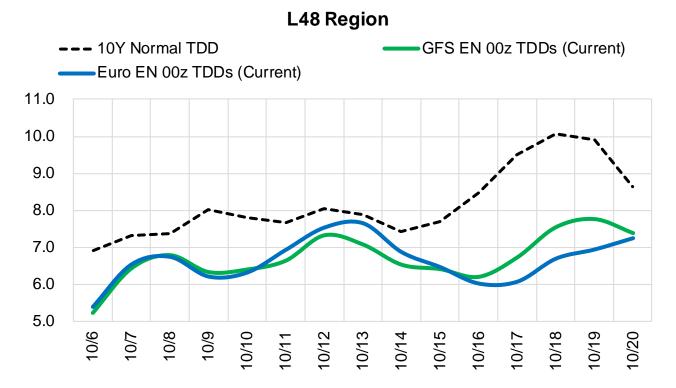


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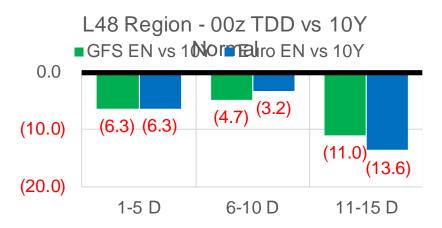
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Short-term Weather Model Outlooks (00z)



Vs. 10Y Normal



Source: WSI, Bloomberg

Market Report

6 October 2021

Daily Balances

	30-Sep	1-Oct	2-Oct	3-Oct	4-Oct	5-Oct	6-Oct	DoD	vs.7D
Lower 48 Dry Production	93.3	92.7	93.1	93.2	93.1	92.8	92.7	▼ 0.0	T -0.3
Canadian Imports	5.7	5.5	5.4	5.5	5.4	5.4	5.0	-0.4	▼ -0.5
L48 Power	32.1	31.1	30.0	31.5	33.8	33.8	33.1	▼ -0.7	1.0
L48 Residential & Commercial	9.3	9.5	7.8	7.4	7.6	8.2	7.9	T -0.3	▼ -0.4
L48 Industrial	20.2	20.4	20.8	20.8	20.8	21.0	20.9	▼ -0.1	0.2
L48 Lease and Plant Fuel	5.1	5.1	5.1	5.1	5.1	5.1	5.0	▼ -0.1	▼ -0.1
L48 Pipeline Distribution	2.3	2.2	2.0	2.1	2.2	2.2	2.2	▼ -0.1	a 0.0
L48 Regional Gas Consumption	69.0	68.3	65.7	66.8	69.5	70.3	69.0	T -1.2	0.8
Net LNG Delivered	10.47	10.08	10.60	10.39	10.25	9.13	9.50	0.4	-0.7
Total Mexican Exports	6.9	6.7	6.4	6.4	6.7	6.7	6.7	0.0	0.1
Implied Daily Storage Activity EIA Reported Daily Storage Activity	12.6	13.2	15.9	15.0	12.1	12.1	12.5		

Lower 48 Component Models

Daily Model Error

EIA Storage Week Balances

	27-Aug	3-Sep	10-Sep	17-Sep	24-Sep	1-Oct	WoW	vs. 4W
Lower 48 Dry Production	93.1	90.9	91.3	91.8	92.9	93.2	0.4	1.5
Canadian Imports	5.3	5.0	4.8	5.2	5.2	5.7	0.6	0.7
L48 Power	41.9	38.1	33.8	35.0	33.2	30.2	▼ -3.0	- 4.8
L48 Residential & Commercial	7.8	7.4	6.9	7.2	8.0	8.3	a 0.3	a 0.9
L48 Industrial	21.0	18.9	19.6	20.8	20.4	20.1	T -0.3	a 0.2
L48 Lease and Plant Fuel	5.1	5.0	5.0	5.0	5.1	5.1	0.0	a 0.1
L48 Pipeline Distribution	2.6	2.4	2.2	2.3	2.3	2.1	T -0.1	- 0.2
L48 Regional Gas Consumption	78.3	71.7	67.5	70.2	69.0	65.8	▼ -3.1	▼ -3.8
Net LNG Exports	10.6	10.5	11.0	10.2	9.9	10.3	0.4	▼-0.1
Total Mexican Exports	6.8	7.0	6.7	6.6	6.8	6.7	▼ -0.1	▼-0.1
Implied Daily Storage Activity EIA Reported Daily Storage Activity	2.8 2.9	6.7 7.4	10.9 11.9	9.9 10.9	12.3 12.6	16.1	3.8	
Daily Model Error	-0.1	-0.8	-1.0	-1.0	-0.2			·

