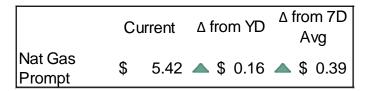


Market Report

15 September 2021



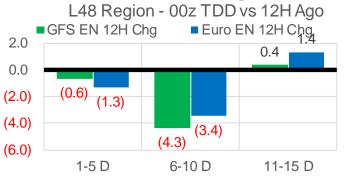
	С	urrent	Δfro	om YD	Δ fror Α\	n 7D /g
WTI Prompt	\$	71.36	4	0.90	\$	1.7

Brent		Δ from 7D			
Brent	Current	Avg			
Prompt \$ 74.48 \(\times \) \$ 0.88 \(\times \)	Brent	\$ 1.6			

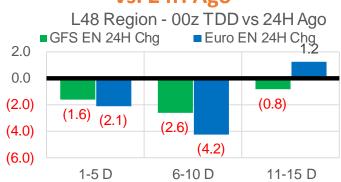
Page Menu

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	90.3	▼ -1.14	▼ -1.46

/D		Current	Δ from YD	Δ from 7D Avg
6	US Power Burns	35.4	▼ -1.92	0.44

	Current	Δ from YD	Δ from 7D Avg
US ResComm	7.2	▼ -0.27	0.02

	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	4.8	▼ -0.45	▼ -0.40

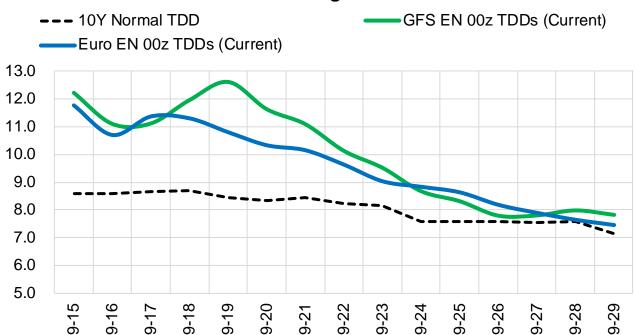
	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	9.4	▲ 0.09	▼ -1.35

	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.8	▼ -0.15	0.18

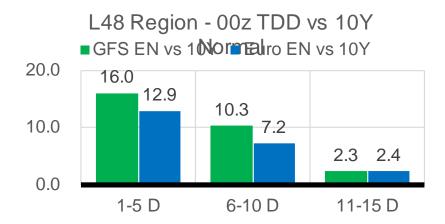


Short-term Weather Model Outlooks (00z)

L48 Region



Vs. 10Y Normal



Source: WSI, Bloomberg



Market Report

Lower 48 Component Models

Daily Balances

	9-Sep	10-Sep	11-Sep	12-Sep	13-Sep	14-Sep	15-Sep	DoD	vs. 7D
Lower 48 Dry Production	91.2	91.8	92.3	92.0	92.4	91.5	90.3	▼-1.1	▼-1.6
Canadian Imports	5.2	5.1	5.1	5.3	5.4	5.2	4.8	▼-0.4	▼ -0.4
L48 Power	34.5	33.0	32.4	34.4	36.8	37.3	35.4	▼ -1.9	0.7
L48 Residential & Commercial	7.5	7.2	6.8	6.9	7.3	7.5	7.2	▼-0.3	0.1
L48 Industrial	20.3	20.4	20.6	20.8	21.1	21.2	21.2	▼ 0.0	0.5
L48 Lease and Plant Fuel	5.0	5.1	5.1	5.1	5.1	5.0	5.0	▼ -0.1	▼ -0.1
L48 Pipeline Distribution	2.1	2.0	2.0	2.1	2.2	2.3	2.2	▼ -0.1	0.0
L48 Regional Gas Consumption	69.4	67.6	66.9	69.3	72.6	73.4	71.0	▼ -2.4	1.2
Net LNG Delivered	10.66	11.07	10.88	11.31	11.19	9.33	9.42	0.1	▼-1.3
Total Mexican Exports	6.6	6.7	6.4	6.3	6.6	7.0	6.8	▼-0.2	0.2
Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error	9.7	11.5	13.2	10.4	7.4	7.0	7.8		

