

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 2.41	▼ \$ (0.02)	▲ \$ 0.06

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 42.50	▼ \$ (0.43)	▲ \$ 0.1

	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 44.89	▼ \$ (0.48)	▼ \$ (0.2)

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- [Short-term Weather Model Outlooks](#)
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- [Supply – Demand Trends](#)
- [Nat Gas Options Volume and Open Interest](#)
- [Nat Gas Futures Open Interest](#)
- [Price Summary](#)

### 00z GWDD Change

Cooler Change

Warmer Change

ECMWF Ensemble 00z	1-5 Day	6-10 Day	11-15 Day	Total
12 Hr Chg	1.4	0.9	0.4	2.6
24 Hr Chg	-0.9	-2.4	-2.7	-5.9

GFS Ensemble 00z	1-5 Day	6-10 Day	11-15 Day	Total
12 Hr Chg	1.3	0.7	-0.5	1.6
24 Hr Chg	0.4	4.4	2.9	7.7

	Current	Δ from YD	Δ from 7D Avg
US Dry Production	85.9	▼ -0.20	▼ -0.58

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	38.4	▼ -0.20	▼ -2.73

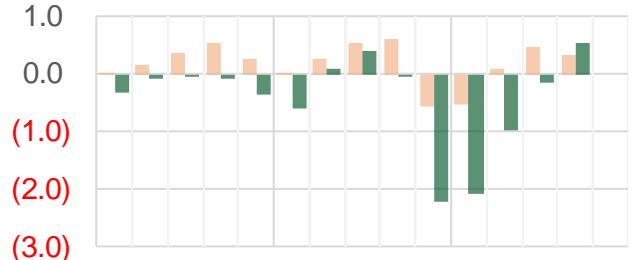
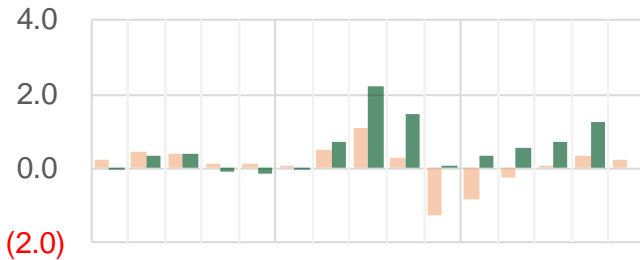
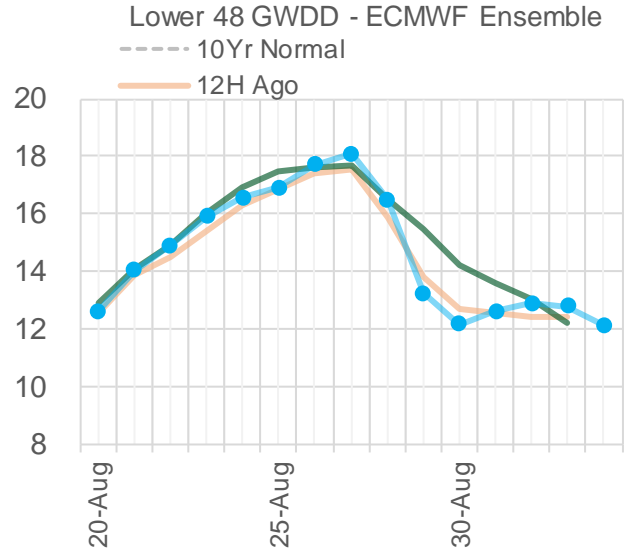
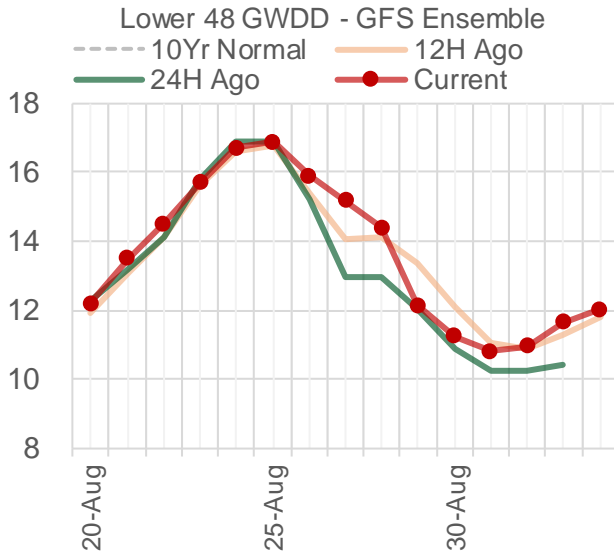
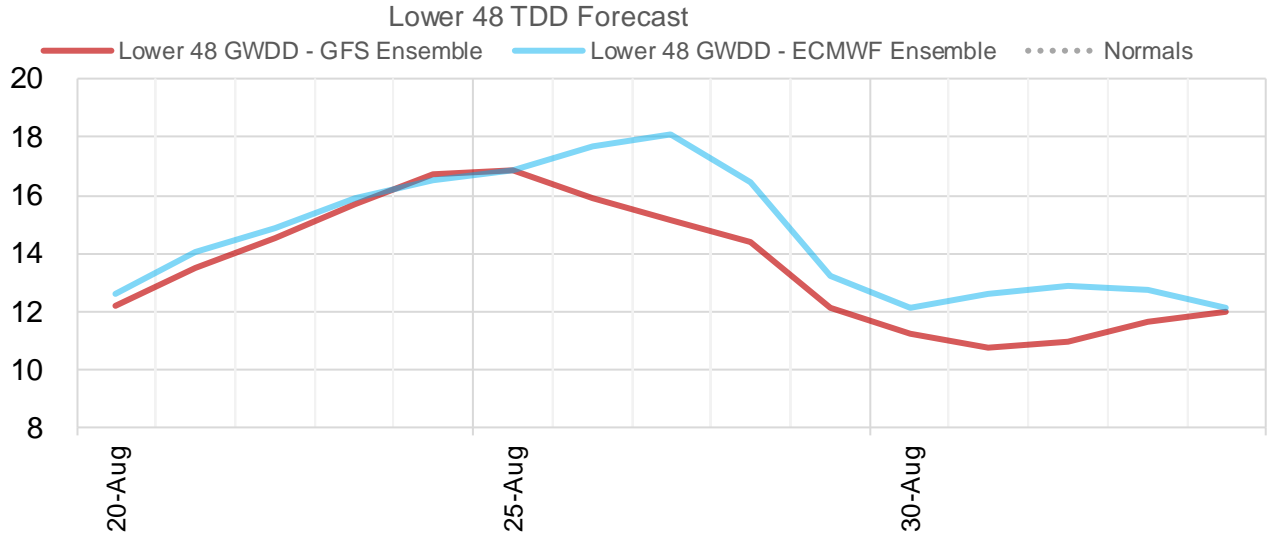
	Current	Δ from YD	Δ from 7D Avg
US ResComm	8.1	▼ -0.04	▲ 0.16

