

# **Market Report**

# 28 September 2020

	Cı	urrent	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$	2.10	<b>&gt;</b> \$ (0.04)	<b>\$</b> 0.03

	С	urrent	Δ	fror	n YD		om 7D Avg
WTI Prompt	\$	40.40	_	\$	0.15	<u></u>	\$ 0.4

	<u></u>	urrant	Λf	ro	m ∨D	Δ	from	17D
	C	urreni	Δ from	טו ווו	Avg		g	
Brent Prompt	\$	42.07	_	\$	0.15	_	\$	0.3

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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	-3.9	2.9	-1.3
24 Hr Chg	-0.4	-3.7	0.5	-3.6
GFS Ensemble 00z	1-5 Day	6-10 Day	11-15 Day	Total
GFS Ensemble 00z 12 Hr Chg	1-5 Day -1.2	6-10 Day -4.9	11-15 Day 1.2	Total -4.9

	Current	Δ from YD	Δ from 7D Avg
US Dry Production	86.4	▼ -0.06	<b>0.85</b>

	Current	Δf	rom YD	Δf	rom 7D Avg
US ResComm	9.5		1.49		0.86

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	6.1	▼ -0.56	<b>a</b> 0.30

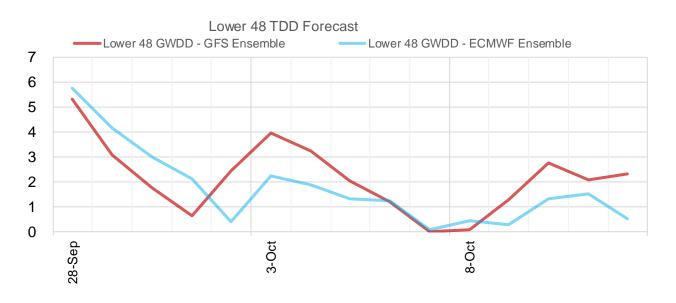
	Current	Δf	rom YD	Δf	rom 7D Avg
US Power Burns	32.1		2.10		1.23

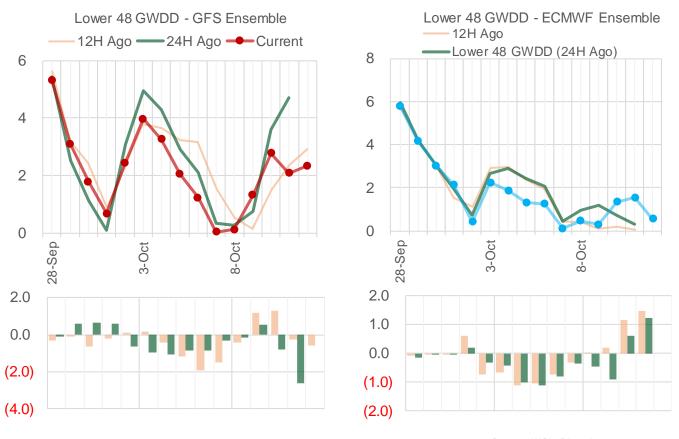
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	3.6	<b>▼</b> -0.07	<b>▼</b> -0.03

	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.3	<b>a</b> 0.11	▼ -0.14



# Short-term Weather Model Outlooks (00z)





Source: WSI , Bloomberg



# **Market Report**

# Lower 48 Component Models

#### **Daily Balances**

	22-Sep	23-Sep	24-Sep	25-Sep	26-Sep	27-Sep	28-Sep	DoD	vs. 7D
Lower 48 Dry Production	85.6	83.7	84.9	85.1	86.3	86.5	86.4	<b>▽ -0.1</b>	<b>△</b> 1.1
Canadian Imports	3.4	3.6	3.8	3.9	3.7	3.7	3.6	<b>▽ -0.1</b>	▼ 0.0
L48 Power	31.3	32.5	32.5	30.8	28.8	30.0	32.1	<b>2.1</b>	<b>▲</b> 1.1
L48 Residential & Commercial	10.2	8.1	7.9	7.7	7.3	8.0	9.5	<b>1.5</b>	<b>1.3</b>
L48 Industrial	18.5	18.6	19.0	19.4	19.8	20.1	20.3	<b>△</b> 0.2	<b>1.1</b>
L48 Lease and Plant Fuel	4.8	4.7	4.7	4.7	4.8	4.8	4.8	▼ 0.0	<b>a</b> 0.1
L48 Pipeline Distribution	2.0	1.9	1.9	1.8	1.7	1.8	2.0	<b>△</b> 0.2	<b>a</b> 0.1
L48 Regional Gas Consumption	66.7	65.8	66.0	64.5	62.4	64.7	68.7	<b>4.0</b>	<b>3.6</b>
Net LNG Exports	3.9	5.3	6.1	6.5	6.9	6.6	6.1	<b>▽ -0.6</b>	<b>△</b> 0.2
Total Mexican Exports	6.7	6.6	6.3	6.6	6.3	6.2	6.3	<b>△</b> 0.1	▼ -0.2
Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error	11.7	9.6	10.2	11.4	14.5	12.7	9.0		

