

Market Report

9 September 2020

	Cı	ırrent	Δf	ro	m YD	Δ from 7D Avg
Nat Gas Prompt	\$	2.42	_	\$	0.02	▼ \$ (0.11)

	Cı	urrent	Δf	ror	n YD	Δf	m 7D vg
WTI Prompt	\$	37.44	_	\$	0.68	~	\$ (2.4)

	_	urrent	Λf	ro	m ∨D	∆ fro	m 7D
	C	urreni	ΔΠΟΠ		טו ווו	P	√vg
Brent Prompt	Ф	40.26		Φ	Λ 4 Q	▼ ¢	(2.4)
Prompt	Φ	40.20		φ	0.40	Ψ Φ	(2.4)

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00z GWDD Change

Cooler Change

Warmer Change

ECMWF Ensemble 00z	1-5 Day	6-10 Day	11-15 Day	Total
12 Hr Chg	0.3	1.0	1.2	2.5
24 Hr Chg	-2.1	-3.6	0.9	-4.8
GFS Ensemble 00z	1-5 Day	6-10 Day	11-15 Day	Total
GFS Ensemble 00z 12 Hr Chg	1-5 Day 1.3	6-10 Day -1.2	11-15 Day 2.4	Total 2.5

	Current	Δ from YD	Δ from 7D Avg
US Dry Production	86.7	▼ -1.59	▼ -1.01

	Current	Δ from YD	Δ from 7D Avg
US ResComm	9.9	▼ -0.16	2.02

	Current	Δ from YD Δ from 7D Avg
Net LNG Exports	6.7	△ 0.50 △ 2.46

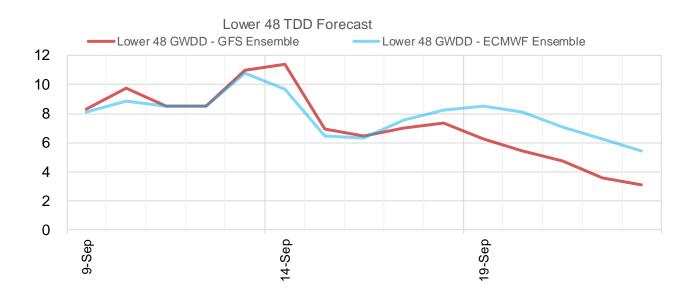
	Current	Δ from YD	Δ from 7D Avg
US Power Burns	35.3	▼ -0.07	▼ -0.57

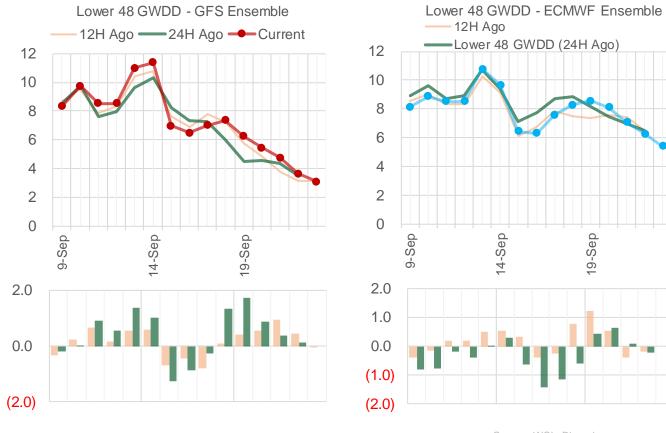
	Current	Δf	rom YD	Δf	rom 7D Avg
Canadian Imports	3.6	_	0.09	~	-0.06

	Current	Δf	rom YD	Δf	rom 7D Avg
Mexican Exports	6.5		0.01	~	-0.12



Short-term Weather Model Outlooks (00z)





