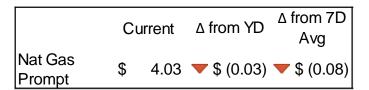


# **Market Report**

# 12 August 2021



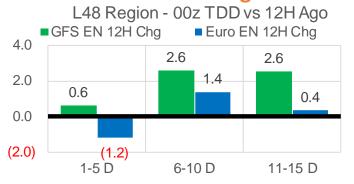
	С	urrent	Δ from YD	Δ fron Αν	
WTI Prompt	\$	68.92	<b>\$</b> (0.33)	<b>\$</b>	0.6

	_	urront	Δ from YD	∆ fron	1 7D
	C	urrent		Αv	g
Brent	\$	71 23	<b>\$</b> (0.21)	<b>\$</b>	0.6
Prompt	Ψ	7 1.20	Ψ (0.21)	— Ψ	0.0

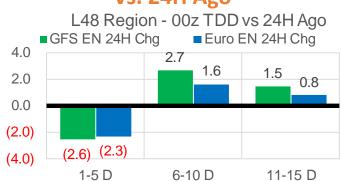
#### Page Menu

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	91.4	<b>▼</b> -1.04	▼ -0.83

	Current	Δfr	om YD	rom 7D Avg
US ResComm	8.3		0.04	0.65

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	10.3	<b>a</b> 0.62	<b>0.39</b>

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	43.2	<b>▼</b> -0.10	<b>2.83</b>

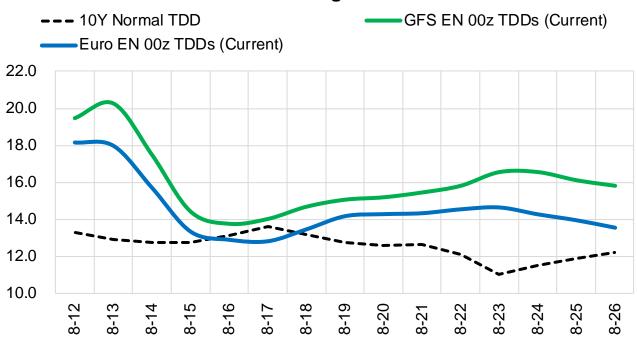
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	5.6	<b>a</b> 0.19	<b>0.58</b>

	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	7.3	<b>a</b> 0.37	<b>a</b> 0.35

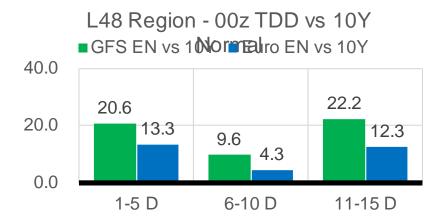


### Short-term Weather Model Outlooks (00z)

### L48 Region



### Vs. 10Y Normal



Source: WSI, Bloomberg



# **Market Report**

# Lower 48 Component Models

### **Daily Balances**

	6-Aug	7-Aug	8-Aug	9-Aug	10-Aug	11-Aug	12-Aug	DoD	vs.7D
Lower 48 Dry Production	92.5	91.9	92.2	92.5	92.3	92.4	91.4	▼-1.0	▼ -0.9
Canadian Imports	4.8	4.9	4.9	5.1	5.3	5.4	5.6	<b>0.2</b>	<b>0.5</b>
L48 Power	40.0	38.2	38.7	40.9	42.6	43.3	43.2	▼-0.1	<b>2.6</b>
L48 Residential & Commercial	7.6	7.2	7.3	7.7	7.9	8.3	8.3	<b>0.0</b>	<b>0.7</b>
L48 Industrial	20.6	20.4	20.5	20.5	20.4	20.4	20.3	▼ -0.1	<b>▼</b> -0.2
L48 Lease and Plant Fuel	5.1	5.1	5.1	5.1	5.1	5.1	5.1	<b>▼</b> -0.1	▼ -0.1
L48 Pipeline Distribution	2.3	2.2	2.2	2.4	2.5	2.5	2.5	▼ 0.0	<b>0.2</b>
L48 Regional Gas Consumption	75.6	73.1	73.8	76.6	78.5	79.6	79.4	▼-0.2	<b>3.2</b>
Net LNG Delivered	10.45	10.40	10.08	9.33	9.29	9.72	10.34	<b>0.6</b>	<b>0.5</b>
Total Mexican Exports	7.3	6.4	6.5	6.9	7.2	6.9	7.3	<b>0.4</b>	<b>0.4</b>
Implied Daily Storage Activity EIA Reported Daily Storage Activity	3.9	6.8	6.7	4.8	2.5	1.5	-0.1		
Daily Model Error									