	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	4.8	▲ 0.13	▲ 0.12

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	3.8	▼ -0.92	▼ -0.86

	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.4	▲ 0.02	▲ 0.16

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



Source: WSI, Bloomberg

### Lower 48 Component Models

#### Daily Balances

	14-Aug	15-Aug	16-Aug	17-Aug	18-Aug	19-Aug	20-Aug	DoD	vs. 7D
<b>Lower 48 Dry Production</b>	<b>86.8</b>	<b>86.7</b>	<b>86.7</b>	<b>86.5</b>	<b>86.3</b>	<b>86.1</b>	<b>85.9</b>	▼ -0.2	▼ -0.6
<b>Canadian Imports</b>	<b>4.7</b>	<b>4.6</b>	<b>4.6</b>	<b>4.6</b>	<b>4.6</b>	<b>4.7</b>	<b>4.8</b>	▲ 0.1	▲ 0.2
L48 Power	43.8	40.1	38.7	40.7	40.6	38.6	38.4	▼ -0.2	▼ -2.0
L48 Residential & Commercial	8.0	7.6	7.5	8.0	8.1	8.1	8.1	▼ 0.0	▲ 0.2
L48 Industrial	19.7	19.8	20.0	20.1	20.0	20.0	19.8	▼ -0.1	▼ -0.1
L48 Lease and Plant Fuel	4.8	4.8	4.8	4.8	4.8	4.8	4.8	▼ 0.0	▼ 0.0
L48 Pipeline Distribution	2.4	2.2	2.1	2.2	2.2	2.2	2.1	▼ 0.0	▼ -0.1
<b>L48 Regional Gas Consumption</b>	<b>78.7</b>	<b>74.6</b>	<b>73.1</b>	<b>75.9</b>	<b>75.6</b>	<b>73.6</b>	<b>73.2</b>	▼ -0.4	▼ -2.1
<b>Net LNG Exports</b>	<b>4.4</b>	<b>4.8</b>	<b>4.8</b>	<b>4.8</b>	<b>4.7</b>	<b>4.7</b>	<b>3.8</b>	▼ -0.9	▼ -0.9
<b>Total Mexican Exports</b>	<b>6.3</b>	<b>6.2</b>	<b>6.0</b>	<b>6.2</b>	<b>6.0</b>	<b>6.3</b>	<b>6.4</b>	▲ 0.0	▲ 0.2
Implied Daily Storage Activity	2.0	5.6	7.5	4.3	4.6	6.2	7.4		
EIA Reported Daily Storage Activity									
Daily Model Error									

#### EIA Storage Week Balances

	10-Jul	17-Jul	24-Jul	31-Jul	7-Aug	14-Aug	WoW	vs. 4W
<b>Lower 48 Dry Production</b>	<b>85.9</b>	<b>85.8</b>	<b>86.6</b>	<b>86.5</b>	<b>86.6</b>	<b>86.7</b>	▲ 0.1	▲ 0.3
<b>Canadian Imports</b>	<b>4.3</b>	<b>4.5</b>	<b>4.4</b>	<b>4.5</b>	<b>4.6</b>	<b>5.0</b>	▲ 0.4	▲ 0.5
L48 Power	41.9	42.9	45.4	45.5	40.8	43.0	▲ 2.2	▼ -0.7
L48 Residential & Commercial	7.8	7.9	8.1	8.1	7.7	7.8	▲ 0.1	▼ -0.2
L48 Industrial	18.5	18.1	17.5	17.2	18.5	18.8	▲ 0.3	▲ 1.0
L48 Lease and Plant Fuel	4.8	4.8	4.8	4.8	4.8	4.8	▲ 0.0	▼ 0.0
L48 Pipeline Distribution	2.3	2.3	2.4	2.4	2.2	2.3	▲ 0.1	▼ 0.0
<b>L48 Regional Gas Consumption</b>	<b>75.2</b>	<b>76.1</b>	<b>78.2</b>	<b>78.2</b>	<b>74.0</b>	<b>76.7</b>	▲ 2.7	▲ 0.1
<b>Net LNG Exports</b>	<b>3.0</b>	<b>3.3</b>	<b>3.6</b>	<b>3.1</b>	<b>3.9</b>	<b>4.4</b>	▲ 0.5	▲ 0.9
<b>Total Mexican Exports</b>	<b>5.9</b>	<b>6.2</b>	<b>6.4</b>	<b>6.2</b>	<b>6.1</b>	<b>6.0</b>	▼ -0.1	▼ -0.2
Implied Daily Storage Activity	6.1	4.8	2.7	3.5	7.2	4.6	-2.6	
EIA Reported Daily Storage Activity	6.4	5.3	3.7	4.7	8.3			
Daily Model Error	-0.4	-0.5	-1.0	-1.2	-1.1			