Monthly Balances

	2Yr Ago	LY					MTD		
	Oct-19	Oct-20	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	МоМ	vs. LY
Lower 48 Dry Production	95.1	88.3	93.3	93.3	92.4	92.2	92.6	0.5	4.3
Canadian Imports	4.6	4.3	4.9	5.2	5.1	5.2	5.4	0.2	▲ 1.1
L48 Power	30.3	30.8	35.9	39.4	40.2	33.1	32.2	- 0.9	1.5
L48 Residential & Commercial	15.3	15.3	8.8	8.1	7.7	7.6	8.1	a 0.5	▼-7.2
L48 Industrial	23.5	22.6	20.5	20.8	20.2	20.1	20.8	0 .7	T -1.8
L48 Lease and Plant Fuel	5.1	4.8	5.0	5.1	5.0	5.0	5.0	▲ 0.0	a 0.2
L48 Pipeline Distribution	2.4	2.5	2.4	2.5	2.5	2.2	2.2	▼ -0.1	V -0.3
L48 Regional Gas Consumption	76.6	75.9	72.7	76.0	75.7	68.1	68.3	0.2	V -7.6
Net LNG Exports	6.7	8.0	10.2	10.8	10.5	10.3	10.0	▼ -0.3	2.0
Total Mexican Exports	5.4	6.0	7.4	7.1	6.9	6.7	6.6	▼ -0.1	0.6
Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error	11.1	2.7	7.8	4.6	4.5	12.2	13.2		

Source: Bloomberg, analytix.ai



Daily Average Generation Data

Nuclear Generation Daily Average - GWh (NRC)

ENERGY

	28-Sep	29-Sep	30-Sep	1-Oct	2-Oct	3-Oct	4-Oct	DoD	vs.7D
NRC Nuclear Daily Output	84.5	84.4	84.4	84.8	82.0	83.0	81.6	-1.5	-2.3
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	20.4	20.4	20.5	20.1	22.8	21.9	23.3	1.5	2.3
NRC % Nuclear Cap Utilization	85.9	85.9	85.8	86.2	83.4	84.4	82.9	-1.5	-2.3

Wind Generation Daily Average - MWh (EIA)

	28-Sep	29-Sep	30-Sep	1-Oct	2-Oct	3-Oct	4-Oct	DoD	vs.7D
CALI Wind	4121	1907	917	295	313	425	752	327	-577
TEXAS Wind	10983	11385	11121	3603	1684	1553	2617	1063	-4105
US Wind	46045	43045	32138	13566	13223	14192	12934	-1258	-14101

Generation Daily Average - MWh (EIA)

	28-Sep	29-Sep	30-Sep	1-Oct	2-Oct	3-Oct	4-Oct	DoD	vs.7D
US Wind	46045	43045	32138	13566	13223	14192	12934	-1258	-14101
US Solar	11997	12647	12038	11689	13033	11970	10092	-1878	-2137
US Petroleum	3244	3279	4102	4456	4058	4016	4383	367	524
US Other	8689	9307	9255	9167	8703	9100	12078	2977	3041
US Coal	97854	99622	103268	106201	99597	96694	103437	6743	2898
US Nuke	87806	87770	87822	87850	85063	85687	82373	-3315	-4627
US Hydro	24475	25099	24195	24136	22657	22506	25444	2938	1599
US Gas	170128	163040	170011	173603	164196	170473	193482	23009	24907

See National Wind and Nuclear daily charts

Source: Bloomberg, analytix.ai

Storage Week Average Generation Data

Nuclear Generation Weekly Average - GWh (NRC)

	27-Aug	3-Sep	10-Sep	17-Sep	24-Sep	1-Oct	WoW	WoW Bcf/d Impact
NRC Nuclear Daily Output	91.9	90.2	90.3	86.7	85.9	85.1	-0.8	0.1
NRC Nuclear Max Capacity	104.9	104.9	104.9	104.9	104.9	104.9	0.0	
NRC Nuclear Outage	12.9	14.7	14.6	18.2	19.0	19.8	0.8	
NRC % Nuclear Cap Utilization	0.1	0.1	0.1	0.1	0.1	0.1	0.0	