#### **EIA Storage Week Balances**

	21-Aug	28-Aug	4-Sep	11-Sep	18-Sep	25-Sep	WoW	vs. 4W
Lower 48 Dry Production	87.2	86.0	86.3	88.3	87.1	86.2	<b>▽ -0.9</b>	▼ -0.7
Canadian Imports	4.7	5.2	4.4	3.8	3.8	3.6	▽ -0.2	▽ -0.7
L48 Power	40.0	41.6	37.3	35.2	33.2	30.6	▼ -2.7	▼ -6.3
L48 Residential & Commercial	8.2	8.3	7.8	8.8	8.5	10.4	<b>1.9</b>	<b>2.0</b>
L48 Industrial	20.4	19.6	19.6	18.8	20.4	18.9	▼ -1.5	▼ -0.7
L48 Lease and Plant Fuel	4.8	4.8	4.8	4.9	4.9	4.8	▼ -0.1	▼ 0.0
L48 Pipeline Distribution	2.2	2.3	2.1	2.1	2.0	1.9	▼ 0.0	▼ -0.2
L48 Regional Gas Consumption	75.6	76.6	71.5	69.8	68.9	66.5	▼ -2.4	▼ -5.2
Net LNG Exports	4.7	3.9	3.0	5.2	7.3	5.8	▼ -1.4	<b>1.0</b>
Total Mexican Exports	6.2	6.6	6.5	6.4	6.2	6.4	<b>a</b> 0.2	▽ 0.0
Implied Daily Storage Activity	5.3	4.1	9.6	10.8	8.4	11.0	2.6	
EIA Reported Daily Storage Activity	6.4	5.0	10.0	12.7	9.4			
Daily Model Error	-1.1	-0.9	-0.4	-1.9	-1.0			

### **Monthly Balances**

93.5 4.7	May-20 85.8 3.9	Jun-20 85.1	Jul-20 86.6	Aug-20 86.8	Sep-20 86.9	MoM <b>△</b> 0.1	vs. LY ▼ -6.6
4.7			86.6	86.8	86.9	A 0.1	W 66
	3.9	4.0			- 3.0	- 0.1	▼ <b>-0.0</b>
		4.0	4.4	4.8	3.8	▼ -1.0	▼ -0.9
36.4	26.9	34.8	43.8	40.6	33.2	▼ -7.3	▼ -3.2
8.3	12.9	9.0	8.6	8.1	8.9	<b>8.0</b>	<b>a</b> 0.6
22.2	18.9	18.4	17.8	19.5	19.4	▼ -0.1	▼ -2.8
5.2	4.8	4.9	4.9	4.8	4.8	<b>△</b> 0.0	▼ -0.4
2.1	1.9	2.0	2.4	2.2	2.0	▼ -0.2	▼ -0.1
74.3	65.5	69.1	77.5	75.3	68.4	▼ -6.9	▼ -5.9
6.2	6.7	4.0	3.3	4.0	5.9	<b>1.8</b>	▼ -0.3
5.4	4.9	5.7	6.1	6.3	6.4	<b>▲ 0.1</b>	<b>1.0</b>
12.4	12.6	10.2	4.1	6.1	10.1		
	22.2 5.2 2.1 74.3 6.2 5.4	8.3 12.9 22.2 18.9 5.2 4.8 2.1 1.9 74.3 65.5 6.2 6.7 5.4 4.9	8.3     12.9     9.0       22.2     18.9     18.4       5.2     4.8     4.9       2.1     1.9     2.0       74.3     65.5     69.1       6.2     6.7     4.0       5.4     4.9     5.7	8.3     12.9     9.0     8.6       22.2     18.9     18.4     17.8       5.2     4.8     4.9     4.9       2.1     1.9     2.0     2.4       74.3     65.5     69.1     77.5       6.2     6.7     4.0     3.3       5.4     4.9     5.7     6.1	8.3     12.9     9.0     8.6     8.1       22.2     18.9     18.4     17.8     19.5       5.2     4.8     4.9     4.9     4.8       2.1     1.9     2.0     2.4     2.2       74.3     65.5     69.1     77.5     75.3       6.2     6.7     4.0     3.3     4.0       5.4     4.9     5.7     6.1     6.3	8.3     12.9     9.0     8.6     8.1     8.9       22.2     18.9     18.4     17.8     19.5     19.4       5.2     4.8     4.9     4.9     4.8     4.8       2.1     1.9     2.0     2.4     2.2     2.0       74.3     65.5     69.1     77.5     75.3     68.4       6.2     6.7     4.0     3.3     4.0     5.9       5.4     4.9     5.7     6.1     6.3     6.4	8.3       12.9       9.0       8.6       8.1       8.9       ▲ 0.8         22.2       18.9       18.4       17.8       19.5       19.4       ▼ -0.1         5.2       4.8       4.9       4.9       4.8       4.8       ▲ 0.0         2.1       1.9       2.0       2.4       2.2       2.0       ▼ -0.2         74.3       65.5       69.1       77.5       75.3       68.4       ▼ -6.9         6.2       6.7       4.0       3.3       4.0       5.9       ▲ 1.8         5.4       4.9       5.7       6.1       6.3       6.4       ▲ 0.1

