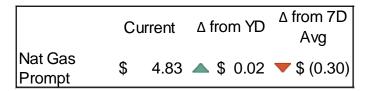


Market Report

22 September 2021



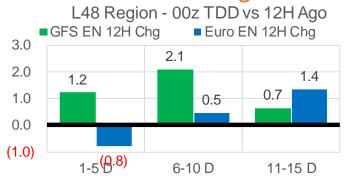
	Curi	rent	Δ fr	om YD		m 7D vg
WTI Prompt	\$ 7	'1.52	<u>~</u> ;	\$ 0.96	- \$	(0.2)

	_	urrent	۸ fro	m VD	∆ fror	n 7D
	urrent	ΔΙΙΟ	טו ווו	Α١	/g	
Brent Prompt	\$	75.37	\$	1.01	\$	0.3

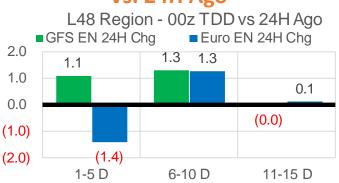
Page Menu

Short-term Weather Model Outlooks
Lower 48 Component Models
Regional S/D Models Storage Projection
Weather Model Storage Projection
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	91.2	▼ -1.47	▼ -1.28

	Current	Δ from YD	Δ from 7D Avg
US ResComm	0.0	▼ -7.91	▼ -7.42

	Current	Δ from YD	Δ from 7D Avg		
Net LNG Exports	10.1	0.23	a 0.41		

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	0.0	▼ -32.78	▼ -34.24

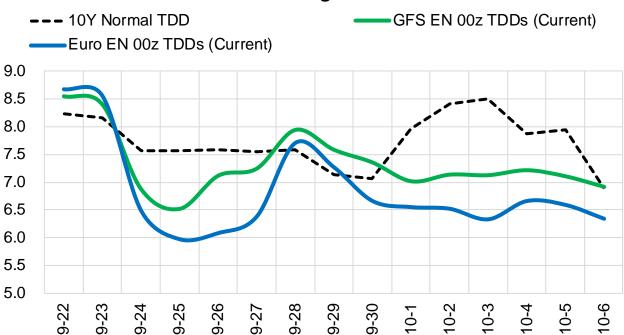
	Current	Δ from YD	Δ from 7D Avg		
Canadian Imports	5.4	a 0.29	0.40		

	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.8	▼ -0.17	0.09

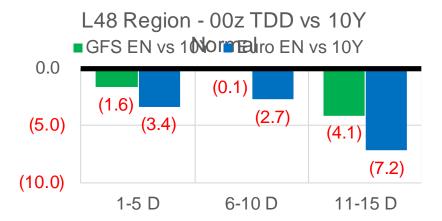


Short-term Weather Model Outlooks (00z)

L48 Region



Vs. 10Y Normal



Source: WSI, Bloomberg



Market Report

Lower 48 Component Models

Daily Balances

	16-Sep	17-Sep	18-Sep	19-Sep	20-Sep	21-Sep	22-Sep	DoD	vs.7D
Lower 48 Dry Production	91.1	93.1	93.1	92.8	93.0	92.6	91.2	▼-1.5	▼-1.4
Canadian Imports	4.9	5.1	5.0	4.9	4.8	5.1	5.4	0.3	▲ 0.4
L48 Power	34.7	35.4	33.4	33.1	34.2	32.8	0.0	▼-32.8	▼-33.9
L48 Residential & Commercial	7.5	7.5	6.9	7.0	7.7	7.9	0.0	▼ -7.9	▼ -7.4
L48 Industrial	21.5	21.8	21.6	21.7	21.7	21.7	0.0	▼-21.7	▼-21.7
L48 Lease and Plant Fuel	5.0	5.1	5.1	5.1	5.1	5.0	0.0	▼ -5.0	▼ -5.1
L48 Pipeline Distribution	2.1	2.2	2.1	2.0	2.1	2.1	0.0	▼ -2.1	▼ -2.1
L48 Regional Gas Consumption	70.8	72.0	69.1	68.9	70.9	69.5	0.0	▼ -69.5	▼-70.2
Net LNG Delivered	8.97	9.29	10.59	10.54	9.45	9.82	10.05	0.2	0.3
Total Mexican Exports	6.6	6.7	6.6	6.5	6.8	7.0	6.8	▼-0.2	▲ 0.1
Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error	9.6	10.1	11.7	11.8	10.7	11.4	79.7		