Source: WSI, Bloomberg



Market Report

Lower 48 Component Models

Daily Balances

	3-Sep	4-Sep	5-Sep	6-Sep	7-Sep	8-Sep	9-Sep	DoD	vs. 7D
Lower 48 Dry Production	86.6	87.2	88.5	88.4	88.6	88.3	86.7	▼ -1.6	▼ -1.2
Canadian Imports	4.1	3.6	3.5	3.5	3.5	3.5	3.6	▲ 0.1	▼ 0.0
L48 Power	39.4	38.0	34.0	32.6	32.8	35.3	35.3	▼ -0.1	▼ -0.1
L48 Residential & Commercial	7.9	7.8	7.3	7.1	7.5	10.1	9.9	▼ -0.2	2.0
L48 Industrial	20.2	20.3	20.4	20.4	20.5	20.8	21.1	△ 0.3	0.7
L48 Lease and Plant Fuel	4.8	4.9	4.9	4.9	4.9	4.9	4.8	▼ -0.1	▼ -0.1
L48 Pipeline Distribution	2.2	2.2	2.0	1.9	1.9	2.2	2.1	▼ 0.0	0.1
L48 Regional Gas Consumption	74.6	73.1	68.6	66.9	67.7	73.3	73.3	▽ 0.0	2.6
Net LNG Exports	3.9	3.9	4.0	4.1	4.3	6.2	6.7	0.5	2.3
Total Mexican Exports	6.9	6.8	6.5	6.2	6.5	6.5	6.5	▲ 0.0	▼ -0.1
Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error	5.3	7.0	12.9	14.8	13.5	5.8	3.8		

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	86.3	△ 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	7.8	▼ -0.5	▼ -0.4
L48 Industrial	17.4	18.8	19.0	20.4	19.6	19.8	a 0.2	a 0.3
L48 Lease and Plant Fuel	4.9	4.9	4.9	4.8	4.8	4.8	a 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	71.7	▽ -4.9	▼ -4.3
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	3.5	7.2	4.8	5.3	4.1	9.4	5.3	
EIA Reported Daily Storage Activity	4.7	8.3	6.1	6.4	5.0			
Daily Model Error	-1.2	-1.1	-1.3	-1.2	-0.9			

Monthly Balances

9-18 35.2 4.5 34.2	93.5 4.7	May-20 85.8 3.9	Jun-20 85.1 4.0	Jul-20 86.6 4.4	Aug-20 86.9	Sep-20 87.3	MoM ▲ 0.5	vs. LY ▼ -6.1
4.5	4.7						<u> </u>	▼ -6.1
		3.9	4.0	4.4	4.0			
34.2	36.4				4.9	3.8	▼ -1.1	▼ -0.9
	50.4	26.9	34.8	43.8	40.6	35.9	▼ -4.7	▼ -0.5
8.5	8.3	12.9	9.0	8.6	8.1	8.1	△ 0.0	▼ -0.2
21.6	22.3	18.9	18.3	17.8	19.6	20.4	8.0	▼ -1.9
4.8	5.2	4.8	4.9	4.9	4.8	4.9	△ 0.0	▼ -0.3
2.0	2.1	1.9	2.0	2.4	2.2	2.1	▼ -0.1	▼ 0.0
71.2	74.3	65.5	69.1	77.5	75.3	71.4	▼ -3.9	▼ -2.9
3.1	6.2	6.7	4.0	3.3	4.0	4.4	a 0.3	▼ -1.8
5.1	5.4	4.9	5.7	6.1	6.3	6.6	a 0.3	1.2
10.3	12.4	12.6	10.2	4.1	6.1	8.8		
	8.5 21.6 4.8 2.0 71.2 3.1 5.1	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	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	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	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	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	8.5 8.3 12.9 9.0 8.6 8.1 8.1 21.6 22.3 18.9 18.3 17.8 19.6 20.4 4.8 5.2 4.8 4.9 4.9 4.8 4.9 2.0 2.1 1.9 2.0 2.4 2.2 2.1 71.2 74.3 65.5 69.1 77.5 75.3 71.4 3.1 6.2 6.7 4.0 3.3 4.0 4.4 5.1 5.4 4.9 5.7 6.1 6.3 6.6	8.5 8.3 12.9 9.0 8.6 8.1 8.1 \triangleq 0.0 21.6 22.3 18.9 18.3 17.8 19.6 20.4 \triangleq 0.8 4.8 5.2 4.8 4.9 4.9 4.8 4.9 \triangleq 0.0 2.0 2.1 1.9 2.0 2.4 2.2 2.1 \checkmark -0.1 71.2 74.3 65.5 69.1 77.5 75.3 71.4 \checkmark -3.9 3.1 6.2 6.7 4.0 3.3 4.0 4.4 \triangleq 0.3 5.1 5.4 4.9 5.7 6.1 6.3 6.6 \triangleq 0.3