### **EIA Storage Week Balances**

	2-Jul	9-Jul	16-Jul	23-Jul	30-Jul	6-Aug	WoW	vs. 4W
Lower 48 Dry Production	92.2	91.8	92.4	92.4	92.5	91.9	▼-0.6	▼-0.4
Canadian Imports	5.1	5.1	5.2	4.9	5.5	5.1	▼ -0.5	▼-0.1
L48 Power	39.8	37.2	38.7	39.7	42.2	38.5	▼-3.7	<b>▼</b> -1.0
L48 Residential & Commercial	8.6	8.2	8.4	8.4	8.3	7.8	▼ -0.5	<b>▼</b> -0.5
L48 Industrial	21.1	19.4	19.5	19.5	20.7	20.3	▼-0.4	<b>0.6</b>
L48 Lease and Plant Fuel	5.1	5.1	5.1	5.1	5.1	5.1	▼ 0.0	▼ 0.0
L48 Pipeline Distribution	2.4	2.1	2.2	2.3	2.4	2.2	▼ -0.2	▼ 0.0
L48 Regional Gas Consumption	76.9	71.9	74.0	75.1	78.7	74.0	▼ -4.8	▼-1.0
Net LNG Exports	11.2	11.0	10.8	10.5	10.8	10.6	▼ -0.3	▼-0.2
Total Mexican Exports	7.2	7.1	7.1	7.1	7.0	7.0	▼ 0.0	▼-0.1
Implied Daily Storage Activity	2.0	6.8	5.6	4.6	1.5	5.5	4.0	
EIA Reported Daily Storage Activity	2.3	7.9	7.0	5.1	1.9			
Daily Model Error	-0.2	-1.1	-1.4	-0.5	-0.3			

Monthly Balances									
•	2Yr Ago	LY					MTD		
	Aug-19	Aug-20	Apr-21	May-21	Jun-21	Jul-21	Aug-21	MoM	vs. LY
Lower 48 Dry Production	94.7	89.6	92.3	92.7	92.8	92.2	91.9	▼ -0.2	<b>2.4</b>
Canadian Imports	4.4	4.9	4.6	4.5	4.8	5.2	5.1	▼ -0.1	<b>0.2</b>
L48 Power	41.0	40.9	24.9	26.7	35.3	39.4	39.7	<b>0.3</b>	▼-1.1
L48 Residential & Commercial	7.8	7.7	19.5	13.2	8.8	8.3	7.8	▼ -0.5	<b>0.1</b>
L48 Industrial	23.5	21.9	21.2	20.3	20.8	19.8	20.4	<b>0.5</b>	<b>▼</b> -1.5
L48 Lease and Plant Fuel	5.2	5.0	5.1	5.1	5.1	5.1	5.1	▼ 0.0	<b>0.1</b>
L48 Pipeline Distribution	2.4	2.4	2.3	2.1	2.2	2.3	2.3	<b>0.0</b>	<b>▼</b> -0.1
L48 Regional Gas Consumption	79.9	77.7	73.0	67.2	72.1	74.9	75.3	<b>0.3</b>	▼-2.4
Net LNG Exports	5.2	4.0	11.5	10.8	10.2	10.8	10.1	▼ -0.7	<b>▲</b> 6.1
Total Mexican Exports	5.3	6.0	6.7	6.8	7.4	7.0	7.0	▼ 0.0	<b>1.0</b>
Implied Daily Storage Activity	8.8	6.7	5.7	12.4	8.0	4.6	4.6		
EIA Reported Daily Storage Activity Daily Model Error									