Wind Generation Weekly Average - MWh (EIA)

	27-Aug	3-Sep	10-Sep	17-Sep	24-Sep	1-Oct	WoW	WoW Bcf/d Impact
CALI Wind	2052	2247	1236	2083	1936	2467	531	-0.1
TEXAS Wind	12600	7534	7327	9541	9780	10364	584	-0.1
US Wind	41912	35441	30659	42378	43250	43246	-4	0.0
					872.3			
					2%			

Generation Weekly Average - MWh (EIA)

								WoW
	27-Aug	3-Sep	10-Sep	17-Sep	24-Sep	1-Oct	WoW	Bcf/d
								Impact
US Wind	41912	35441	30659	42378	43250	43246	-4	0.0
US Solar	14469	13358	14254	14057	12185	12732	548	-0.1
US Petroleum	5323	3135	2072	2470	2594	2775	182	0.0
US Other	10131	9765	8934	9277	9125	8628	-496	0.1
US Coal	136177	136318	116993	115066	109063	94622	-14440	2.6
US Nuke	94358	92365	93162	89490	88789	88403	-385	0.1
US Hydro	30621	28181	26944	24138	25340	25132	-208	0.0
US Gas	216025	205503	181 0 94	182116	175354	153373	-21981	4.0

See National Wind and Nuclear daily charts

Source: Bloomberg, analytix.ai

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Monthly Average Generation Data

Nuclear Generation Monthly Average - GWh (NRC)

	2Yr Ago	LY				MTD			
	Same 30 days	Same 30 days	Jul-21	Aug-21	Sep-21	Oct-21	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY
NRC Nuclear Daily Output	86.8	86.5	90.1	91.5	87.2	55.2	80.2	-32.0	-6.3
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	18.0	18.4	14.8	13.4	17.7	49.6	24.7	32.0	6.3
NRC % Nuclear Cap Utilization	88.3	88.0	91.6	93.0	88.7	56.2	81.6	-32.5	-6.4

Wind Generation Monthly Average - MWh (EIA)

	2Yr Ago	LY				MTD			
	Same 30 S days	ame 30 days	Jul-21	Aug-21	Sep-21	Oct-21	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY
CALI Wind	2055	1269	2338	2442	2020	548	1787	-1471	518
TEXAS Wind	8968	7510	7217	9901	9400	2448	8075	-6951	565
US Wind	35242	32035	29217	35830	40162	13297	36225	-26865	4190

Generation Monthly Average - MWh (EIA)

	2Yr Ago	LY				MTD			
	Same 30 days	Same 30 days	Jul-21	Aug-21	Sep-21	Oct-21	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY
US Wind	35242	32035	29217	35830	40162	13297	36225	2 2927.8	4190
US Solar	8610	8931	14140	13787	13327	11161	12666	1 504.6	A 3735
US Petroleum	4349	2836	4233	4484	2467	4280	2913	T -1367	77
US Other	8384	8242	9327	9929	8992	10534	9331	T -1203	1089
US Coal	114011	84106	137228	137655	109998	102134	106544	🔺 4411	A 22439
US Nuke	93368	89687	92911	94062	90146	84286	88387	4100	T -1300
US Hydro	25288	25882	29941	28532	25605	24272	25050	A 778	V -832
US Gas	183846	171673	207823	210824	173434	181453	175253	A 31152	3579
US Total	474376	423459	524834	534937	464376	431028	456550	A 39376	a 33091