EIA Storage Week Balances

	13-Aug	20-Aug	27-Aug	3-Sep	10-Sep	17-Sep	WoW	vs. 4W
Lower 48 Dry Production	92.4	92.5	93.0	90.9	91.3	91.8	0.5	▼-0.1
Canadian Imports	5.2	5.0	5.3	5.0	4.8	5.2	0.3	▲ 0.1
L48 Power	41.1	39.7	41.9	38.1	33.7	35.0	1.3	▼-3.4
L48 Residential & Commercial	7.8	7.6	7.8	7.5	7.1	7.3	0.2	▼ -0.2
L48 Industrial	19.3	20.9	20.9	19.0	19.9	20.8	0.9	a 0.6
L48 Lease and Plant Fuel	5.1	5.1	5.1	5.0	5.0	5.1	0.0	▼ 0.0
L48 Pipeline Distribution	2.4	2.3	2.4	2.2	2.1	2.2	0.1	▼ -0.1
L48 Regional Gas Consumption	75.6	75.6	78.2	71.7	67.8	70.3	2.4	▼-3.1
Net LNG Exports	9.9	10.9	10.6	10.5	11.0	10.2	▼ -0.7	▼ -0.5
Total Mexican Exports	6.8	6.8	6.8	7.0	6.7	6.6	▼ -0.1	▼-0.2
Implied Daily Storage Activity	5.2	4.2	2.8	6.7	10.6	9.8	-0.8	
EIA Reported Daily Storage Activity	6.6	4.1	2.9	7.4	11.9			
Daily Model Error	-1.4	0.1	-0.1	-0.8	-1.3			