# **Daily** Average Generation Data

### **Nuclear Generation Daily Average - GWh (NRC)**

	4-Aug	5-Aug	6-Aug	7-Aug	8-Aug	9-Aug	10-Aug	DoD	vs. 7D
NRC Nuclear Daily Output	90.8	90.9	89.9	90.2	91.3	91.9	92.2	0.3	1.3
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	14.1	14.0	15.0	14.7	13.6	13.0	12.7	-0.3	-1.3
NRC % Nuclear Cap Utilization	92.3	92.4	91.4	91.7	92.8	93.4	93.7	0.3	1.4

### Wind Generation Daily Average - MWh (EIA)

	4-Aug	5-Aug	6-Aug	7-Aug	8-Aug	9-Aug	10-Aug	DoD	vs. 7D
CALI Wind	2569	3209	3051	2013	2483	1912	1903	-9	-637
TEXAS Wind	2665	5568	9348	17855	18246	18829	19443	614	7358
US Wind	21441	23390	40825	54359	47462	49061	52778	3717	13355

#### **Generation Daily Average - MWh (EIA)**

	4-Aug	5-Aug	6-Aug	7-Aug	8-Aug	9-Aug	10-Aug	DoD	vs. 7D
US Wind	21441	23390	40825	54359	47462	49061	52778	3717	13355
US Solar	14012	14607	14722	13245	14428	14425	13394	-1031	-846
US Petroleum	3954	4277	4654	3835	4151	4187	5384	1197	1208
US Other	9038	8942	9050	9168	9274	9681	10545	864	1353
US Coal	130727	131981	129205	127741	131518	142603	149372	6769	17077
US Nuke	93547	93711	92859	93241	94174	94652	94812	160	1115
US Hydro	28161	27913	27139	24702	23813	25292	27469	2178	1299
US Gas	201808	208408	205952	181075	183355	205134	219064	13930	21442

See National Wind and Nuclear daily charts



# **Storage Week** Average Generation Data

### **Nuclear Generation Weekly Average - GWh (NRC)**

	2-Jul	9-Jul	16-Jul	23-Jul	30-Jul	6-Aug	WoW	WoW Bcf/d Impact
NRC Nuclear Daily Output	89.1	89.5	90.7	90.7	89.3	90.7	1.4	-0.2
NRC Nuclear Max Capacity	104.9	104.9	104.9	104.9	104.9	104.9	0.0	
NRC Nuclear Outage	15.7	15.4	14.2	14.2	15.6	14.2	-1.4	
NRC % Nuclear Cap Utilization	0.1	0.1	0.1	0.1	0.1	0.1	0.0	

### Wind Generation Weekly Average - MWh (EIA)

	2-Jul	9-Jul	16-Jul	23-Jul	30-Jul	6-Aug	WoW	wow Bcf/d Impact
CALI Wind	2588	2604	3004	2064	1905	2237	331	-0.1
TEXAS Wind	8326	3739	10817	7162	7913	5180	-2733	0.5
US Wind	27215	25696	36364	26446	29735	22378	-7356	1.2

### **Generation Weekly Average - MWh (EIA)**

	2-Jul	9-Jul	16-Jul	23-Jul	30-Jul	6-Aug	WoW	WoW Bcf/d
	2 0 01	J 341	. o oui	20 <b>0</b> 01	55 <b>5</b> 41	o nag		Impact
US Wind	27215	25696	36364	26446	29735	22378	-7356	1.2
US Solar	14055	14165	14486	14023	13977	14127	151	0.0
US Petroleum	5142	4035	4282	3892	4729	4074	-654	0.1
US Other	8886	9159	9555	9336	9281	9056	-225	0.0
US Coal	136486	131306	131524	137617	146398	134763	-11634	2.0
US Nuke	92257	92359	93735	93488	92226	93269	1043	-0.2
US Hydro	33030	30129	30421	30191	29203	27733	-1470	0.2
US Gas	208730	194610	199730	210468	224374	204514	-19860	

See National Wind and Nuclear daily charts



NRC % Nuclear Cap Utilization

# **Market Report**

92.6

# **Monthly** Average Generation Data

Nuclear Generation Monthly Average - GWh (NRC)											
	2Yr Ago	LY				MTD	MTD				
	Same 30 days	Same 30 days	May-21	Jun-21	Jul-21	Aug-21	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY		
NRC Nuclear Daily Output	94.3	91.0	81.8	88.7	90.0	91.3	90.6	1.2	-0.4		
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	10.6	13.8	23.1	16.2	14.9	13.6	14.2	-1.2	0.4		