See National Wind and Nuclear daily charts

Source: Bloomberg, analytix.ai

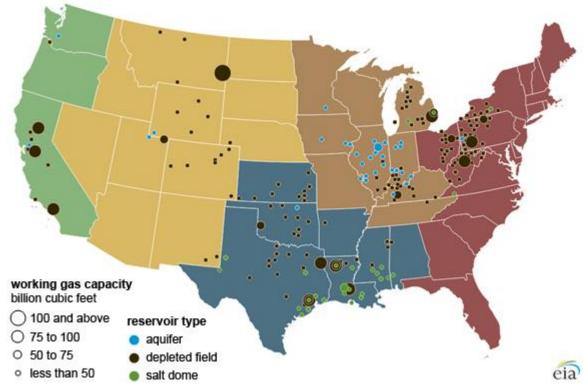


Regional S/D Models Storage Projection

Week Ending	1-Oct			
			Daily	
			Average	Weekly
		Daily	Storage	Adjusted
	Daily Raw	Adjustment	Activity	Storage
	Storage	Factor	(Adjusted) *	Activity
L48	15.8	0.9	16.8	117
East	3.7	0.5	4.3	30
Midwest	5.9	-0.8	5.1	36
Mountain	3.7	-3.3	0.4	3
South Central	1.2	5.1	6.2	44
Pacific	1.3	-0.5	0.8	5

*Adjustment Factor is calcuated based on historical regional deltas

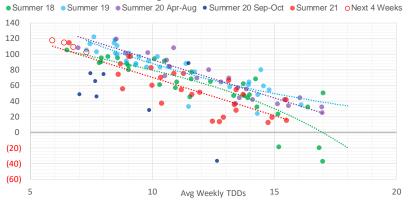
U.S. underground natural gas storage facilities by type (July 2015)



Weather Model Storage Projection

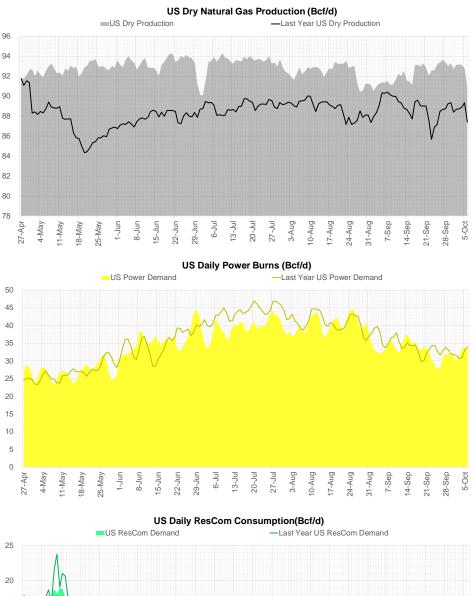
Next report and beyond		
Week Ending	GWDDs	Week Storage Projection
01-Oct	5.9	117
08-Oct	6.4	115
15-Oct	6.8	109
22-Oct	7.3	103

Weather Storage Model - Next 4 Week Forecast



Go to larger image



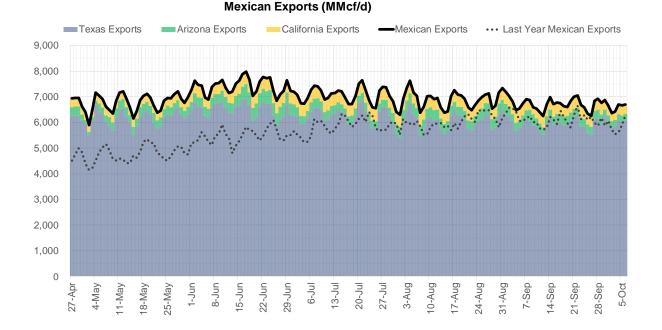


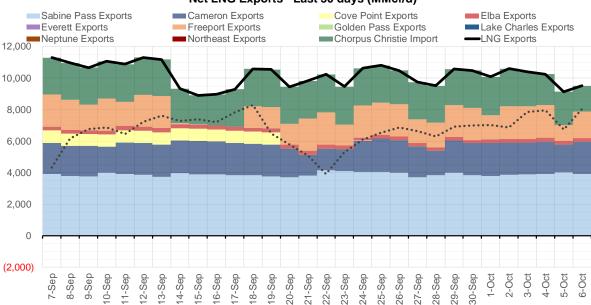
Supply – Demand Trends

15 10 5 0 4-May 27-Apr 11-May 22-Jun 29-Jun 20-Jul 27-Jul 3-Aug 10-Aug 17-Aug 24-Aug 31-Aug 14-Sep 28-Sep I8-May 25-May 1-Jun 8-Jun 15-Jun 6-Jul 13-Jul 7-Sep 21-Sep 5-Oct

Source: Bloomberg







Net LNG Exports - Last 30 days (MMcf/d)