#### Monthly Balances

	2Yr Ago Aug-18	LY Aug-19	Apr-20	May-20	Jun-20	Jul-20	MTD Aug-20	MoM	vs. LY
<b>Lower 48 Dry Production</b>	<b>83.2</b>	<b>92.5</b>	<b>91.6</b>	<b>85.8</b>	<b>85.1</b>	<b>86.2</b>	<b>86.6</b>	▲ 0.4	▼ -5.9
<b>Canadian Imports</b>	<b>5.0</b>	<b>4.4</b>	<b>3.9</b>	<b>3.9</b>	<b>4.0</b>	<b>4.4</b>	<b>4.8</b>	▲ 0.4	▲ 0.4
L48 Power	38.2	41.1	25.5	26.9	34.5	43.7	41.1	▼ -2.5	▲ 0.1
L48 Residential & Commercial	7.8	7.8	20.4	13.0	8.6	8.0	7.8	▼ -0.2	▼ 0.0
L48 Industrial	20.2	22.0	20.6	18.8	18.5	17.9	19.1	▲ 1.2	▼ -2.8
L48 Lease and Plant Fuel	4.7	5.1	5.1	4.8	4.8	4.8	4.8	▼ 0.0	▼ -0.3
L48 Pipeline Distribution	2.1	2.3	2.1	1.9	2.1	2.4	2.3	▼ -0.1	▲ 0.0
<b>L48 Regional Gas Consumption</b>	<b>73.0</b>	<b>78.2</b>	<b>73.7</b>	<b>65.4</b>	<b>68.4</b>	<b>76.8</b>	<b>75.1</b>	▼ -1.6	▼ -3.1
<b>Net LNG Exports</b>	<b>3.3</b>	<b>5.2</b>	<b>8.2</b>	<b>6.7</b>	<b>4.0</b>	<b>3.3</b>	<b>4.3</b>	▲ 1.0	▼ -0.8
<b>Total Mexican Exports</b>	<b>5.0</b>	<b>5.4</b>	<b>4.9</b>	<b>4.9</b>	<b>5.7</b>	<b>6.1</b>	<b>6.1</b>	▼ 0.0	▲ 0.7
Implied Daily Storage Activity	6.9	8.0	8.7	12.7	10.9	4.4	5.8		
EIA Reported Daily Storage Activity									
Daily Model Error									

Source: Bloomberg, analytix.ai

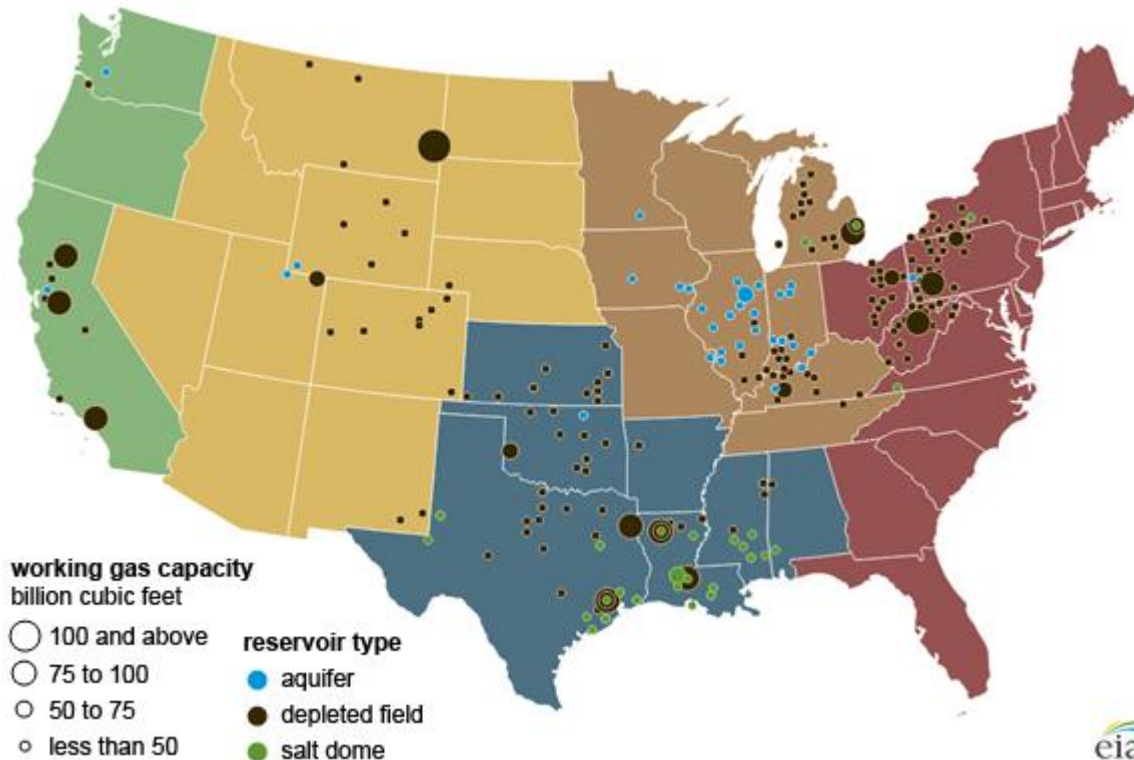
### Regional S/D Models Storage Projection