90.2

91.5

83.2

#### Wind Generation Monthly Average - MWh (Genscape)

95.9

	2Yr Ago	LY				MTD			
	Same 30 days	Same 30 days	May-21	Jun-21	Jul-21	Aug-21	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY
CALI Wind	2276	2628	3402	2913	2338	2274	2131	-65	-496
TEXAS Wind	8746	9575	12259	9675	7217	12258	9852	5041	277
US Wind	27535	32008	46081	37299	29105	37894	32988	8789	980

### **Generation Monthly Average - MWh (EIA)**

	2Yr Ago	LY				MTD			
	Same 30 days	Same 30 days	May-21	Jun-21	Jul-21	Aug-21	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY
US Wind	27535	32008	46081	37299	29105	37894	32988	▼-4905.2	<b>980</b>
US Solar	9330	12081	14488	14564	14195	13950	14070	<b>120.3</b>	<b>1989</b>
US Petroleum	5500	4585	3012	4149	4233	4431	4393	▼ -38	<b>▼ -193</b>
US Other	9275	9980	7439	8162	9324	9503	9425	<b>▼</b> -78	<b>▼</b> -556
US Coal	130392	121470	86422	121351	137224	136570	139464	<b>2893</b>	<b>17994</b>
US Nuke	100699	93200	85517	92175	92897	93934	93385	<b>-549</b>	<b>185</b>
US Hydro	33951	30502	30677	32578	29936	26770	28579	<b>1809</b>	<b>▼</b> -1924
US Gas	219755	225552	139477	188815	207789	202783	210707	<b>▼</b> -747	<b>▼-14845</b>
US Total	537683	529113	413562	499435	524880	526178	533210	<b>3411</b>	<b>4097</b>



See National Wind and Nuclear daily charts



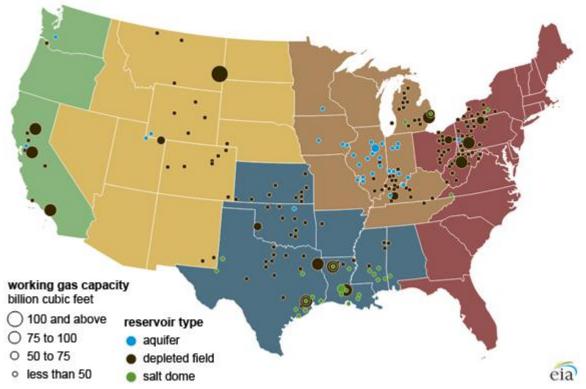
# Regional S/D Models Storage Projection

Week Ending 6-Aug

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	5.2	1.0	6.2	43
East	2.3	1.5	3.8	26
Midwest	3.3	-0.3	2.9	21
Mountain	4.3	-4.3	0.0	0
South Central	-4.5	4.2	-0.3	-2
Pacific	-0.1	-0.1	-0.2	-2

<sup>\*</sup>Adjustment Factor is calcuated based on historical regional deltas

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



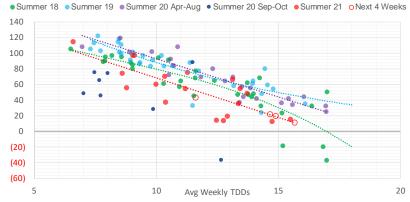


### Weather Model Storage Projection

# Next report and beyond

Week Ending	GWDDs	Week Storage Projection
06-Aug	11.6	43
13-Aug	15.7	11
20-Aug	14.7	22
27-Aug	14.9	19