Source: Bloomberg, analytix.ai



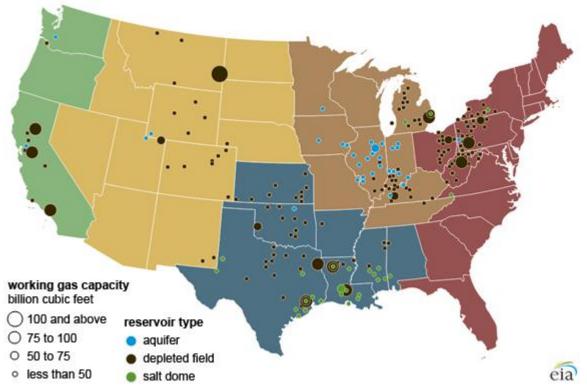
Regional S/D Models Storage Projection

Week Ending 4-Sep

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	9.1	1.2	10.3	71
East	1.2	1.8	3.0	20
Midwest	4.0	0.5	4.5	31
Mountain	3.4	-2.9	0.5	3
South Central	-0.4	2.3	2.0	14
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	78								
18-Sep	93								
25-Sep	102								

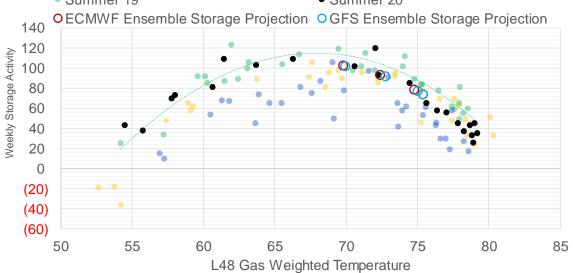
Weather Storage Model - Next 4 Week Forecast

Summer 17

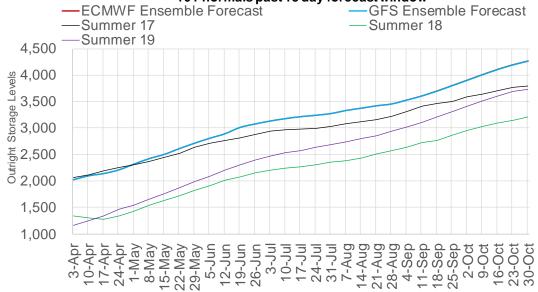
Summer 18

Summer 19

• Summer 20



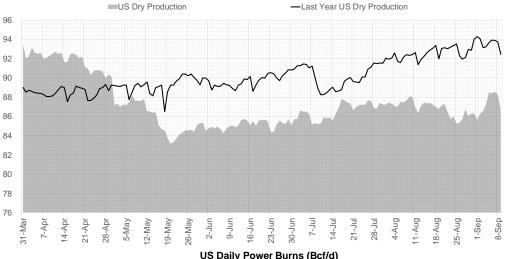
Weather Based End of Winter Projection (Bcf) 10Y normals past 15 day forecast window



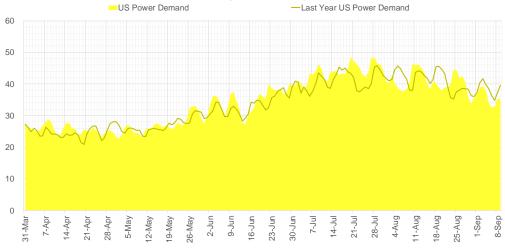


Supply - Demand Trends

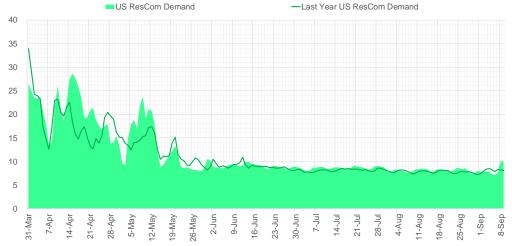
US Dry Natural Gas Production (Bcf/d)