Source: Bloomberg

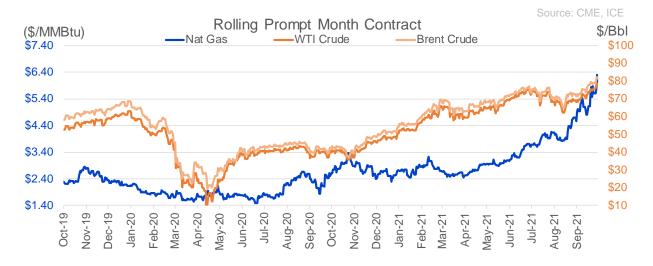


Nat Gas Options Volume and Open Interest CME, ICE and Nasdaq Combined

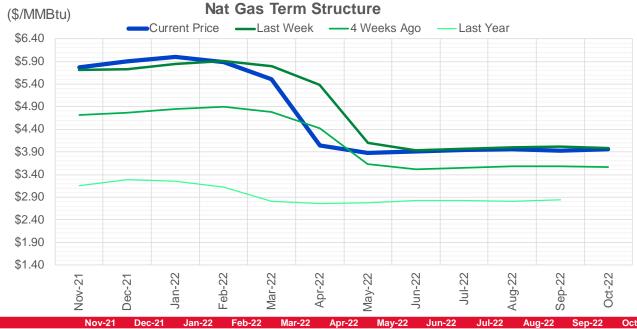
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	TRACT NTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
11	2021	Р	5.00	2797	12	2021	Р	2.75	43712
11	2021	Р	5.50	2645	12	2021	Р	2.50	38567
1	2022	С	17.00	2000	12	2021	Р	3.00	32086
11	2021	C	9.00	1917	12	2021	Р	4.00	31164
1	2022	С	10.00	1624	3	2022	С	10.00	30811
4	2022	С	4.25	1400	11	2021	Р	3.00	30169
11	2021	С	8.00	1194	11	2021	Р	4.00	26642
5	2022	C	4.00	1125	3	2022	С	8.00	26365
3	2022	P	3.00	975	12	2021	Р	3.50	25663
1	2022	С	8.00	921	11	2021	Р	4.50	25269
3	2022	P	4.25	912	11	2021	Р	5.00	23692
11	2021	С	7.00	848	11	2021	С	7.00	23281
12	2021	C	10.00	796	12	2021	С	4.00	22528
2	2022	C	15.00	736	3	2022	Р	3.50	20936
11	2021	C	10.00	732	3	2022	С	5.00	20486
3	2022	P	3.50	680	11	2021	С	4.00	20146
12	2021	Р	5.00	673	11	2021	Р	3.50	20074
3	2022	С	20.00	623	4	2022	С	3.00	19760
11	2021	P	5.30	607	11	2021	С	6.00	19544
4	2022	С	6.00	602	1	2022	Р	3.50	18199
12	2021	C	8.50	590	1	2022	С	5.00	18097
12	2021	P	4.00	589	12	2021	С	6.00	17655
3	2022	С	7.00	582	2	2022	Р	3.50	17545
11	2021	C	6.50	574	2	2022	С	5.00	17401
12	2021	P	3.50	553	3	2022	Р	4.00	16934
2	2022	С	8.00	539	3	2022	P	2.50	16801
12	2021	C	15.00	516	12	2021	С	7.00	16105
11	2021	P	5.75	512	3	2022	С	4.00	15831
11	2021	Р	6.00	506	11	2021	С	5.00	15178
1	2022	С	2.00	500	11	2021	С	4.50	14904
3	2022	P	5.25	500	1	2022	C P	4.00	14503
4	2022	C	8.00	500	11	2021		2.50	14488
4	2022	P	3.25	500	11 4	2021 2022	C C	3.75 5.00	14480 14446
11	2021	Р	4.50	492	4 12	2022	c	5.00	14446
1	2022	С	8.50	458	12 11	2022	P	3.00	14372
12	2021	C	11.00	445	4	2021	P	3.25 2.50	14214
1	2022	С	7.00	404	4 1	2022	F C	6.00	13937
1	2022	c	6.00	378	12	2022	P	2.00	13885
1	2022	C	6.50	377	12 11	2021	C	5.50	13725
2	2022	C	20.00	377	1	2021	P	4.00	13518
12	2021	C	9.00	369	1	2022	C	7.00	13406
11	2021	C	7.50	362	' 11	2022	c	4.25	13294
12	2021	c	7.00	353	2	2021	c	6.00	13229
3	2022	P	5.00	350	12	2022	c	4.50	13115
5	2022	C	10.00	350	5	2022	c	3.00	13110
5	2022	c	12.00	350	12	2022	c	8.00	13008
6	2022	c	10.00	350	2	2021	c	4.00	12914
6	2022	c	12.00	350	12	2022	c	5.00	12871
7	2022	č	10.00	350	6	2022			
		-			-		Sourc	e: CME, ICE	0.0