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



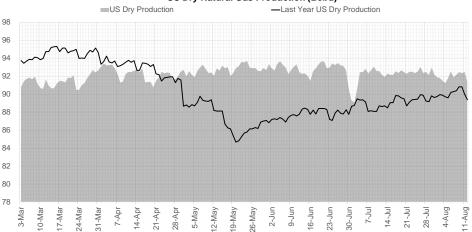
Go to larger image



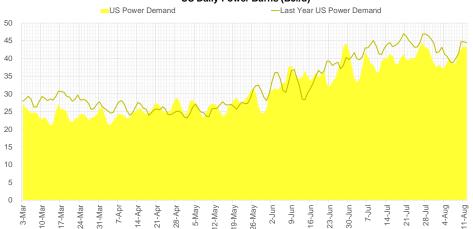


### Supply - Demand Trends

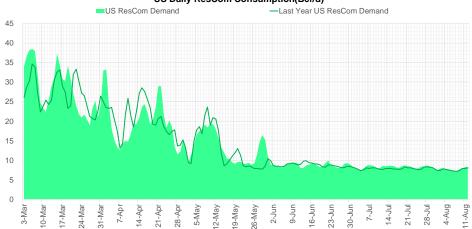
#### US Dry Natural Gas Production (Bcf/d)



#### US Daily Power Burns (Bcf/d)



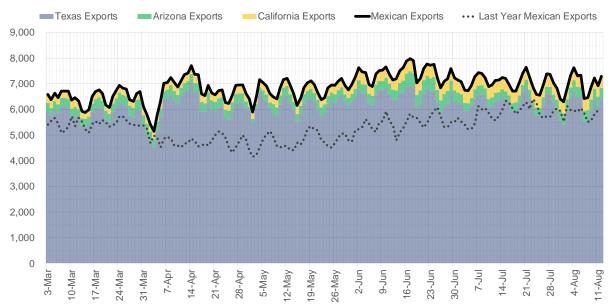
#### US Daily ResCom Consumption(Bcf/d)