Source: Bloomberg, analytix.ai



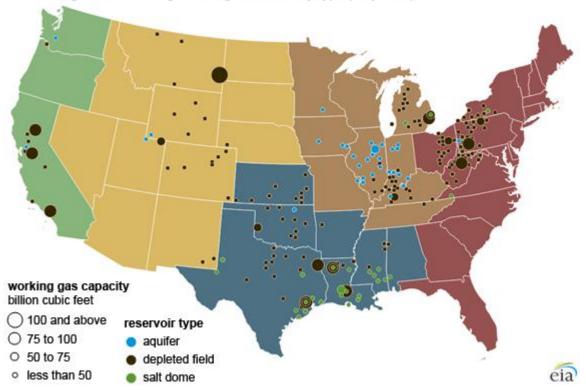
## Regional S/D Models Storage Projection

Week Ending 25-Sep

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	10.8	1.4	12.2	85
East	8.0	1.7	2.6	18
Midwest	3.5	0.4	3.9	27
Mountain	4.0	-3.0	1.0	7
South Central	1.0	2.8	3.9	27
Pacific	1.4	-0.5	8.0	6

<sup>\*</sup>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								
2-Oct	102								
9-Oct	100								
16-Oct	98								

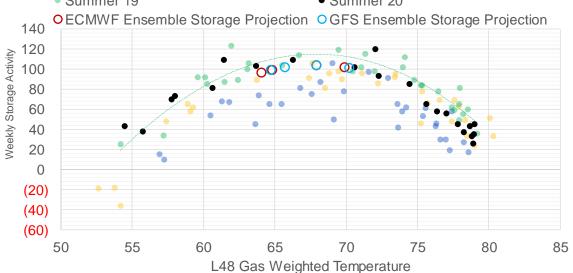
#### Weather Storage Model - Next 4 Week Forecast

Summer 17

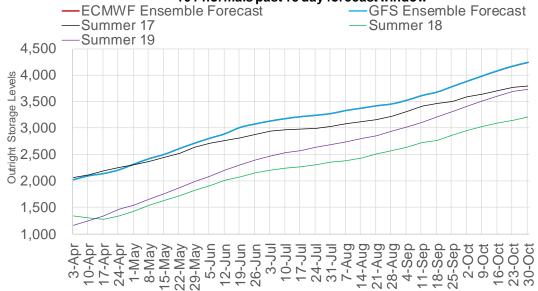
Summer 18

Summer 19

• Summer 20



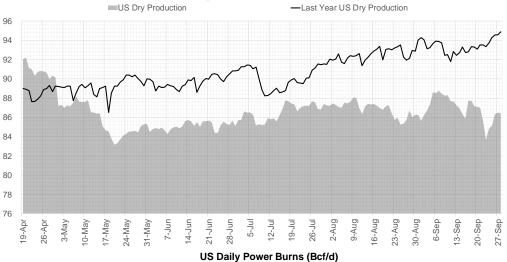
#### Weather Based End of Winter Projection (Bcf) 10Y normals past 15 day forecast window