EIA Storage Week Balances

	6-Aug	13-Aug	20-Aug	27-Aug	3-Sep	10-Sep	WoW	vs. 4W
Lower 48 Dry Production	91.9	92.4	92.4	93.0	90.9	91.4	0.4	▼-0.8
Canadian Imports	5.0	5.2	5.0	5.3	5.0	4.8	▼-0.2	▼-0.3
L48 Power	38.3	41.1	39.7	41.9	38.0	33.6	▼ -4.3	▼-6.5
L48 Residential & Commercial	8.0	7.8	7.6	7.8	7.5	7.0	▼ -0.4	▼-0.6
L48 Industrial	20.2	19.2	20.9	21.0	18.6	19.6	1.0	▼ -0.3
L48 Lease and Plant Fuel	5.1	5.1	5.1	5.1	5.0	5.0	0.0	▼ -0.1
L48 Pipeline Distribution	2.2	2.4	2.3	2.4	2.2	2.1	▼ -0.2	▼ -0.3
L48 Regional Gas Consumption	73.8	75.6	75.6	78.2	71.3	67.4	▼ -3.9	▼-7.8
Net LNG Exports	10.6	9.9	10.9	10.6	10.5	11.0	0.5	0.5
Total Mexican Exports	6.9	6.8	6.8	6.8	7.0	6.7	▼ -0.3	▼-0.2
Implied Daily Storage Activity	5.7	5.2	4.2	2.8	7.2	11.1	4.0	
EIA Reported Daily Storage Activity	7.0	6.6	4.1	2.9	7.4			
Daily Model Error	-1.3	-1.4	0.1	-0.1	-0.3			

Monthly Balances									
•	2Yr Ago	LY					MTD		
	Sep-18	Sep-18	May-21	Jun-21	Jul-21	Aug-21	Sep-21	MoM	vs. LY
Lower 48 Dry Production	86.6	86.6	93.1	93.4	92.4	92.2	91.4	▼ -0.7	4.8
Canadian Imports	4.5	4.5	4.5	4.8	5.2	5.1	4.9	▼ -0.2	0.4
L48 Power	34.3	34.3	26.8	35.9	39.6	40.2	34.2	▼-6.0	▼-0.2
L48 Residential & Commercial	8.5	8.5	12.8	8.9	8.6	7.7	7.1	▼ -0.6	▼ -1.3
L48 Industrial	22.6	22.6	20.8	20.6	19.6	20.0	19.9	▼ -0.1	▼ -2.7
L48 Lease and Plant Fuel	4.8	4.8	5.1	5.1	5.1	5.1	5.0	▼ -0.1	0.2
L48 Pipeline Distribution	2.1	2.1	2.1	2.2	2.3	2.3	2.1	▼ -0.2	0.0
L48 Regional Gas Consumption	72.3	72.3	67.6	72.7	75.1	75.4	68.4	▼ -7.0	▼-3.9
Net LNG Exports	3.1	3.1	10.8	10.2	10.8	10.5	10.7	0.2	7.6
Total Mexican Exports	5.0	5.0	6.8	7.4	7.0	6.9	6.7	▼-0.2	1.8
Implied Daily Storage Activity EIA Reported Daily Storage Activity	10.7	10.7	12.4	8.0	4.6	4.6	10.6		
	10.7	10.7	12.4	0.0	4.0	4.0	10.6		



Daily Average Generation Data

Nuclear Generation Daily Average - GWh (NRC)