Week Ending 14-Aug

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	4.3	1.3	5.7	40
East	0.1	2.5	2.5	18
Midwest	2.3	0.1	2.4	17
Mountain	3.1	-2.3	0.8	5
South Central	-1.8	1.7	-0.2	-1
Pacific	0.7	-0.6	0.1	1

\*Adjustment Factor is calculated based on historical regional deltas

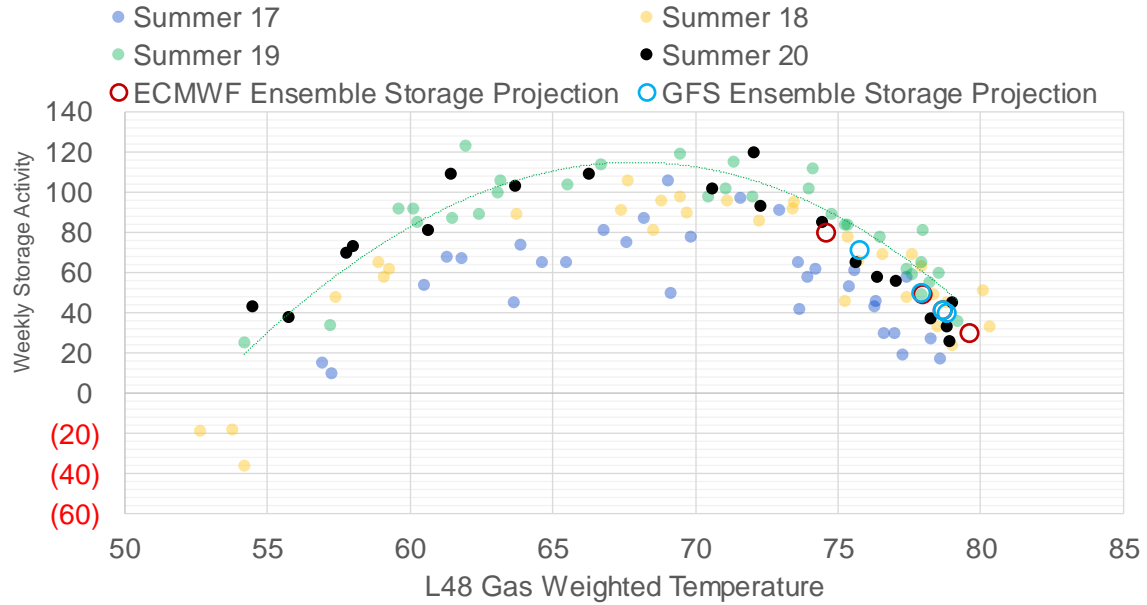
U.S. underground natural gas storage facilities by type (July 2015)