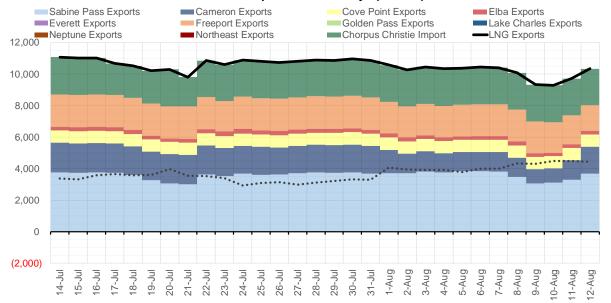
Source: Bloomberg



#### Mexican Exports (MMcf/d)







Source: Bloomberg





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

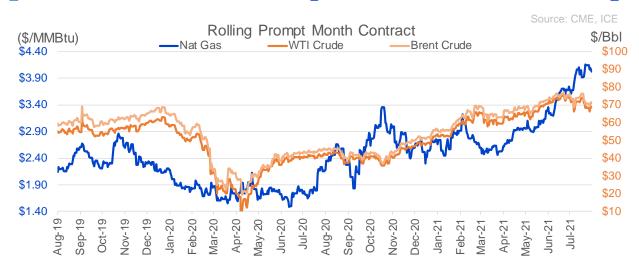
	CONTRACT	PUT/CALL	STRIKE	CUMULATIVE	CONTRACT	CONTRACT	PUT/CALL	STRIKE	CUMULATIVE OI
MONTH	YEAR	- O I/OALL	- OTKIKE	VOL	MONTH	YEAR	- OT/CALL	STRIKE	COMOLATIVE OF
9	2021	С	4.25	5887	10	2021	С	4.50	44711
10	2021	c	5.00	5420	12	2021	P	2.75	41619
10	2021	P	3.00	5263	10	2021	C	4.00	40381
10	2021	Р	3.50	4378	10	2021	C	5.00	37889
10	2021	C	4.50	3667	10	2021	С	3.50	33006
9	2021	C	5.00	3666	10	2021	Р	3.50	30899
9	2021	P	3.85	2947	10	2021	Р	2.50	30039
9	2021	C	4.50	2903	12	2021	Р	2.50	29530
11	2021	P	3.50	2761	10	2021	С	3.25	28230
9	2021	С	4.75	2374	10	2021	Р	2.00	27595
10	2021	P	2.00	2351	9	2021	С	4.00	26723
9	2021	Р	4.00	2335	9	2021	С	4.25	26574
10	2021	P	3.75	2269	9	2021	С	5.00	26413
10	2021	С	6.00	2230	10	2021	Р	2.75	25764
9	2021	P	3.90	2224	10	2021	Р	3.00	25574
9	2021	Р	3.75	2066	12	2021	Р	3.00	24792
4	2022	Р	2.00	2000	9	2021	Р	2.50	23385
4	2022	Р	2.25	2000	10	2021	С	6.00	23195
9	2021	С	4.65	1922	9	2021	C	3.50	22603
11	2021	С	4.25	1803	9	2021	P -	3.00	22432
10	2021	С	5.25	1722	11	2021	P	3.00	22398
9	2021	Р	3.80	1686	11	2021	С	4.00	22136
9	2021	С	4.45	1579	12	2021	С	4.00	22091
9	2021	С	4.85	1535	10	2021	С	4.25	20830
9	2021	Р	3.70	1359	9	2021	C P	4.75	20665
9	2021	С	4.35	1337	9	2021 2021	P P	2.00 2.25	20427 19900
10	2021	Р	3.60	1314	10 9	2021	P P	2.25 3.25	19792
11	2021	С	4.75	1300	4	2021	C	3.25	19792
11	2021	С	5.25	1243	9	2022	P	3.50	19271
4	2022	С	4.00	1200	9	2021	C	3.25	18994
11	2021	Р	3.75	1155	10	2021	Č	3.00	18502
9	2021	Р	3.60	1142	11	2021	Č	5.00	18033
11	2021	С	5.50	1087	10	2021	Č	3.75	16815
9	2021	Р	3.50	1018	1	2022	Č	5.00	15993
12	2021	С	3.75	1000	9	2021	Ċ	4.50	15923
3	2022	Р	2.50	1000	9	2021	P	2.75	15816
9	2021	С	4.15	815	3	2022	C	5.00	15519
10	2021	Р	3.20	808	2	2022	C	5.00	15076
10	2021	С	4.25	765	11	2021	C	3.75	15026
10	2021	Р	3.25	755	9	2021	P	4.00	14954
11	2021	С	4.50	751	1	2022	С	4.00	14782
5	2022	С	4.75	750	3	2022	Ċ	3.00	14448
4	2022	Р	2.50	700	3	2022	P	2.50	13969
6	2022	Р	2.50	700	12	2021	Р	2.00	13889
11	2021	Р	4.00	684	9	2021	Р	2.60	13814
10	2021	С	4.75	601	9	2021	Р	1.90	13773
9	2021	С	4.00	597	11	2021	Р	2.50	13698
10	2021	С	5.50	589	10	2021	Р	3.25	13674
10	2021	Р	3.15	578	3	2022	C	: CME, ICE	13585
							Source	E CIVIE, ICE	