2Yr Ago	LY					MTD		
Sep-19	Sep-20	May-21	Jun-21	Jul-21	Aug-21	Sep-21	MoM	vs. LY
94.4	89.1	93.1	93.4	92.4	92.2	91.8	▼ -0.4	2.6
4.7	3.8	4.5	4.8	5.2	5.1	5.0	▼-0.2	1.1
36.3	34.4	26.8	35.9	39.6	40.2	32.6	▼ -7.6	▼ -1.8
8.2	8.8	12.8	8.9	8.6	7.7	6.9	▼-0.8	▼ -1.9
22.5	20.3	20.8	20.6	19.6	20.1	19.6	▼ -0.5	▼-0.8
5.1	4.9	5.1	5.1	5.1	5.1	4.8	▼-0.3	▼-0.1
2.2	2.2	2.1	2.2	2.3	2.3	2.0	▼ -0.3	▼ -0.2
74.5	70.6	67.6	72.7	75.1	75.4	66.0	▼ -9.5	▼-4.6
6.2	5.9	10.8	10.2	10.8	10.5	10.4	▼ -0.1	4.4
5.3	6.1	6.8	7.4	7.1	6.9	6.7	▼-0.2	0.6
13.2	10.2	12.4	8.0	4.6	4.5	13.7		
	\$ep-19 94.4 4.7 36.3 8.2 22.5 5.1 2.2 74.5 6.2 5.3	Sep-19 Sep-20 94.4 89.1 4.7 3.8 36.3 34.4 8.2 8.8 22.5 20.3 5.1 4.9 2.2 2.2 74.5 70.6 6.2 5.9 5.3 6.1	Sep-19 Sep-20 May-21 94.4 89.1 93.1 4.7 3.8 4.5 36.3 34.4 26.8 8.2 8.8 12.8 22.5 20.3 20.8 5.1 4.9 5.1 2.2 2.2 2.1 74.5 70.6 67.6 6.2 5.9 10.8 5.3 6.1 6.8	Sep-19 Sep-20 May-21 Jun-21 94.4 89.1 93.1 93.4 4.7 3.8 4.5 4.8 36.3 34.4 26.8 35.9 8.2 8.8 12.8 8.9 22.5 20.3 20.8 20.6 5.1 4.9 5.1 5.1 2.2 2.2 2.1 2.2 74.5 70.6 67.6 72.7 6.2 5.9 10.8 10.2 5.3 6.1 6.8 7.4	Sep-19 Sep-20 May-21 Jun-21 Jul-21 94.4 89.1 93.1 93.4 92.4 4.7 3.8 4.5 4.8 5.2 36.3 34.4 26.8 35.9 39.6 8.2 8.8 12.8 8.9 8.6 22.5 20.3 20.8 20.6 19.6 5.1 4.9 5.1 5.1 5.1 2.2 2.2 2.1 2.2 2.3 74.5 70.6 67.6 72.7 75.1 6.2 5.9 10.8 10.2 10.8 5.3 6.1 6.8 7.4 7.1	Sep-19 Sep-20 May-21 Jun-21 Jul-21 Aug-21 94.4 89.1 93.1 93.4 92.4 92.2 4.7 3.8 4.5 4.8 5.2 5.1 36.3 34.4 26.8 35.9 39.6 40.2 8.2 8.8 12.8 8.9 8.6 7.7 22.5 20.3 20.8 20.6 19.6 20.1 5.1 4.9 5.1 5.1 5.1 5.1 2.2 2.2 2.1 2.2 2.3 2.3 74.5 70.6 67.6 72.7 75.1 75.4 6.2 5.9 10.8 10.2 10.8 10.5 5.3 6.1 6.8 7.4 7.1 6.9	Sep-19 Sep-20 May-21 Jun-21 Jul-21 Aug-21 Sep-21 94.4 89.1 93.1 93.4 92.4 92.2 91.8 4.7 3.8 4.5 4.8 5.2 5.1 5.0 36.3 34.4 26.8 35.9 39.6 40.2 32.6 8.2 8.8 12.8 8.9 8.6 7.7 6.9 22.5 20.3 20.8 20.6 19.6 20.1 19.6 5.1 4.9 5.1 5.1 5.1 4.8 2.2 2.2 2.1 2.2 2.3 2.3 2.0 74.5 70.6 67.6 72.7 75.1 75.4 66.0 6.2 5.9 10.8 10.2 10.8 10.5 10.4 5.3 6.1 6.8 7.4 7.1 6.9 6.7	Sep-19 Sep-20 May-21 Jun-21 Jul-21 Aug-21 Sep-21 MoM 94.4 89.1 93.1 93.4 92.4 92.2 91.8 ▼-0.4 4.7 3.8 4.5 4.8 5.2 5.1 5.0 ▼-0.2 36.3 34.4 26.8 35.9 39.6 40.2 32.6 ▼-7.6 8.2 8.8 12.8 8.9 8.6 7.7 6.9 ▼-0.8 22.5 20.3 20.8 20.6 19.6 20.1 19.6 ▼-0.5 5.1 4.9 5.1 5.1 5.1 5.1 4.8 ▼-0.3 2.2 2.2 2.1 2.2 2.3 2.3 2.0 ▼-0.3 74.5 70.6 67.6 72.7 75.1 75.4 66.0 ▼-9.5 6.2 5.9 10.8 10.2 10.8 10.5 10.4 ▼-0.1 5.3 6.1 6.8 7.4



Daily Average Generation Data

Nuclear Generation Daily Average - GWh (NRC)

	14-Sep	15-Sep	16-Sep	17-Sep	18-Sep	19-Sep	20-Sep	DoD	vs. 7D
NRC Nuclear Daily Output	85.4	86.1	86.1	86.0	84.8	85.4	85.8	0.5	0.2
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	19.4	18.8	18.8	18.9	20.1	19.5	19.0	-0.5	-0.2
NRC % Nuclear Cap Utilization	86.9	87.6	87.5	87.4	86.2	86.8	87.3	0.5	0.2

Wind Generation Daily Average - MWh (EIA)

	14-Sep	15-Sep	16-Sep	17-Sep	18-Sep	19-Sep	20-Sep	DoD	vs. 7D
CALI Wind	1735	2601	2839	1645	2681	3843	1687	-2156	-870
TEXAS Wind	8035	4586	8035	9546	4741	6921	14461	7540	7484
US Wind	37115	30421	46466	37154	32631	47333	57453	10119	18933