### Weather Model Storage Projection

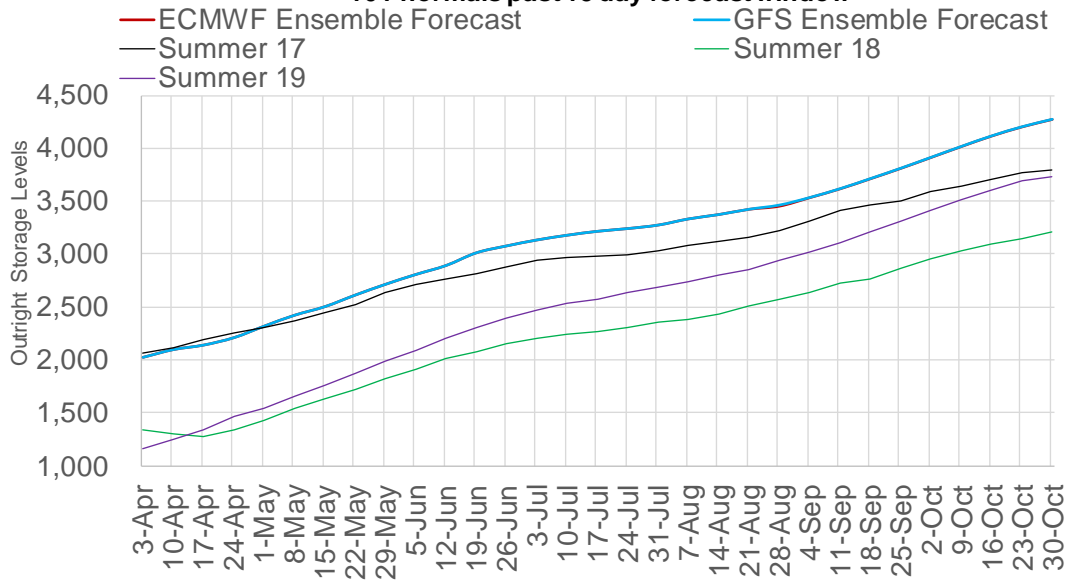
Next report and beyond	
Week Ending	Week Storage Projection
21-Aug	50
28-Aug	35
4-Sep	76