US Daily Power Burns (Bcf/d)



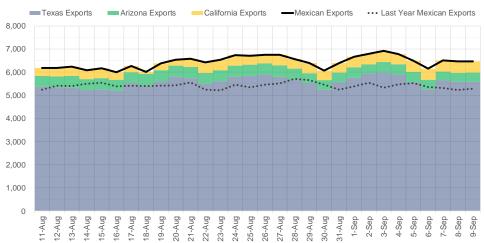
US Daily ResCom Consumption(Bcf/d)

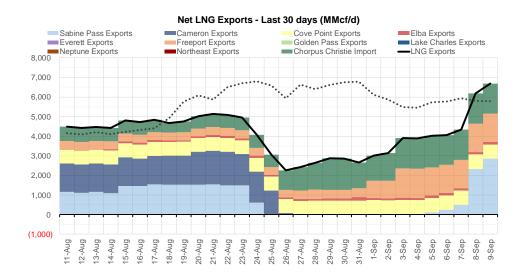


Source: Bloomberg



Mexican Exports - Last 30 days (MMcf/d)





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	CUMULATIVI
10	2020	С	3.00	19234	10	2020	Р	2.00	50738
10	2020	Р	2.25	14884	10	2020	С	3.00	47076
10	2020	Р	2.20	10566	10	2020	Р	1.50	44771
10	2020	С	2.75	9860	10	2020	С	2.75	43128
10	2020	Č	3.25	7876	10	2020	Р	2.25	35479
10	2020	P	2.00	5494	10	2020	С	2.50	33954
10	2020	C	2.80	4795	10	2020	Р	1.60	33878
10	2020	č	3.50	3760	3	2021	Р	2.00	32439
10	2020	Č	2.60	2666	4	2021	С	5.00	30337
10	2020	Č	3.20	2543	10	2020	Р	1.75	30259
3	2021	Č	15.00	2500	10	2020	Р	1.25	28897
11	2020	P	2.00	2230	3	2021	С	3.25	26418
10	2020	C	2.50	2189	3	2021	C	4.00	26231
11	2020	P	2.25		10	2020	C	3.25	24678
				2159	10	2020	P	1.00	24016
10	2020	Р	2.50	2066	11	2020	C	3.50	23813
10	2020	Р	2.30	1736	11	2020	Č	5.00	23148
10	2020	C	2.65	1655	10	2020	P	2.10	23141
10	2020	P	1.70	1630	12	2020	Р	2.00	23132
11	2020	Р	2.80	1509	1	2021	C	4.50	23116
10	2020	С	4.00	1500	11	2020	P	2.00	22494
10	2020	Р	1.90	1453	1	2021	C	3.50	22049
10	2020	Р	1.95	1041	10	2020	Ċ	2.10	21985
10	2020	Р	1.80	985	3	2021	č	3.00	21961
11	2020	Р	2.50	962	10	2020	P	1.80	21043
10	2020	Р	2.10	952	10	2020	P	2.20	20938
11	2020	С	3.50	883	10	2020	C	3.50	20879
11	2020	С	3.00	880	3	2020	Č	6.00	20079
10	2020	Р	1.75	794	3	2021	Č	3.50	19431
10	2020	С	2.90	768	1	2021	Č	3.75	19295
1	2023	С	3.00	730	10	2020	P	1.30	19133
1	2023	С	4.00	730	11	2020	P	2.25	18876
2	2023	С	3.00	730	10	2020	C	2.25	18664
2	2023	C	4.00	730	10	2020	C	5.00	17918
3	2023	C	3.00	730	10	2021	C	2.25	17916
3	2023	C	4.00	730	2	2020	C	5.00	17301
4	2023	Ċ	3.00	730	1	2021	C	3.00	16783
4	2023	Č	4.00	730	11	2021	C		16503
5	2023	Č	3.00	730	11	2020	P	3.00	
5	2023	Č	4.00	730	10	2020	P P	2.50 1.90	16487 16207
6	2023	Č	3.00	730			P P		
6	2023	C	4.00	730	12 12	2020		2.50	15390 15202
7	2023	C	3.00	730		2020	C C	4.00	
7	2023	C	4.00	730	11	2020		3.25	14988
8	2023	C	3.00	730	11	2020	С	2.75	14575
					11	2020	С	4.00	14406
8	2023	С	4.00	730	10	2020	P	1.40	14345
9	2023	С	3.00	730	1	2021	P	2.25	14314
9	2023	С	4.00	730	4	2021	С	3.00	14222
10	2023	С	3.00	730	10	2020	С	2.70	14160
10	2023	С	4.00	730	6	2021	С	4	14075