Generation Daily Average - MWh (EIA)

	14-Sep	15-Sep	16-Sep	17-Sep	18-Sep	19-Sep	20-Sep	DoD	vs.7D
US Wind	37115	30421	46466	37154	32631	47333	57453	10119	18933
US Solar	13985	13256	12757	11260	12150	12798	12283	-516	-419
US Petroleum	2765	2644	2257	2897	2356	2542	3067	525	491
US Other	9509	9587	9021	9153	9164	9122	8909	-213	-350
US Coal	125803	125026	115063	118603	115190	106176	109629	3453	-8015
US Nuke	88293	88913	88175	88162	86756	87697	88563	866	563
US Hydro	25770	20657	24427	25702	23362	22499	25572	3073	1836
US Gas	197450	194457	182786	191964	183511	168609	176692	8083	-9771

See National Wind and Nuclear daily charts



Storage Week Average Generation Data

Nuclear Generation Weekly Average - GWh (NRC)

	13-Aug	20-Aug	27-Aug	3-Sep	10-Sep	17-Sep	WoW	WoW Bcf/d Impact
NRC Nuclear Daily Output	91.5	92.4	91.9	90.2	90.3	86.7	-3.6	0.6
NRC Nuclear Max Capacity	104.9	104.9	104.9	104.9	104.9	104.9	0.0	
NRC Nuclear Outage	13.3	12.5	12.9	14.7	14.6	18.2	3.6	
NRC % Nuclear Cap Utilization	0.1	0.1	0.1	0.1	0.1	0.1	0.0	

Wind Generation Weekly Average - MWh (EIA)

	13-Aug	20-Aug	27-Aug	3-Sep	10-Sep	17-Sep	WoW	WoW Bcf/d Impact
CALI Wind	2507	3210	2052	2247	1236	2083	847	-0.2
TEXAS Wind	16319	7171	12600	7534	7327	9541	2214	-0.4
US Wind	49696	29243	41912	35441	30659	42355	11696	-2.1
					-4781.5 -13%			

Generation Weekly Average - MWh (EIA)

	13-Aug	20-Aug	27-Aug	3-Sep	10-Sep	17-Sep	WoW	WoW Bcf/d Impact
US Wind	49696	29243	41912	35441	30659	42355	11696	-2.1
US Solar	14383	12828	14536	13423	14316	14009	-307	0.1
US Petroleum	4712	4466	5323	3135	2072	2470	398	-0.1
US Other	10070	10104	10131	9766	8934	9190	255	0.0
US Coal	140524	138055	136177	136318	116993	115066	-1927	0.3
US Nuke	94302	95157	94358	92365	93162	89425	-3736	0.7
US Hydro	27035	28988	30621	28179	26944	24138	-2807	0.5
US Gas	208281	212106	215990	205486	181094	181901	807	-0.1

See National Wind and Nuclear daily charts



Monthly Average Generation Data

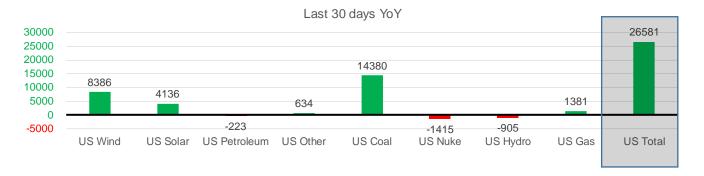
Nuclear Generation Monthly	Average -	GWh (NI	RC)						
	2Yr Ago	LY				MTD			
	Same 30 days	Same 30 days	Jun-21	Jul-21	Aug-21	Sep-21	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY
NRC Nuclear Daily Output	91.4	89.9	88.7	90.1	91.5	87.9	88.7	-3.6	-1.2
NRC Nuclear Max Capacity	104.9	104.9	104.9	104.9	104.9	104.9	104.9	0.0	0.0
NRC Nuclear Outage	13.4	15.0	16.2	14.8	13.4	17.0	16.2	3.6	1.2
NRC % Nuclear Cap Utilization	93.0	91.4	90.2	91.6	93.0	89.4	90.2	-3.7	-1.2

