4.3	4.4	4.5	3.9	4.1	3.7	▽ -0.4	▽ -0.6
L48 Power	35.8	33.7	35.5	36.9	38.9	39.3	38.7	▼ -0.6	2.0
L48 Residential & Commercial	7.4	7.5	7.9	7.8	7.7	7.9	7.8	▼ -0.1	△ 0.1
L48 Industrial	20.0	20.2	20.4	20.2	19.9	19.7	19.3	▼ -0.4	▼ -0.7
L48 Lease and Plant Fuel	4.8	4.8	4.8	4.8	4.8	4.8	4.8	▼ 0.0	▼ 0.0
L48 Pipeline Distribution	2.0	1.9	2.0	2.1	2.2	2.2	2.2	▼ 0.0	0.1
L48 Regional Gas Consumption	70.0	68.1	70.6	71.8	73.5	73.9	72.8	▼ -1.1	1.5
Net LNG Exports	2.9	2.9	2.7	3.0	3.1	3.9	3.8	▼ -0.1	△ 0.7
Total Mexican Exports	6.4	6.1	6.3	6.6	6.7	6.9	6.7	▽ -0.2	△ 0.2
Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error	11.2	13.6	11.1	8.8	6.8	5.8	6.2		

EIA Storage Week Balances

	31-Jul	7-Aug	14-Aug	21-Aug	28-Aug	4-Sep	WoW	vs. 4W
Lower 48 Dry Production	87.2	87.3	87.4	87.2	86.0	86.2	△ 0.3	▼ -0.7
Canadian Imports	4.5	4.6	5.0	4.7	5.2	4.4	▼ -0.8	▼ -0.5
L48 Power	45.5	40.7	42.9	40.0	41.6	37.2	▼ -4.4	▼ -4.1
L48 Residential & Commercial	8.7	8.1	8.1	8.2	8.3	7.7	▼ -0.6	▼ -0.4
L48 Industrial	17.4	18.8	19.0	20.4	19.6	20.0	0.4	a 0.5
L48 Lease and Plant Fuel	4.9	4.9	4.9	4.8	4.8	4.8	0.0	▼ 0.0
L48 Pipeline Distribution	2.5	2.2	2.3	2.2	2.3	2.1	▼ -0.2	▼ -0.2
L48 Regional Gas Consumption	78.9	74.7	77.2	75.7	76.6	71.9	▼ -4.7	▼ -4.2
Net LNG Exports	3.1	3.9	4.4	4.7	3.9	3.0	▽ -0.8	▼ -1.2
Total Mexican Exports	6.2	6.1	6.0	6.2	6.6	6.5	▽ -0.1	△ 0.3
Implied Daily Storage Activity	3.6	7.2	4.8	5.3	4.1	9.2	5.1	
EIA Reported Daily Storage Activity	4.7	8.3	6.1	6.4	5.0			
Daily Model Error	-1.2	-1.0	-1.3	-1.1	-0.9			