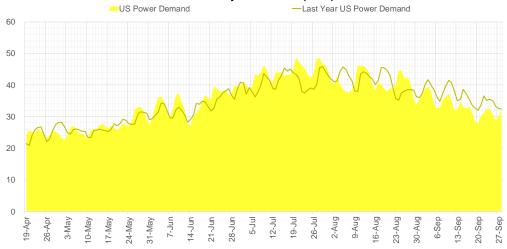




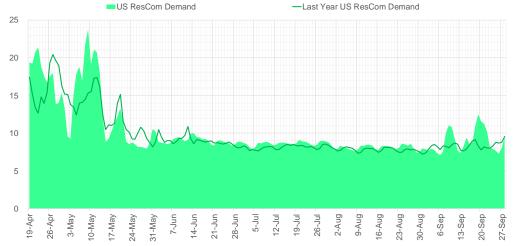
### Supply - Demand Trends

#### US Dry Natural Gas Production (Bcf/d)





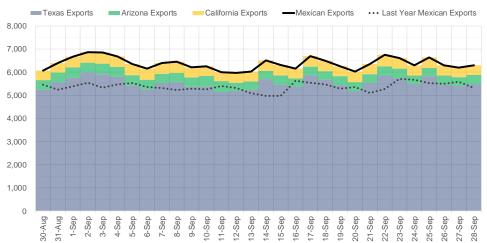
#### US Daily ResCom Consumption(Bcf/d)

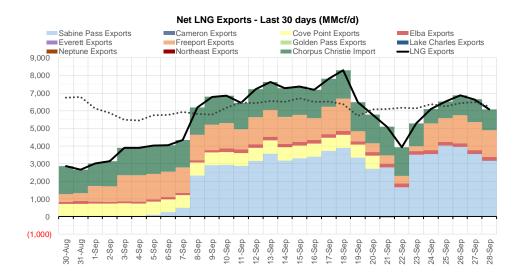


Source: Bloomberg



#### Mexican Exports - Last 30 days (MMcf/d)





Source: Bloomberg



# **Market Report**

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

			<u>'</u>		<u> </u>				
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
11	2020	Р	2.00	12283	10	2020	С	2.75	49746
11	2020	Р	2.25	6297	10	2020	С	3.00	48326
10	2020	С	2.25	4911	10	2020	Р	2.00	45807
11	2020	Ċ	3.00	4870	10	2020	Р	1.50	42161
11	2020	P	2.50	4469	10	2020	Р	2.25	37327
1	2021	C	6.00	4001	10	2020	Р	1.75	37297
10	2020	P	2.15	3948	10	2020	Р	1.60	35614
10	2020	C	2.20	3205	10	2020	С	2.50	34516
10	2020	P	2.25	3029	3	2021	Р	2.00	33102
10	2020	С	2.30	2800	4	2021	С	5.00	32747
1	2021	Č	5.00	2710	11	2020	Р	2.00	30552
11	2020	Č	3.50	2667	11	2020	С	3.50	28850
4	2022	Č	4.00	2400	11	2020	С	5.00	28629
5	2022	Č	4.00	2400	3	2021	С	4.00	27960
6	2022	Č	4.00	2400	3	2021	С	3.25	27403
7	2022	Č	4.00	2400	10	2020	Р	1.25	27111
8	2022	C	4.00	2400	10	2020	Р	2.10	26373
9	2022	C	4.00	2400	10	2020	С	2.25	25421
10	2022	C	4.00	2400	12	2020	Р	2.00	24704
					10	2020	Р	1.80	24389
1	2021	C P	7.00	2001	3	2021	С	6.00	24060
11	2020		2.60	1769	10	2020	Р	1.90	24047
10	2020	P	2.10	1763	11	2020	Р	2.25	23937
10	2020	P	2.20	1731	10	2020	С	3.25	23426
11	2020	С	2.50	1726	1	2021	С	4.50	23401
12	2020	P	2.25	1529	10	2020	С	2.00	23200
1	2021	P P	2.00	1500	1	2021	С	3.50	23069
11	2020		2.80	1471	10	2020	Р	1.00	22550
11	2020	P	2.75	1322	10	2020	Р	2.20	22165
11	2020	С	3.25	1287	3	2021	С	3.00	22162
12	2020	P	2.50	1107	12	2020	Р	2.50	22119
11	2020	С	3.10	990	10	2020	С	2.10	22006
3	2021	С	5.50	885	10	2020	Р	1.30	20777
10	2020	С	2.35	786	11	2020	С	3.00	19815
3	2021	С	5.00	775	3	2021	С	3.50	19604
11	2020	С	2.75	767	10	2020	С	2.80	19238
2	2021	P	2.50	745	12	2020	С	4.00	19186
10	2020	P	2.00	731	1	2021	С	5.00	19147
2	2021	P	3.25	700	11	2020	Р	2.50	18855
11	2020	C	2.90	681	10	2020	С	3.50	18823
11	2020	Р	2.70	680	10	2020	Р	1.85	18325
11	2020	Р	2.65	676	10	2020	С	2.60	17813
11	2020	P	2.40	627	10	2020	С	2.40	17763
11	2020	P	1.75	613	11	2020	С	3.25	17542
11	2020	С	5.00	600	11	2020	С	4.00	17278
11	2020	Р	2.45	577	2	2021	С	5.00	17247
11	2020	P	2.55	530	1	2021	С	3.00	16884
5	2021	С	3.00	525	1	2021	Р	2.50	16778
1	2021	С	4.00	500	1	2021	С	3.75	16453
1	2021	С	4.25	500	3	2021	С	7	16227