Wind Generation Monthly Average - MWh (EIA)

•	2Yr Ago	LY				MTD			
	Same 30 days	Same 30 days	Jun-21	Jul-21	Aug-21	Sep-21	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY
CALI Wind	2220	1438	2881	2338	2442	1955	1970	-487	532
TEXAS Wind	7635	6762	9509	7217	9901	9344	8875	-557	2113
US Wind	30516	30502	36864	29217	35830	40396	38888	4567	8386

Generation Monthly Average - MWh (EIA)

, , ,	2Yr Ago	LY				MTD			
	Same 30 days	Same 30 days	Jun-21	Jul-21	Aug-21	Sep-21	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY
US Wind	30516	30502	36864	29217	35830	40396	38888	▼-1508.2	8386
US Solar	8412	9534	14577	14195	13849	13575	13670	95.6	4136
US Petroleum	4347	3221	4155	4233	4484	2428	2998	570	▼ -223
US Other	8196	8733	8208	9327	9929	9047	9367	320	634
US Coal	114823	108161	122034	137228	137655	115591	122541	△ 6950	14380
US Nuke	98139	92613	92180	92911	94062	90541	91198	658	▼ -1415
US Hydro	27984	27455	32566	29941	28532	25596	26550	954	▼ -905
US Gas	195250	190415	189395	207814	210803	180663	191796	8039	1381
US Total	489494	470593	500271	524889	534999	478121	497175	17587	26581



See National Wind and Nuclear daily charts



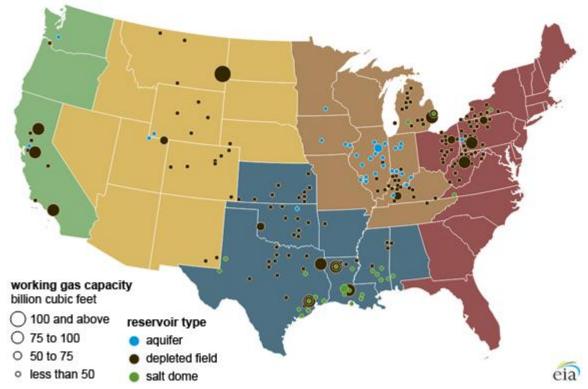
Regional S/D Models Storage Projection

Week Ending 17-Sep

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	9.5	1.2	10.7	75
East	2.6	1.1	3.6	26
Midwest	4.9	-0.4	4.5	32
Mountain	4.2	-3.5	8.0	5
South Central	-2.6	4.5	1.9	13
Pacific	0.3	-0.5	-0.2	-1

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

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



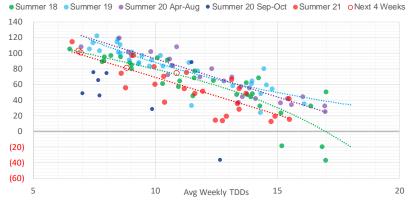


Weather Model Storage Projection

Next report and beyond

Week Ending	GWDDs	Week Storage Projection
17-Sep	10.9	75
24-Sep	8.8	81
01-Oct	7.0	101
08-Oct	6.9	103

Weather Storage Model - Next 4 Week Forecast



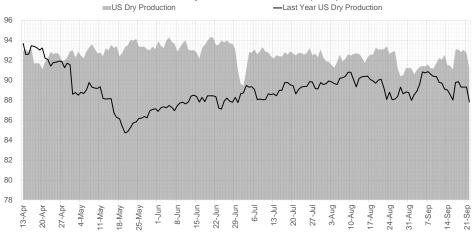
Go to larger image



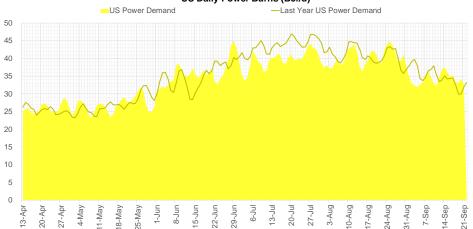


Supply - Demand Trends

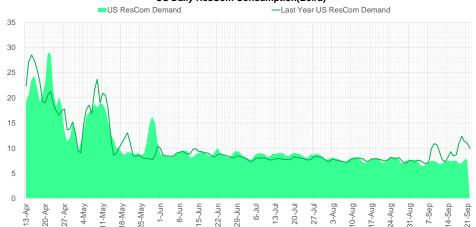
US Dry Natural Gas Production (Bcf/d)