Monthly Balances

2Yr Ago	LY					MTD		
Sep-18	Sep-19	May-20	Jun-20	Jul-20	Aug-20	Sep-20	MoM	vs. LY
85.2	93.5	85.8	85.1	86.6	86.9	86.1	▼ -0.8	▼ -7.4
4.5	4.7	3.9	4.0	4.4	4.9	4.1	▽ -0.8	▼ -0.6
34.2	36.4	26.9	34.8	43.8	40.6	38.4	▼ -2.1	2.1
8.5	8.3	12.9	9.0	8.6	8.1	7.8	▼ -0.3	▼ -0.5
21.6	22.3	18.9	18.3	17.8	19.6	19.8	△ 0.2	▼ -2.5
4.8	5.2	4.8	4.9	4.9	4.8	4.8	▼ 0.0	▼ -0.4
2.0	2.1	1.9	2.0	2.4	2.2	2.2	▼ 0.0	a 0.1
71.2	74.3	65.5	69.1	77.5	75.3	73.0	▼ -2.3	▼ -1.2
3.1	6.2	6.7	4.0	3.3	4.0	3.5	▽ -0.6	▼ -2.7
5.1	5.4	4.9	5.7	6.1	6.3	6.7	△ 0.5	△ 1.4
10.3	12.4	12.6	10.2	4.1	6.1	6.9		
	Sep-18 85.2 4.5 34.2 8.5 21.6 4.8 2.0 71.2 3.1 5.1	Sep-18 Sep-19 85.2 93.5 4.5 4.7 34.2 36.4 8.5 8.3 21.6 22.3 4.8 5.2 2.0 2.1 71.2 74.3 3.1 6.2 5.1 5.4	Sep-18 Sep-19 May-20 85.2 93.5 85.8 4.5 4.7 3.9 34.2 36.4 26.9 8.5 8.3 12.9 21.6 22.3 18.9 4.8 5.2 4.8 2.0 2.1 1.9 71.2 74.3 65.5 3.1 6.2 6.7 5.1 5.4 4.9	Sep-18 Sep-19 May-20 Jun-20 85.2 93.5 85.8 85.1 4.5 4.7 3.9 4.0 34.2 36.4 26.9 34.8 8.5 8.3 12.9 9.0 21.6 22.3 18.9 18.3 4.8 5.2 4.8 4.9 2.0 2.1 1.9 2.0 71.2 74.3 65.5 69.1 3.1 6.2 6.7 4.0 5.1 5.4 4.9 5.7	Sep-18 Sep-19 May-20 Jun-20 Jul-20 85.2 93.5 85.8 85.1 86.6 4.5 4.7 3.9 4.0 4.4 34.2 36.4 26.9 34.8 43.8 8.5 8.3 12.9 9.0 8.6 21.6 22.3 18.9 18.3 17.8 4.8 5.2 4.8 4.9 4.9 2.0 2.1 1.9 2.0 2.4 71.2 74.3 65.5 69.1 77.5 3.1 6.2 6.7 4.0 3.3 5.1 5.4 4.9 5.7 6.1	Sep-18 Sep-19 May-20 Jun-20 Jul-20 Aug-20 85.2 93.5 85.8 85.1 86.6 86.9 4.5 4.7 3.9 4.0 4.4 4.9 34.2 36.4 26.9 34.8 43.8 40.6 8.5 8.3 12.9 9.0 8.6 8.1 21.6 22.3 18.9 18.3 17.8 19.6 4.8 5.2 4.8 4.9 4.9 4.8 2.0 2.1 1.9 2.0 2.4 2.2 71.2 74.3 65.5 69.1 77.5 75.3 3.1 6.2 6.7 4.0 3.3 4.0 5.1 5.4 4.9 5.7 6.1 6.3	Sep-18 Sep-19 May-20 Jun-20 Jul-20 Aug-20 Sep-20 85.2 93.5 85.8 85.1 86.6 86.9 86.1 4.5 4.7 3.9 4.0 4.4 4.9 4.1 34.2 36.4 26.9 34.8 43.8 40.6 38.4 8.5 8.3 12.9 9.0 8.6 8.1 7.8 21.6 22.3 18.9 18.3 17.8 19.6 19.8 4.8 5.2 4.8 4.9 4.9 4.8 4.8 2.0 2.1 1.9 2.0 2.4 2.2 2.2 71.2 74.3 65.5 69.1 77.5 75.3 73.0 3.1 6.2 6.7 4.0 3.3 4.0 3.5 5.1 5.4 4.9 5.7 6.1 6.3 6.7	Sep-18 Sep-19 May-20 Jun-20 Jul-20 Aug-20 Sep-20 MoM 85.2 93.5 85.8 85.1 86.6 86.9 86.1 ▼ -0.8 4.5 4.7 3.9 4.0 4.4 4.9 4.1 ▼ -0.8 34.2 36.4 26.9 34.8 43.8 40.6 38.4 ▼ -2.1 8.5 8.3 12.9 9.0 8.6 8.1 7.8 ▼ -0.3 21.6 22.3 18.9 18.3 17.8 19.6 19.8 ▲ 0.2 4.8 5.2 4.8 4.9 4.9 4.8 4.8 ▼ 0.0 2.0 2.1 1.9 2.0 2.4 2.2 2.2 ▼ 0.0 71.2 74.3 65.5 69.1 77.5 75.3 73.0 ▼ -0.6 5.1 5.4 4.9 5.7 6.1 6.3 6.7 ▲ 0.5