### Weather Storage Model - Next 4 Week Forecast



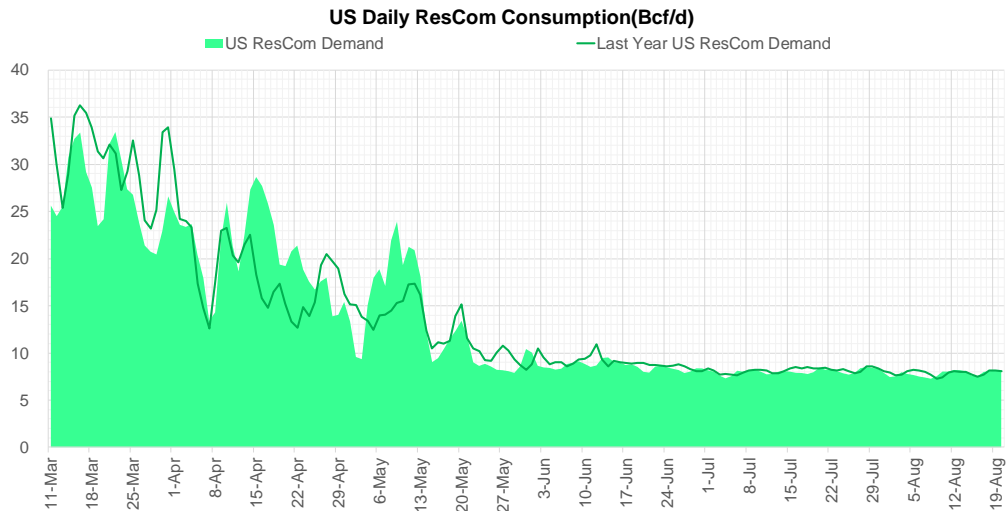
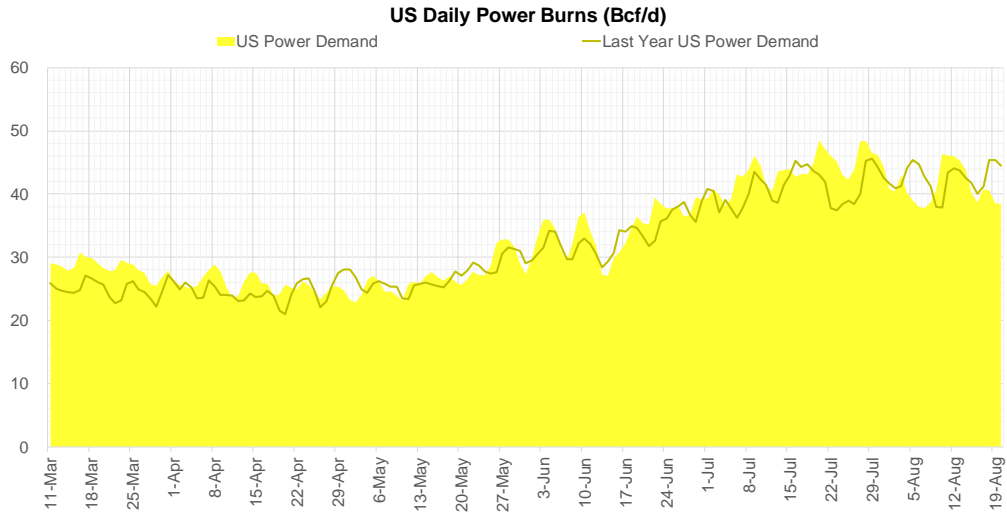
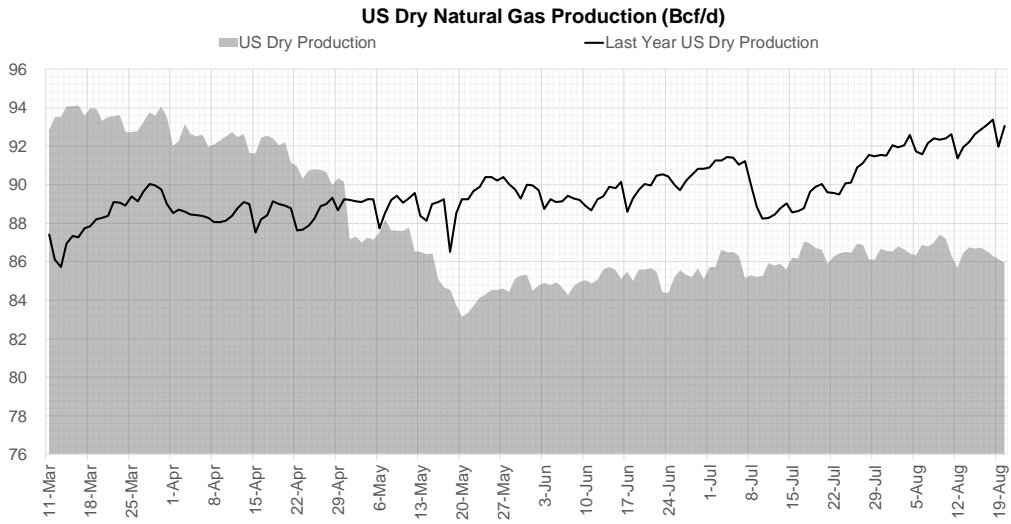
### Weather Based End of Winter Projection (Bcf)