US Daily Power Burns (Bcf/d)



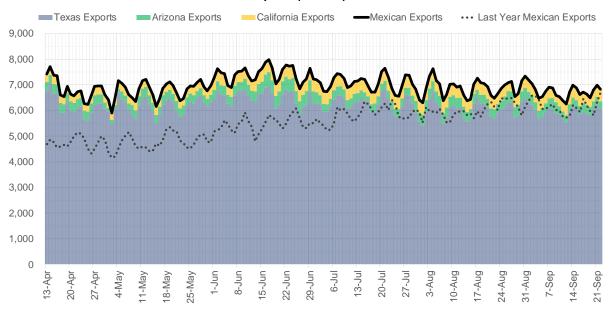
US Daily ResCom Consumption(Bcf/d)



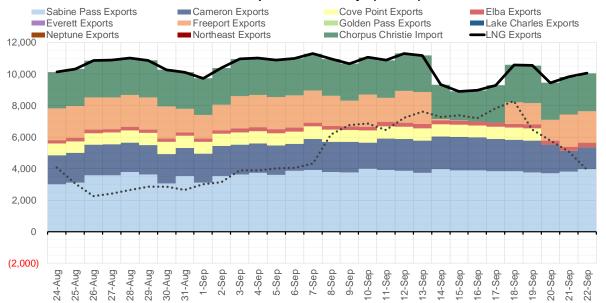
Source: Bloomberg



Mexican Exports (MMcf/d)







Source: Bloomberg



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

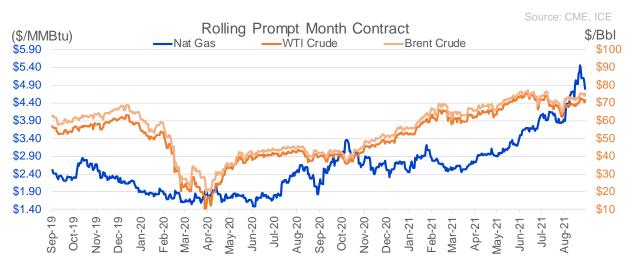
MON	CONTRACT	CONTRACT CONTRACT	
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		2022	2022 C
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Nat Gas Futures Open Interest