Source: Bloomberg, analytix.ai



Regional S/D Models Storage Projection

Week Ending 4-Sep

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	8.9	1.2	10.1	70
East	1.1	1.8	2.9	20
Midwest	3.9	0.5	4.4	31
Mountain	3.4	-2.9	0.5	3
South Central	-0.5	2.3	1.9	13
Pacific	1.0	-0.6	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 Storage								
Week Ending	Projection								
11-Sep	74								
18-Sep	99								
25-Sep	99								

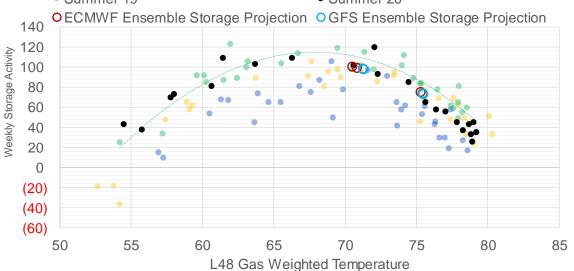
Weather Storage Model - Next 4 Week Forecast

Summer 17

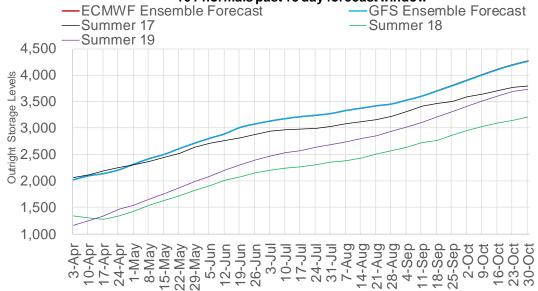
Summer 18

Summer 19

• Summer 20



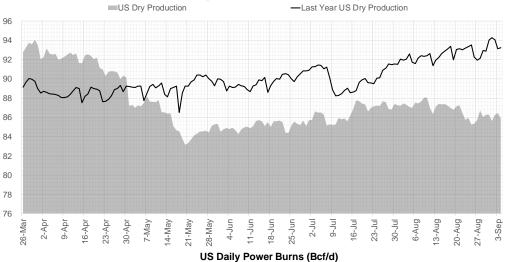
Weather Based End of Winter Projection (Bcf) 10Y normals past 15 day forecast window

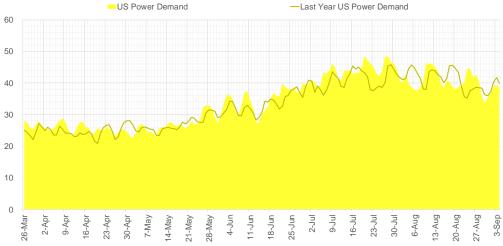




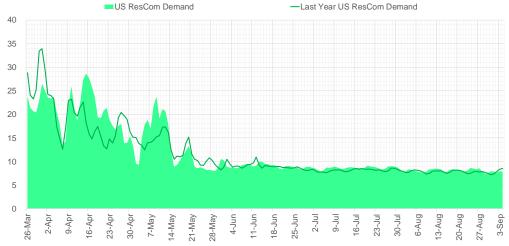
Supply - Demand Trends

US Dry Natural Gas Production (Bcf/d)