	7-Sep	8-Sep	9-Sep	10-Sep	11-Sep	12-Sep	13-Sep	DoD	vs. 7D
NRC Nuclear Daily Output	90.4	90.2	90.7	90.4	87.6	85.7	85.6	-0.1	-3.6
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	14.5	14.7	14.2	14.4	17.3	19.2	19.3	0.1	3.6
NRC % Nuclear Cap Utilization	91.9	91.7	92.2	92.0	89.1	87.2	87.0	-0.1	-3.6

Wind Generation Daily Average - MWh (EIA)

	7-Sep	8-Sep	9-Sep	10-Sep	11-Sep	12-Sep	13-Sep	DoD	vs. 7D
CALI Wind	1916	1499	1489	1933	1582	1639	2254	615	578
TEXAS Wind	6387	6438	6940	13204	12093	10433	10403	-30	1154
US Wind	44321	35146	25275	41396	51240	45323	44270	-1053	3820

Generation Daily Average - MWh (EIA)

	7-Sep	8-Sep	9-Sep	10-Sep	11-Sep	12-Sep	13-Sep	DoD	vs. 7D
US Wind	44321	35146	25275	41396	51240	45323	44270	-1053	3820
US Solar	14119	12961	12184	13809	13934	14248	13978	-269	436
US Petroleum	2068	2067	2705	2206	2189	2594	2632	38	327
US Other	9189	8953	8591	8259	8547	9059	9417	358	651
US Coal	112318	119951	119792	110954	102157	108214	118243	10029	6012
US Nuke	92903	92842	93366	93090	90305	88978	88224	-755	-3691
US Hydro	27669	27913	27947	25973	23680	22701	25737	3037	-243
US Gas	194286	201605	194771	171141	155930	170340	198449	28109	17104

See National Wind and Nuclear daily charts



Storage Week Average Generation Data

Nucl	ear C	eneratio	n W	eekl	y A	verag	je -	GWh ((NRC)
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	6-Aug	13-Aug	20-Aug	27-Aug	3-Sep	10-Sep	WoW	WoW Bcf/d Impact
NRC Nuclear Daily Output	90.6	91.5	92.4	91.9	90.2	90.3	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	14.3	13.3	12.5	12.9	14.7	14.6	-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)

	6-Aug	13-Aug	20-Aug	27-Aug	3-Sep	10-Sep	WoW	WoW Bcf/d Impact
CALI Wind	2237	2507	3210	2052	2247	1236	-1010	0.2
TEXAS Wind	5180	16319	7171	12600	7534	7327	-206	0.0
US Wind	22379	49586	29141	41810	35348	30632	-4716	8.0
					-6462.0 -15%			

Generation Weekly Average - MWh (EIA)

	6-Aug	13-Aug	20-Aug	27-Aug	3-Sep	10-Sep	WoW	WoW Bcf/d Impact
US Wind	22379	49586	29141	41810	35348	30632	-4716	8.0
US Solar	14131	14383	12828	14536	13423	14158	736	-0.1
US Petroleum	4074	4712	4466	5323	3135	2072	-1063	0.2
US Other	9070	10070	10104	10131	9767	8823	-945	0.2
US Coal	134740	140524	138052	136168	136296	116953	-19343	3.5
US Nuke	93328	94302	95157	94358	92365	93162	797	-0.1
US Hydro	27752	27035	28988	30618	28159	26933	-1226	0.2
US Gas	204634	208281	212106	215990	205501	180766	-24735	4.5

See National Wind and Nuclear daily charts



Monthly Average Generation Data

Nuclear Generation Monthly A	verage -	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	92.9	90.2	88.7	90.1	91.5	88.8	90.1	-2.7	0.0
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	12.0	14.7	16.2	14.8	13.4	16.1	14.7	2.7	0.0
NRC % Nuclear Cap Utilization	94.5	91.7	90.2	91.6	93.0	90.3	91.6	-2.7	0.0