Source: CME, Nasdaq, ICE

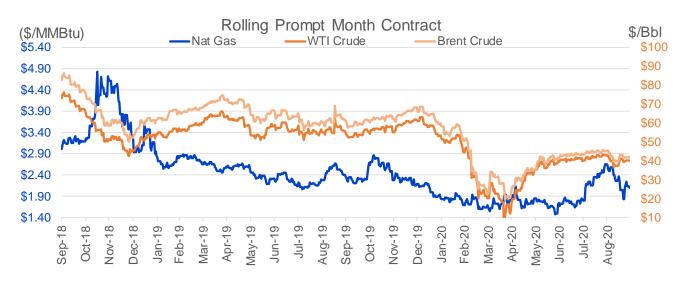


# Nat Gas Futures Open Interest

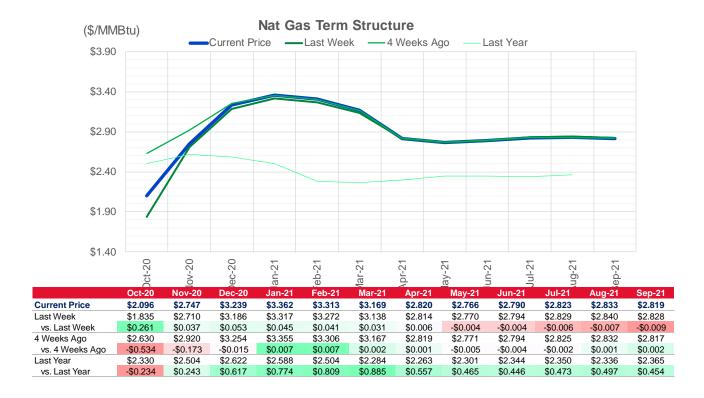
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CME Henry Hub Futures (10,000 MMBtu)  CME Henry Hub Futures Contract Equivalent (10,000 MM								
CIVIE Henry								
	Current	Prior		FOR JUNE 26	Current	Prior	Daily Change	
OCT 20	2221	13518	-11297	OCT 20	73364	72427	937.5	
NOV 20	285501	285934	-433	NOV 20	79275	82662	-3387.25	
DEC 20	137558	137086	472	DEC 20	76919	77303	-383.75	
JAN 21	139219	144402	-5183	JAN 21	87784	87568	215.25	
FEB 21	61606	60069	1537	FEB 21	61416	60617	798.5	
MAR 21	118484	120284	-1800	MAR 21	80319	79610	708.5	
APR 21	83171	80429	2742	APR 21	65001	64669	332.25	
MAY 21	47350	47798	-448	MAY 21	58237	57457	780.25	
JUN 21	31501	31065	436	JUN 21	52891	52718	173	
JUL 21	20300	20111	189	JUL 21	55148	55179	-31	
AUG 21	26025	25181	844	AUG 21	58375	55268	3107.5	
SEP 21	33063	32442	621	SEP 21	52564	51856	707.75	
OCT 21	75811	75916	-105	OCT 21	78742	77884	857.75	
NOV 21	28633	28332	301	NOV 21	45000	44641	359.25	
DEC 21	25386	25171	215	DEC 21	44624	44267	356.75	
JAN 22	26121	25732	389	JAN 22	38251	37756	494.75	
FEB 22	14514	14452	62	FEB 22	32770	32438	332.25	
MAR 22	18488	18881	-393	MAR 22	35012	34595	416.5	
APR 22	22846	23081	-235	APR 22	35687	35673	14.5	
MAY 22	6802	6818	-16	MAY 22	25686	25480	206.75	
JUN 22	3857	3857	0	JUN 22	24189	24103	86.25	
JUL 22	3343	3392	-49	JUL 22	25770	25520	249.5	
AUG 22	2265	2264	1	AUG 22	24701	24452	249.25	
SEP 22	2226	2188	38	SEP 22	23529	23455	74.25	
OCT 22	3542	3555	-13	OCT 22	25706	25388	318	
NOV 22	2639	2662	-23	NOV 22	23092	22891	201	
DEC 22	2843	2820	23	DEC 22	25523	25004	518.75	
JAN 23	2836	2822	14	JAN 23	12875	12665	209.25	
FEB 23	885	885	0	FEB 23	12231	12062	169	
MAR 23	911	911	0	MAR 23	12346	12143	202.75	