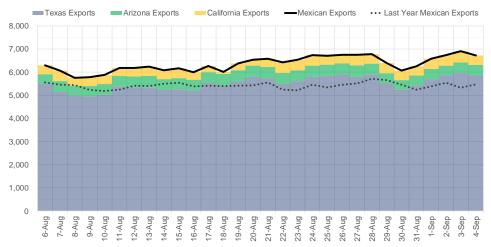
US Daily ResCom Consumption(Bcf/d)



Source: Bloomberg



Mexican Exports - Last 30 days (MMcf/d)



Net LNG Exports - Last 30 days (MMcf/d) Cameron Exports Cove Point Exports Elba Exports Sabine Pass Exports Everett Exports Freeport Exports Golden Pass Exports Lake Charles Exports Neptune Exports Northeast Exports Chorpus Christie Import LNG Exports 8,000 7,000 6.000 5,000 4,000 3,000 2,000 1,000 0 (1,000)19-Aug 20-Aug 21-Aug 22-Aug 17-Aug 24-Aug

Source: Bloomberg



Market Report

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
10	2020	Р	2.00	13554	10	2020	Р	2.00	48534
10	2020	C	2.75	11597	10	2020	Р	1.50	44773
10	2020	P	2.25	9287	10	2020	С	3.00	44118
10	2020	C	3.00	9048	10	2020	С	2.75	42713
4	2021	Č	5.00	7695	10	2020	C	2.50	34205
10	2020	Ċ	3.25	6661	10	2020	P	1.60	34024
10	2020	P	1.90	5306	3	2021	Р	2.00	32639
11	2020	C	5.00	5010	10	2020	Р	1.75	30569
10	2020	Ċ	2.50	3728	10	2020	Р	1.25	28900
10	2020	C	2.80	3160	4	2021	С	5.00	27737
10	2020	P	2.10	3139	3	2021	С	3.25	25873
10	2020	r P	2.05	2845	3	2021	С	4.00	24679
10	2020	P	2.05	2845	10	2020	P	1.00	24016
10	2020	C	2.15	2811	11	2020	С	3.50	23884
10		P			10	2020	Р	2.25	23637
	2020	C	1.85	2522	1	2021	С	4.50	23116
11	2020	P	4.50	2501	10	2020	C	3.25	22754
10	2020 2020	P	2.40 2.20	2427 2307	12	2020	Р	2.00	22653
10					11	2020	Р	2.00	22325
10	2020	С	2.55	2172	3	2021	С	3.00	22261
11	2020	С	3.10	2097	10	2020	P	2.10	22174
2	2021	С	5.00	2000	1	2021	С	3.50	22012
10	2020	С	2.65	1877	10	2020	С	2.10	21985
12	2020	Р	2.50	1802	3	2021	С	3.50	20231
3	2021	P	2.00	1775	3	2021	С	6.00	20080
4	2021	С	4.00	1772	10	2020	С	3.50	19504
11	2020	С	3.00	1559	1	2021	С	5.00	19306
11	2020	P	2.25	1559	1	2021	С	3.75	19295
10	2020	С	2.85	1531	10	2020	Р	1.30	19133
10	2020	С	2.90	1384	10	2020	С	2.00	18664
10	2020	P	2.50	1335	10	2020	Р	1.80	18494
10	2020	P	1.80	1283	11	2020	Р	2.25	18352
11	2020	P	1.50	1272	2	2021	С	5.00	17295
12	2020	С	4.00	1240	10	2020	С	2.25	17293
12	2020	C	3.75	1200	11	2020	С	3.00	16887
10	2020	С	3.50	1193	1	2021	С	3.00	16783
10	2020	P	1.95	1115	11	2020	Р	2.50	16364
5	2021	С	3.50	1100	11	2020	С	5.00	15470
11	2020	С	3.30	1060	11	2020	С	3.25	15233
5	2021	C	5.00	1050	12	2020	С	4.00	15165
11	2020	С	2.90	1017	11	2020	С	2.75	14928
3	2021	С	4.00	1000	1	2021	Р	2.25	14314
6	2021	C	5.00	1000	4	2021	С	3.00	14222
7	2021	С	5.00	1000	10	2020	Р	2.20	14055
8	2021	С	5.00	1000	12	2020	С	3.75	14048
9	2021	С	5.00	1000	10	2020	Р	1.40	13894
10	2021	С	5.00	1000	10	2020	С	2.40	13892
10	2020	С	3.20	972	10	2020	С	2.70	13774
5	2021	С	4.00	900	4	2021	Р	2.00	13744
11	2020	Р	1.75	876	10	2020	Р	1.7	13735