Nat Gas Futures Open Interest CME, and ICE Combined

Civile, and ICE Combined								
CME Henry Hub Futures (10,000 MMBtu) ICE Henry Hub Futures Contract Equivalent (10,000 I								
-	Current	Prior	Daily Change		Current	Prior	Daily Change	
NOV 21	252830	251348	1482	NOV 21	87937	87861	77	
DEC 21	111339	106116	5223	DEC 21	76585	75454	1131	
JAN 22	174588	170053	4535	JAN 22	94704	94385	320	
FEB 22	61118	59798	1320	FEB 22	69591	70532	-941	
MAR 22	129143	127728	1415	MAR 22	76016	76155	-139	
APR 22	124794	123886	908	APR 22	74509	74380	128	
MAY 22	121229	120899	330	MAY 22	70751	70689	62	
JUN 22	37554	37044	510	JUN 22	54591	54607	-16	
JUL 22	33390	33886	-496	JUL 22	56927	56951	-23	
AUG 22	31287	32167	-880	AUG 22	55976	55822	154	
SEP 22	35250	34711	539	SEP 22	56856	56803	53	
OCT 22	89826	90039	-213	OCT 22	62659	62527	132	
NOV 22	31416	31606	-190	NOV 22	48654	48553	101	
DEC 22	25445	25690	-245	DEC 22	51927	51823	104	
JAN 23	24602	24594	8	JAN 23	38234	38125	109	
FEB 23	10030	9879	151	FEB 23	31688	31524	164	
MAR 23	13337	13491	-154	MAR 23	33330	33423	-93	
APR 23	12427	12595	-168	APR 23	33009	32508	501	
MAY 23	7936	7806	130	MAY 23	31870	31676	194	
JUN 23	6169	6108	61	JUN 23	29619	29471	148	
JUL 23	4294	4226	68	JUL 23	29868	29720	148	
AUG 23	3377	3341	36	AUG 23	29659	29506	153	
SEP 23	4632	4580	52	SEP 23	28787	28640	148	
OCT 23	5754	5686	68	OCT 23	31826	31728	99	
NOV 23	2580	2514	66	NOV 23	30299	30322	-23	
DEC 23	2363	2653	-290	DEC 23	28224	28176	48	
JAN 24	1179	1479	-300	JAN 24	15610	15487	123	
FEB 24	1085	1084	1	FEB 24	13174	13134	41	
MAR 24	3361	3361	0	MAR 24	18028	17902	127	
APR 24	3518	3517	1	APR 24	12255	12134	121	