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	2284	1574	2881	2338	2442	1807	2015	-634	441
TEXAS Wind	7697	7057	9509	7217	9901	9409	9644	-492	2586
US Wind	29349	29487	36826	29106	35740	38210	37386	2470	7900

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	29349	29487	36826	29106	35740	38210	37386	▼ -823.3	~ 7900
US Solar	8543	9639	14578	14195	13849	14023	13947	-75.6	4309
US Petroleum	4452	3504	4155	4233	4484	2268	3452	1183	▼ -53
US Other	8564	9141	8208	9327	9929	8925	9564	639	423
US Coal	117141	117897	122034	137228	137649	116292	127098	1 0805	9200
US Nuke	99498	92643	92180	92911	94062	91644	92746	1102	102
US Hydro	29292	28496	32565	29941	28528	26354	28042	1688	▼ -454
US Gas	204745	201752	189395	207814	210806	181171	198701	14519	▼ -3051
US Total	503427	492501	500271	524889	534991	478956	510921	29861	18419



See National Wind and Nuclear daily charts



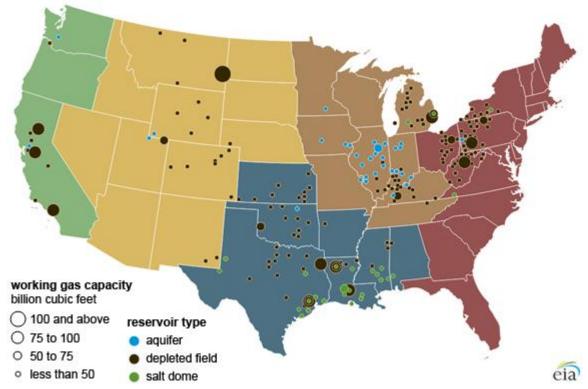
Regional S/D Models Storage Projection

Week Ending 10-Sep

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	10.8	0.5	11.4	80
East	3.2	1.0	4.2	30
Midwest	5.6	-0.2	5.4	38
Mountain	4.0	-3.3	0.6	5
South Central	-2.3	3.4	1.2	8
Pacific	0.3	-0.4	-0.1	-1

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

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



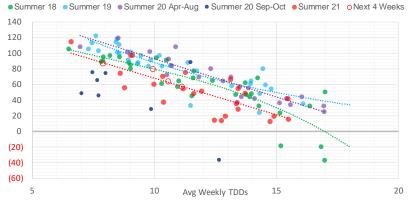


Weather Model Storage Projection

Next report and beyond

Week Ending	GWDDs	Week Storage Projection
10-Sep	9.9	80
17-Sep	11.1	57
24-Sep	10.6	64
01-Oct	7.9	87

Weather Storage Model - Next 4 Week Forecast



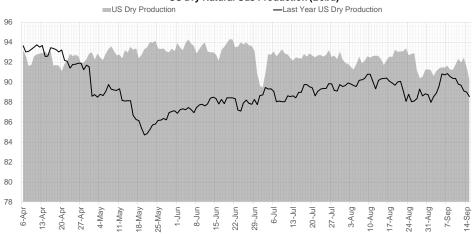
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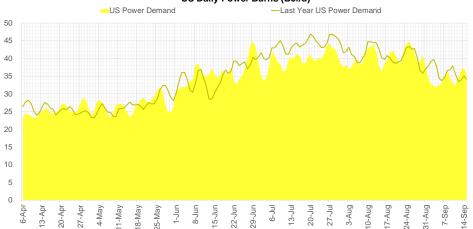


Supply - Demand Trends

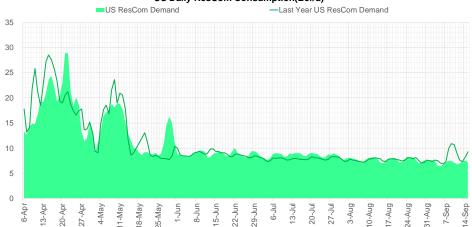
US Dry Natural Gas Production (Bcf/d)