Source: CME, Nasdaq, ICE

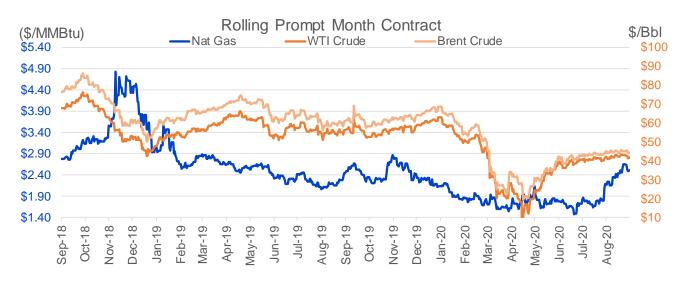


Nat Gas Futures Open Interest

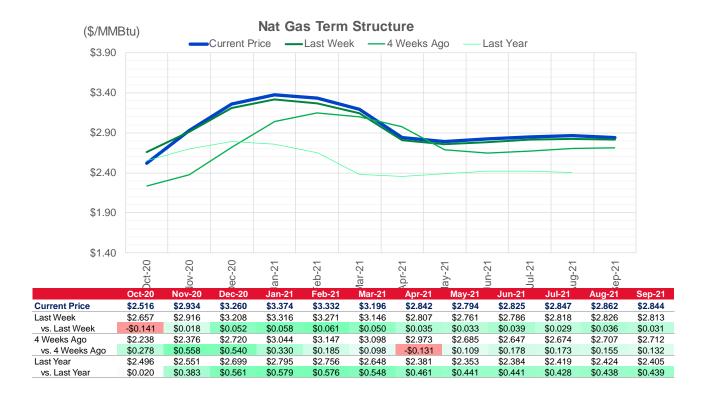
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CMF Henry	CME Henry Hub Futures (10,000 MMBtu) CME Henry Hub Futures Contract Equivalent (10,000 MM							
OIVIL FIOTHY	Current	Prior		FOR JUNE 26	Current	Prior	Daily Change	
OCT 20	211587	217559	-5972	OCT 20	89158	91880	-2721.5	
NOV 20	204150	204561	-411	NOV 20	82217	81908	309.25	
DEC 20	103808	105620	-1812	DEC 20	73661	72839	821.5	
JAN 21	127740	129141	-1401	JAN 21	85225	85000	225.25	
FEB 21	48657	47471	1186	FEB 21	57047	56652	395.25	
MAR 21	98185	97311	874	MAR 21	75890	75657	233.5	
APR 21	78605	79020	-415	APR 21	63856	63371	484.5	
MAY 21	46389	46408	-19	MAY 21	53916	53953	-36.5	
JUN 21	27368	27301	67	JUN 21	50023	50036	-13	
JUL 21	20167	19925	242	JUL 21	52282	52197	85	
AUG 21	20973	20540	433	AUG 21	52474	52529	-55.5	
SEP 21	26774	26970	-196	SEP 21	48834	48896	-62.25	
OCT 21	65255	64901	354	OCT 21	72925	72660	265	
NOV 21	27248	27533	-285	NOV 21	42196	42057	138.75	
DEC 21	23554	23472	82	DEC 21	42566	42354	212.25	
JAN 22	21920	21779	141	JAN 22	36554	36158	396	
FEB 22	11736	11777	-41	FEB 22	31614	31635	-21.5	
MAR 22	17742	17485	257	MAR 22	33577	33686	-109.25	
APR 22	20667	20462	205	APR 22	33880	34060	-179.75	
MAY 22	6029	6008	21	MAY 22	24633	24663	-30.25	
JUN 22	3133	3145	-12	JUN 22	23799	23888	-89.75	
JUL 22	2714	2727	-13	JUL 22	24358	24404	-45.75	
AUG 22	1963	1950	13	AUG 22	24129	24222	-92.5	
SEP 22	2120	2132	-12	SEP 22	23271	23346	-74.75	
OCT 22	3161	3165	-4	OCT 22	24533	24476	56.25	
NOV 22	2207	2104	103	NOV 22	21866	21961	-95.25	
DEC 22	2202	2200	2	DEC 22	23057	23040	17.25	
JAN 23	2868	2868	0	JAN 23	12549	12545	3.5	
FEB 23	858	858	0	FEB 23	11423	11419	3.5	
MAR 23	900	898	2	MAR 23	11757	11897	-140	