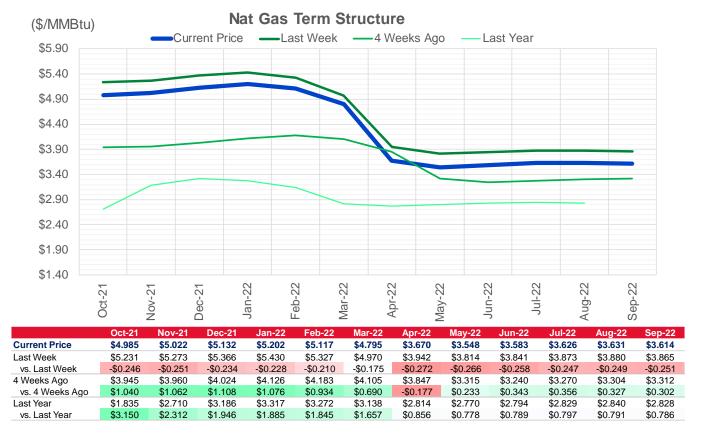
CME, and ICE Combined

CME Henry Hub Futures (10,000 MMBtu) ICE Henry Hub Futures Contract Equivalent (10,000 MM							
	Current	Prior	Daily Change		Current	Prior	Daily Change
OCT 21	56675	79169	-22494	OCT 21	93817	96797	-2981
NOV 21	268281	262971	5310	NOV 21	78800	78807	-7
DEC 21	91304	89746	1558	DEC 21	76749	76578	171
JAN 22	155135	155040	95	JAN 22	94493	96301	-1808
FEB 22	57504	56379	1125	FEB 22	69667	69786	-119
MAR 22	121607	120548	1059	MAR 22	74902	76009	-1107
APR 22	118157	119630	-1473	APR 22	72887	72439	448
MAY 22	116988	118122	-1134	MAY 22	69736	69942	-207
JUN 22	37034	37100	-66	JUN 22	53693	53376	318
JUL 22	34573	32766	1807	JUL 22	55858	55715	143
AUG 22	31960	32694	-734	AUG 22	55123	55160	-37
SEP 22	34665	34923	-258	SEP 22	55455	55407	49
OCT 22	87289	88234	-945	OCT 22	61928	61966	-38
NOV 22	32194	32090	104	NOV 22	47965	47902	63
DEC 22	25669	25656	13	DEC 22	51057	51031	26
JAN 23	22532	22706	-174	JAN 23	37256	37167	89
FEB 23	9270	9450	-180	FEB 23	30454	30442	12
MAR 23	11456	12078	-622	MAR 23	32066	32543	-478
APR 23	11975	11935	40	APR 23	30014	29605	409
MAY 23	6930	6959	-29	MAY 23	29869	29841	28
JUN 23	6068	6009	59	JUN 23	27762	27766	-4
JUL 23	4049	4050	-1	JUL 23	27879	27861	18
AUG 23	3214	3228	-14	AUG 23	27714	27695	19
SEP 23	4472	4473	-1	SEP 23	27023	27003	20
OCT 23	5789	5789	0	OCT 23	29233	29073	160
NOV 23	2165	2165	0	NOV 23	28003	28028	-24
DEC 23	2209	2330	-121	DEC 23	26746	26778	-32
JAN 24	1369	1312	57	JAN 24	14971	14901	70
FEB 24	891	891	0	FEB 24	12502	12437	65
MAR 24	3192	3192	0	MAR 24	16799	16729	70





Market Report



		Cash	Prompt	Cash to
	Units	Settled	Settle	Prompt
AGT Citygate	\$/MMBtu	4.30	4.92	0.62
TETCO M3	\$/MMBtu	3.86	3.96	0.10
FGT Zone 3	\$/MMBtu	3.95 5.40		1.45
Zone 6 NY	\$/MMBtu	3.95	3.75	-0.20
Chicago Citygate	\$/MMBtu	4.63	5.14	0.51
Michcon	\$/MMBtu	4.65	5.02	0.37
Columbia TCO Pool	\$/MMBtu	3.97	4.16	0.19
Ventura	\$/MMBtu	4.80	5.07	0.27
Rockies/Opal	\$/MMBtu	5.94	5.05	-0.89
El Paso Permian Basin	\$/MMBtu	4.52	5.02	0.50
Socal Citygate	\$/MMBtu	7.49 6.39		-1.10
Malin	\$/MMBtu	5.76	5.67	-0.09
Houston Ship Channel	\$/MMBtu	4.75	5.34	0.59
Henry Hub Cash	\$/MMBtu	4.90	5.10	0.20
AECO Cash	C\$/GJ	2.48	3.66	1.18
Station2 Cash	C\$/GJ	2.11	5.78	3.67
Dawn Cash	C\$/GJ	4.61	4.99	0.38

Source: CME, Bloomberg



					VS	s. 4 Weeks		
	Units	Current Price	vs.	Last Week		Ago	VS	s. Last Year
NatGas Jul21/Oct21	\$/MMBtu	1.188		-0.455		0.889		1.158
NatGas Oct21/Nov21	\$/MMBtu	0.037		-0.008	•	-0.029		-0.021
NatGas Oct21/Jan22	\$/MMBtu	0.218		0.013	•	-0.015		-0.085
NatGas Apr22/Oct22	\$/MMBtu	-0.024		0.025	•	-0.040		-0.047
WTI Crude	\$/Bbl	70.56		0.100		3.020		30.960
Brent Crude	\$/BbI	74.36		0.760		3.310		32.640
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18		0.000		0.000		0.000
Heating Oil	cents/Gallon	217.38		1.250		10.700		107.770
Propane, Mt. Bel	cents/Gallon	1.27		0.042		0.162		0.780
Ethane, Mt. Bel	cents/Gallon	0.38		-0.007		0.043		0.187
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						