US Daily Power Burns (Bcf/d)



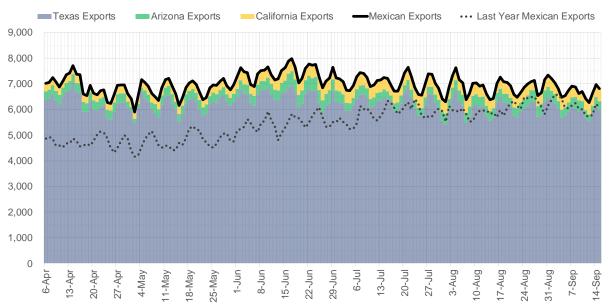
US Daily ResCom Consumption(Bcf/d)



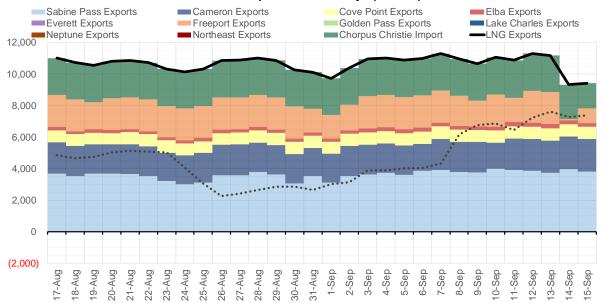
Source: Bloomberg



Mexican Exports (MMcf/d)







Source: Bloomberg



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

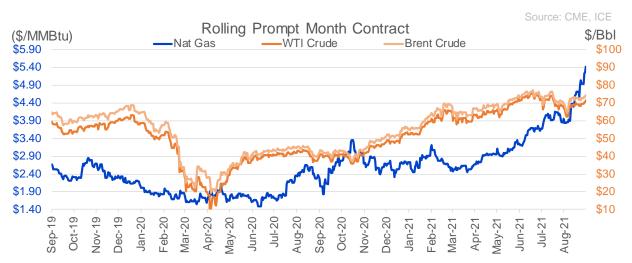
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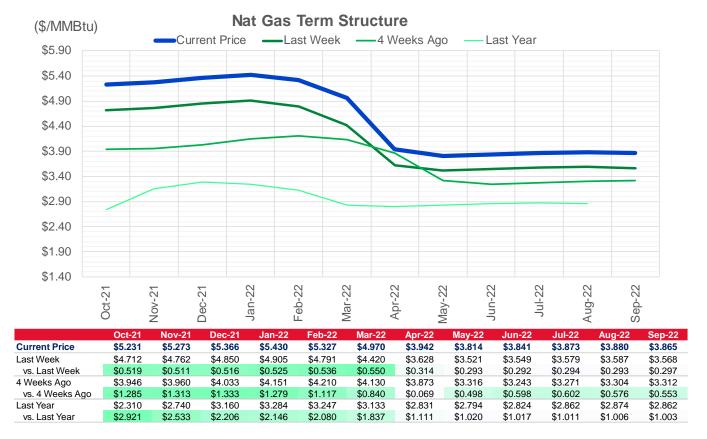
Nat Gas Futures Open Interest