# Nat Gas Futures Open Interest

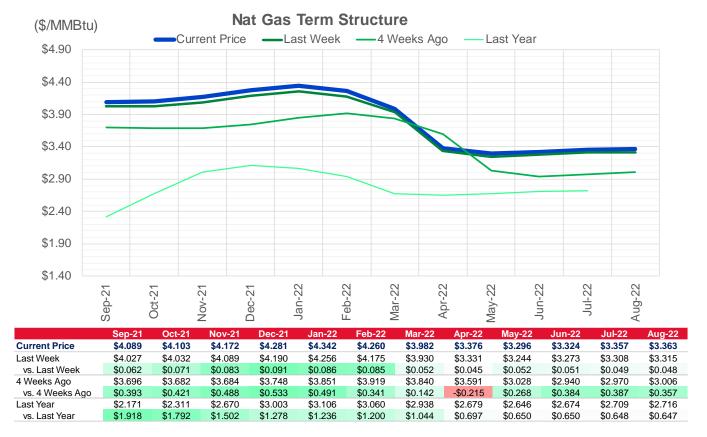
CME, and ICE Combined

CME Henry Hub Futures (10,000 MMBtu)  ICE Henry Hub Futures Contract Equivalent (10,000 MM										
CME Henry I				ICE Henry I			· · · ·			
	Current	Prior	Daily Change		Current	Prior	Daily Change			
SEP 21	161153	198256	-37103	SEP 21	89531	91869	-2338			
OCT 21	195152	185396	9756	OCT 21	107878	107206	672			
NOV 21	173367	158271	15096	NOV 21	69676	69669	8			
DEC 21	75980	74684	1296	DEC 21	75672	75490	182			
JAN 22	133463	133172	291	JAN 22	78622	78185	436			
FEB 22	55135	55085	50	FEB 22	71199	71379	-180			
MAR 22	103803	106273	-2470	MAR 22	73338	72809	529			
APR 22	110162	108281	1881	APR 22	70347	68846	1501			
MAY 22	94728	92785	1943	MAY 22	68771	67325	1446			
JUN 22	30718	30393	325	JUN 22	55037	55023	14			
JUL 22	26156	26195	-39	JUL 22	54769	54663	106			
AUG 22	25099	25157	-58	AUG 22	55919	55766	153			
SEP 22	25416	25274	142	SEP 22	55750	55617	134			
OCT 22	65481	65148	333	OCT 22	62334	62368	-33			
NOV 22	26983	25935	1048	NOV 22	48847	49690	-843			
DEC 22	23854	23523	331	DEC 22	52368	52279	89			
JAN 23	17330	17265	65	JAN 23	33202	33101	101			
FEB 23	6200	6192	8	FEB 23	27871	27798	73			
MAR 23	7894	8363	-469	MAR 23	29682	29695	-13			
APR 23	10538	10683	-145	APR 23	24303	24301	2			
MAY 23	6152	6228	-76	MAY 23	25230	25209	21			
JUN 23	4701	4741	-40	JUN 23	23444	23428	15			
JUL 23	3772	3775	-3	JUL 23	23577	23539	38			
AUG 23	3222	3227	-5	AUG 23	23410	23372	38			
SEP 23	3676	3682	-6	SEP 23	22921	22871	50			
OCT 23	4804	4820	-16	OCT 23	24542	24525	17			
NOV 23	1330	1323	7	NOV 23	24598	24457	141			
DEC 23	1850	1843	7	DEC 23	22357	22212	145			
JAN 24	989	990	-1	JAN 24	13060	13045	16			
FEB 24	873	874	-1	FEB 24	11332	11369	-37			





# **Market Report**



		Cash	Prompt	Cash to
	Units	Settled	Settle	Prompt
AGT Citygate	\$/MMBtu	4.88	3.49	-1.39
TETCO M3	\$/MMBtu	3.93	3.23	-0.71
FGT Zone 3	\$/MMBtu	4.05	4.23	0.18
Zone 6 NY	\$/MMBtu	4.05	3.19	-0.86
Chicago Citygate	\$/MMBtu	3.91	3.99	0.08
Michcon	\$/MMBtu	3.87	3.93	0.06
Columbia TCO Pool	\$/MMBtu	3.78	3.39	-0.39
Ventura	\$/MMBtu	3.96	3.94	-0.02
Rockies/Opal	\$/MMBtu	3.86	3.86	0.00
El Paso Permian Basin	\$/MMBtu	3.84	3.94	0.10
Socal Citygate	\$/MMBtu	7.35	5.38	-1.97
Malin	\$/MMBtu	4.12	4.28	0.16
Houston Ship Channel	\$/MMBtu	3.97	4.14	0.17
Henry Hub Cash	\$/MMBtu	4.07	3.93	-0.14
AECO Cash	C\$/GJ	1.43	3.19	1.76
Station2 Cash	C\$/GJ	1.32	4.15	2.83
Dawn Cash	C\$/GJ	3.88	3.88	0.00

Source: CME, Bloomberg



			vs. 4 Weeks					
	Units	<b>Current Price</b>	vs.	<b>Last Week</b>		Ago	VS	s. Last Year
NatGas Jul21/Oct21	\$/MMBtu	0.454		-0.092		0.416		0.441
NatGas Oct21/Nov21	\$/MMBtu	0.072		0.014		0.006		0.021
NatGas Oct21/Jan22	\$/MMBtu	0.248		0.025		0.004		-0.030
NatGas Apr22/Oct22	\$/MMBtu	0.000		0.020		0.005		-0.048
WTI Crude	\$/Bbl	69.25		1.100		-3.880		26.580
Brent Crude	\$/Bbl	71.44		1.060		-3.320		26.010
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18		0.000		0.000		0.000
Heating Oil	cents/Gallon	210.58		3.170		-3.770		84.860
Propane, Mt. Bel	cents/Gallon	1.12		0.038		0.020		0.614
Ethane, Mt. Bel	cents/Gallon	0.34		0.000		0.035		0.111
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						