Source: CME, Nasdaq, ICE

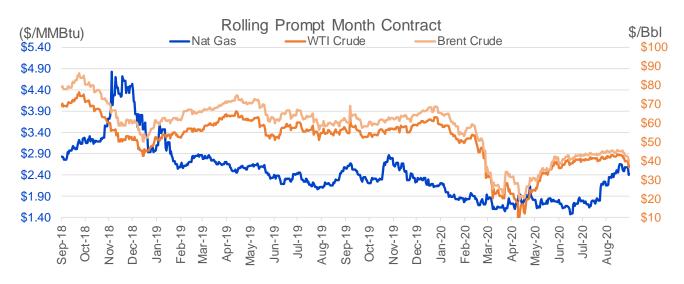


Nat Gas Futures Open Interest

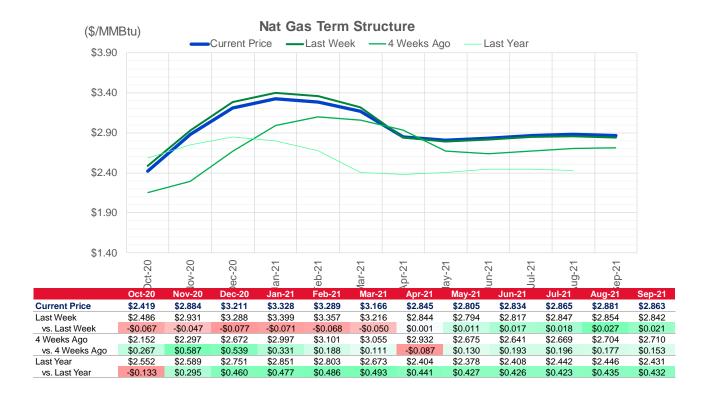
CME.	and	ICE	Com	hined
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CMF Henry	Hub Futures (10				Futures Co	ontract Equiva	lent (10,000 MM
	Current	Prior		FOR JUNE 26	Current	Prior	Daily Change
OCT 20	190501	211662	-21161	OCT 20	91315	89175	2140
NOV 20	211499	205877	5622	NOV 20	82889	83693	-804
DEC 20	100715	102742	-2027	DEC 20	74539	75034	-495
JAN 21	131012	130022	990	JAN 21	85637	85481	156.25
FEB 21	51781	51531	250	FEB 21	57690	57618	72.25
MAR 21	102119	101206	913	MAR 21	77082	76132	950
APR 21	78707	78587	120	APR 21	63898	64180	-282.75
MAY 21	45765	46041	-276	MAY 21	55067	54211	856.5
JUN 21	28451	28312	139	JUN 21	50413	50168	244.75
JUL 21	20266	20361	-95	JUL 21	52681	52416	264.25
AUG 21	21283	21211	72	AUG 21	53023	52799	224.5
SEP 21	27464	26926	538	SEP 21	49306	49088	217.25
OCT 21	66362	65397	965	OCT 21	73595	73152	443
NOV 21	27289	27274	15	NOV 21	42306	42222	84.25
DEC 21	23856	23540	316	DEC 21	42732	42638	93.75
JAN 22	22498	21771	727	JAN 22	36816	36596	219.5
FEB 22	12529	12436	93	FEB 22	31925	31746	179
MAR 22	17732	17667	65	MAR 22	33821	33633	188.5
APR 22	21189	21081	108	APR 22	33694	33887	-192.5
MAY 22	6035	6037	-2	MAY 22	24790	24662	128.25
JUN 22	3116	3121	-5	JUN 22	23812	23797	15
JUL 22	2928	2725	203	JUL 22	24500	24372	128.25
AUG 22	1960	1971	-11	AUG 22	24199	24184	15.5
SEP 22	2058	2054	4	SEP 22	23292	23269	22.5
OCT 22	3295	3281	14	OCT 22	24885	24708	177
NOV 22	2325	2148	177	NOV 22	22017	22000	17.5
DEC 22	2223	2218	5	DEC 22	23112	23116	-4.5
JAN 23	2873	2873	0	JAN 23	12423	12406	17.5
FEB 23	858	858	0	FEB 23	11421	11405	16
MAR 23	900	900	0	MAR 23	11831	11744	87.25