Source: CME, ICE







	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	1.63	1.67	0.04
TETCO M3	\$/MMBtu	1.63	1.52	-0.12
FGT Zone 3	\$/MMBtu	1.57	2.68	1.11
Zone 6 NY	\$/MMBtu	1.57	1.49	-0.08
Chicago Citygate	\$/MMBtu	2.18	2.36	0.18
Michcon	\$/MMBtu	2.16	2.22	0.06
Columbia TCO Pool	\$/MMBtu	1.71	1.74	0.03
Ventura	\$/MMBtu	2.15	2.32	0.17
Rockies/Opal	\$/MMBtu	2.42	2.24	-0.18
El Paso Permian Basin	\$/MMBtu	2.12	1.84	-0.28
Socal Citygate	\$/MMBtu	5.00	2.68	-2.32
Malin	\$/MMBtu	2.51	2.59	0.08
Houston Ship Channel	\$/MMBtu	2.45	2.62	0.17
Henry Hub Cash	\$/MMBtu	2.32	2.40	0.08
AECO Cash	C\$/GJ	2.13	2.06	-0.07
Station2 Cash	C\$/GJ	2.23	2.59	0.36
Dawn Cash	C\$/GJ	2.19	2.26	0.07

Source: CME, Bloomberg



					VS	s. 4 Weeks		
	Units	Current Price	vs.	Last Week		Ago	V:	s. Last Year
NatGas Jan/Apr	\$/MMBtu	-0.53	$\overline{}$	-0.023	$\overline{}$	-0.070	$\overline{}$	-0.113
NatGas Mar/Apr	\$/MMBtu	-0.354	$\overline{}$	-0.015	$\overline{}$	-0.642	$\overline{}$	-0.621
NatGas Oct/Nov	\$/MMBtu	0.42	_	0.159	_	0.074		0.364
NatGas Oct/Jan	\$/MMBtu	0.86	A	0.199	A	0.087		0.537
WTI Crude	\$/Bbl	41.67	$\overline{}$	-1.300	_	0.450	$\overline{}$	-14.850
Brent Crude	\$/BbI	44.32	$\overline{}$	-0.730	$\overline{}$	-0.080	$\overline{}$	-17.220
Fuel Oil, NY Harbour 1%	\$/Bbl	98.03	A	0.000	A	0.000		0.000
Heating Oil	cents/Gallon	118.10	$\overline{}$	-3.520	$\overline{}$	-3.890	$\overline{}$	-71.930
Propane, Mt. Bel	cents/Gallon	0.50	$\overline{}$	-0.011	$\overline{}$	-0.006		0.062
Ethane, Mt. Bel	cents/Gallon	0.19	$\overline{}$	-0.051	$\overline{}$	-0.037	$\overline{}$	-0.026
Coal, PRB	\$/MTon	12.30		0.000		0.000		0.150
Coal, ILB	\$/MTon	31.05	_	0.000	_	0.000	$\overline{}$	-4.500