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	144902	163992	-19090	OCT 21	101547	105896	-4349
NOV 21	239538	234156	5382	NOV 21	76389	79724	-3335
DEC 21	89738	88900	838	DEC 21	76465	76373	92
JAN 22	157497	158366	-869	JAN 22	90654	89901	753
FEB 22	60322	60013	309	FEB 22	68965	68604	361
MAR 22	116434	115375	1059	MAR 22	75159	73552	1607
APR 22	116550	116432	118	APR 22	69713	68814	899
MAY 22	114520	115851	-1331	MAY 22	69993	69233	760
JUN 22	41012	40891	121	JUN 22	52246	52276	-30
JUL 22	30546	30242	304	JUL 22	54009	53661	348
AUG 22	32621	32784	-163	AUG 22	54302	54016	286
SEP 22	35243	35673	-430	SEP 22	54593	54249	345
OCT 22	86815	87361	-546	OCT 22	60935	60652	284
NOV 22	31794	32612	-818	NOV 22	47549	47442	108
DEC 22	25654	25605	49	DEC 22	50743	50377	366
JAN 23	22334	21994	340	JAN 23	37198	37172	26
FEB 23	8586	8498	88	FEB 23	30445	30431	14
MAR 23	11738	11505	233	MAR 23	32558	32543	16
APR 23	11757	11557	200	APR 23	29123	29080	44
MAY 23	7284	7265	19	MAY 23	29461	29479	-18
JUN 23	5514	5507	7	JUN 23	27404	27443	-40
JUL 23	4040	4062	-22	JUL 23	27507	27556	-49
AUG 23	3226	3219	7	AUG 23	27348	27412	-64
SEP 23	4132	4158	-26	SEP 23	26652	26707	-55
OCT 23	6076	6086	-10	OCT 23	28575	28617	-42
NOV 23	2107	1865	242	NOV 23	27917	27941	-24
DEC 23	1974	1954	20	DEC 23	26565	26592	-27
JAN 24	1312	1202	110	JAN 24	14716	14696	20
FEB 24	890	890	0	FEB 24	12226	12237	-10
MAR 24	2958	3219	-261	MAR 24	16475	16488	-13







		Cash	Prompt	Cash to
	Units	Settled	Settle	Prompt
AGT Citygate	\$/MMBtu	5.70	4.25	-1.46
TETCO M3	\$/MMBtu	5.10	3.38	-1.72
FGT Zone 3	\$/MMBtu	4.96	4.71	-0.25
Zone 6 NY	\$/MMBtu	4.96	3.24	-1.73
Chicago Citygate	\$/MMBtu	5.11	4.46	-0.65
Michcon	\$/MMBtu	5.15	4.38	-0.77
Columbia TCO Pool	\$/MMBtu	4.98	3.55	-1.43
Ventura	\$/MMBtu	4.68	4.42	-0.27
Rockies/Opal	\$/MMBtu	5.55	4.35	-1.20
El Paso Permian Basin	\$/MMBtu	5.12	4.33	-0.78
Socal Citygate	\$/MMBtu	8.16	5.38	-2.78
Malin	\$/MMBtu	5.61	4.79	-0.82
Houston Ship Channel	\$/MMBtu	5.20	4.70	-0.50
Henry Hub Cash	\$/MMBtu	5.35	4.43	-0.92
AECO Cash	C\$/GJ	3.88	2.74	-1.14
Station2 Cash	C\$/GJ	3.37	4.93	1.56
Dawn Cash	C\$/GJ	5.16	4.36	-0.80

Source: CME, Bloomberg



					VS	s. 4 Weeks		
	Units	Current Price	vs.	Last Week		Ago	VS	. Last Year
NatGas Jul21/Oct21	\$/MMBtu	1.643		0.692		1.409		1.619
NatGas Oct21/Nov21	\$/MMBtu	0.045		-0.002	•	-0.029		-0.006
NatGas Oct21/Jan22	\$/MMBtu	0.205		0.009	•	-0.050		-0.078
NatGas Apr22/Oct22	\$/MMBtu	-0.049		-0.045	•	-0.066		-0.073
WTI Crude	\$/Bbl	70.46		2.110		3.870		32.180
Brent Crude	\$/BbI	73.60		1.910		4.570		33.070
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18		0.000		0.000		0.000
Heating Oil	cents/Gallon	216.13		3.970		12.520		106.200
Propane, Mt. Bel	cents/Gallon	1.23		0.043		0.107		0.738
Ethane, Mt. Bel	cents/Gallon	0.39		0.030		0.048		0.177
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						