Source: CME, ICE







	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	2.40	1.64	-0.76
TETCO M3	\$/MMBtu	1.65	1.39	-0.26
FGT Zone 3	\$/MMBtu	1.73	2.51	0.78
Zone 6 NY	\$/MMBtu	1.73	1.13	-0.60
Chicago Citygate	\$/MMBtu	1.99	2.18	0.19
Michcon	\$/MMBtu	1.99	2.06	0.07
Columbia TCO Pool	\$/MMBtu	1.70	1.58	-0.12
Ventura	\$/MMBtu	1.95	2.16	0.21
Rockies/Opal	\$/MMBtu	2.41	2.06	-0.36
El Paso Permian Basin	\$/MMBtu	1.01	1.71	0.70
Socal Citygate	\$/MMBtu	3.23	2.53	-0.70
Malin	\$/MMBtu	2.42	2.33	-0.09
Houston Ship Channel	\$/MMBtu	2.21	2.44	0.23
Henry Hub Cash	\$/MMBtu	2.35	2.24	-0.11
AECO Cash	C\$/GJ	1.98	1.93	-0.05
Station2 Cash	C\$/GJ	1.92	2.44	0.52
Dawn Cash	C\$/GJ	2.04	2.09	0.05

Source: CME, Bloomberg



					V	s. 4 Weeks		
	Units	Current Price	vs.	Last Week		Ago	٧s	s. Last Year
NatGas Jan/Apr	\$/MMBtu	-0.48	_	0.072	$\overline{}$	-0.057	$\overline{}$	-0.034
NatGas Mar/Apr	\$/MMBtu	-0.321	_	0.051	$\overline{}$	-0.578	$\overline{}$	-0.599
NatGas Oct/Nov	\$/MMBtu	0.47	_	0.020	_	0.090		0.412
NatGas Oct/Jan	\$/MMBtu	0.91	$\overline{}$	-0.004		0.105		0.581
WTI Crude	\$/Bbl	37.44	$\overline{}$	-4.070	$\overline{}$	-5.230	$\overline{}$	-18.310
Brent Crude	\$/Bbl	40.26	$\overline{}$	-4.170	$\overline{}$	-5.170	$\overline{}$	-20.550
Fuel Oil, NY Harbour 1%	\$/Bbl	98.03	A	0.000	_	0.000		0.000
Heating Oil	cents/Gallon	109.10	$\overline{}$	-9.750	$\overline{}$	-16.620	$\overline{}$	-81.220
Propane, Mt. Bel	cents/Gallon	0.46	$\overline{}$	-0.040	$\overline{}$	-0.042		0.030
Ethane, Mt. Bel	cents/Gallon	0.20	$\overline{}$	-0.006	$\overline{}$	-0.032	$\overline{}$	-0.028
Coal, PRB	\$/MTon	12.30	_	0.000		0.000		0.150
Coal, ILB	\$/MTon	31.05	_	0.000	_	0.000	$\overline{}$	-4.500