Market Report



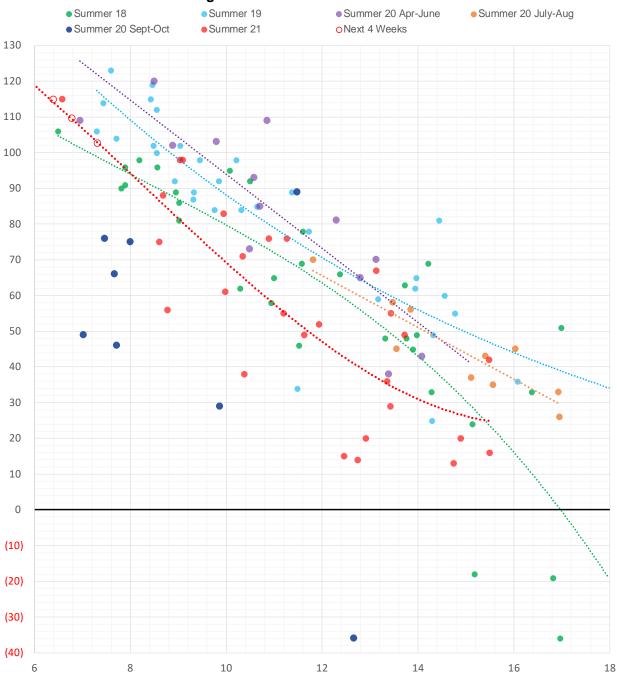
	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22
Current Price	\$5.766	\$5.906	\$5.999	\$5.888	\$5.505	\$4.042	\$3.880	\$3.911	\$3.950	\$3.955	\$3.935	\$3.963
Last Week	\$5.706	\$5.731	\$5.839	\$5.910	\$5.798	\$5.385	\$4.107	\$3.938	\$3.967	\$4.007	\$4.010	\$3.990
vs. Last Week	\$0.060	\$0.175	\$0.160	-\$0.022	-\$0.293	-\$1.343	-\$0.227	-\$0.027	-\$0.017	-\$0.052	-\$0.075	-\$0.027
4 Weeks Ago	\$4.712	\$4.762	\$4.850	\$4.905	\$4.791	\$4.420	\$3.628	\$3.521	\$3.549	\$3.579	\$3.587	\$3.568
vs. 4 Weeks Ago	\$1.054	\$1.144	\$1.149	\$0.983	\$0.714	-\$0.378	\$0.252	\$0.390	\$0.401	\$0.376	\$0.348	\$0.395
Last Year	\$2.615	\$3.161	\$3.293	\$3.247	\$3.122	\$2.801	\$2.751	\$2.780	\$2.817	\$2.825	\$2.811	\$2.841
vs. Last Year	\$3.151	\$2.745	\$2.706	\$2.641	\$2.383	\$1.241	\$1.129	\$1.131	\$1.133	\$1.130	\$1.124	\$1.122

		Cash	Prompt	Cash to
	Units	Settled	Settle	Prompt
AGT Citygate	\$/MMBtu	6.50	5.42	-1.09
TETCO M3	\$/MMBtu	5.30	4.63	-0.67
FGT Zone 3	\$/MMBtu	5.32	5.88	0.56
Zone 6 NY	\$/MMBtu	5.32	4.53	-0.79
Chicago Citygate	\$/MMBtu	6.02	5.63	-0.39
Michcon	\$/MMBtu	5.98	5.44	-0.54
Columbia TCO Pool	\$/MMBtu	5.23	4.76	-0.47
Ventura	\$/MMBtu	5.97	5.44	-0.53
Rockies/Opal	\$/MMBtu	6.08	5.50	-0.57
El Paso Permian Basin	\$/MMBtu	5.75	5.49	-0.26
Socal Citygate	\$/MMBtu	6.65	6.15	-0.50
Malin	\$/MMBtu	6.30	5.81	-0.50
Houston Ship Channel	\$/MMBtu	6.05	5.82	-0.23
Henry Hub Cash	\$/MMBtu	5.81	5.54	-0.27
AECO Cash	C\$/GJ	4.43	3.93	-0.50
Station2 Cash	C\$/GJ	4.20	6.39	2.19
Dawn Cash	C\$/GJ	6.02	5.41	-0.61

Source: CME, Bloomberg



				vs. 4 Weeks	
	Units	Current Price	vs. Last Week	Ago	vs. Last Year
NatGas Jul21/Oct21	\$/MMBtu	2.224	a 0.000	1 .273	2 .200
NatGas Oct21/Nov21	\$/MMBtu	0.471	a 0.432	0.424	a 0.414
NatGas Oct21/Jan22	\$/MMBtu	0.681	a 0.464	0.485	0.388
NatGas Apr22/Oct22	\$/MMBtu	-0.108	-0.003	-0.104	-0.117
WTI Crude	\$/Bbl	78.93	a 3.640	1 0.580	a 38.260
Brent Crude	\$/Bbl	82.56	a 3.470	1 0.870	4 39.910
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18	0.000	0.000	▲ 0.000
Heating Oil	cents/Gallon	249.36	a 20.460	3 7.200	1 30.500
Propane, Mt. Bel	cents/Gallon	1.51	a 0.221	a 0.326	1 .001
Ethane, Mt. Bel	cents/Gallon	0.46	a 0.072	0.107	a 0.259
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			



Weather Storage Model - Next 4 Week Forecast

Market Report

ENERGY

6 October 2021