Source: CME, ICE







	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	1.20	1.44	0.24
TETCO M3	\$/MMBtu	1.05	1.11	0.06
FGT Zone 3	\$/MMBtu	1.36	1.91	0.55
Zone 6 NY	\$/MMBtu	1.36	1.01	-0.35
Chicago Citygate	\$/MMBtu	1.69	1.70	0.01
Michcon	\$/MMBtu	1.81	1.66	-0.15
Columbia TCO Pool	\$/MMBtu	0.88	1.24	0.36
Ventura	\$/MMBtu	1.87	1.75	-0.12
Rockies/Opal	\$/MMBtu	2.16	1.60	-0.56
El Paso Permian Basin	\$/MMBtu	0.51	1.19	0.68
Socal Citygate	\$/MMBtu	3.00	1.98	-1.02
Malin	\$/MMBtu	2.25	1.86	-0.39
Houston Ship Channel	\$/MMBtu	1.94	1.90	-0.04
Henry Hub Cash	\$/MMBtu	1.90	1.69	-0.21
AECO Cash	C\$/GJ	1.63	1.53	-0.10
Station2 Cash	C\$/GJ	1.65	1.93	0.28
Dawn Cash	C\$/GJ	1.67	1.65	-0.02

Source: CME, Bloomberg



					VS	s. 4 Weeks		
	Units	<b>Current Price</b>	vs.	Last Week		Ago	VS	s. Last Year
NatGas Jan/Apr	\$/MMBtu	-0.54	$\overline{}$	-0.039	$\overline{}$	-0.006	$\overline{}$	-0.128
NatGas Mar/Apr	\$/MMBtu	-0.349	$\overline{}$	-0.025	$\overline{}$	-0.697	$\overline{}$	-0.608
NatGas Oct/Nov	\$/MMBtu	0.65	$\overline{}$	-0.224	_	0.361	_	0.583
NatGas Oct/Jan	\$/MMBtu	1.27	$\overline{}$	-0.216	_	0.541		0.912
WTI Crude	\$/Bbl	40.40	_	1.090	$\overline{}$	-2.210	$\overline{}$	-13.670
Brent Crude	\$/Bbl	42.07	_	0.630	$\overline{}$	-3.210	$\overline{}$	-18.710
Fuel Oil, NY Harbour 1%	\$/Bbl	98.03	_	0.000	_	0.000	_	0.000
Heating Oil	cents/Gallon	113.29	_	2.560	$\overline{}$	-6.320	$\overline{}$	-77.270
Propane, Mt. Bel	cents/Gallon	0.49	_	0.003	$\overline{}$	-0.011		0.045
Ethane, Mt. Bel	cents/Gallon	0.20	_	0.004	$\overline{}$	-0.042	$\overline{}$	-0.013
Coal, PRB	\$/MTon	12.30		0.000	_	0.000		0.100
Coal, ILB	\$/MTon	31.05	_	0.000	_	0.000	$\overline{}$	-4.500