10Y normals past 15 day forecast window



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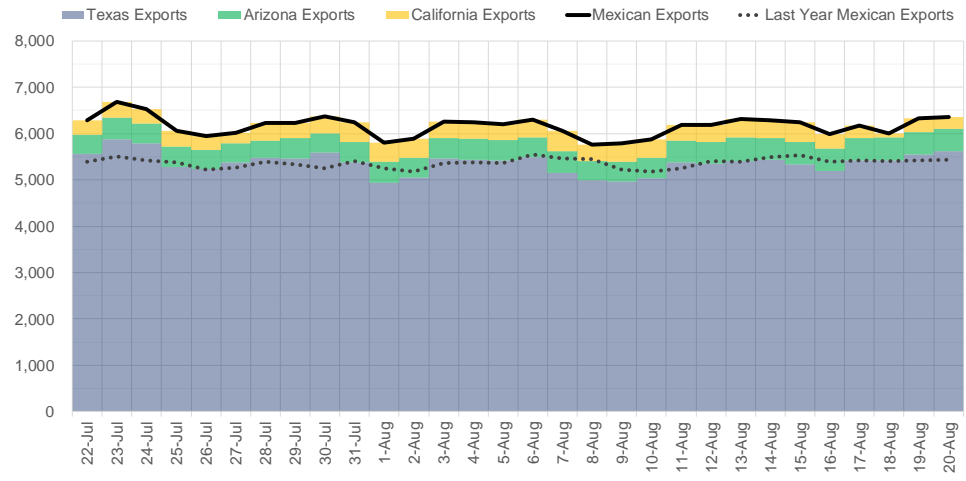
## Supply – Demand Trends



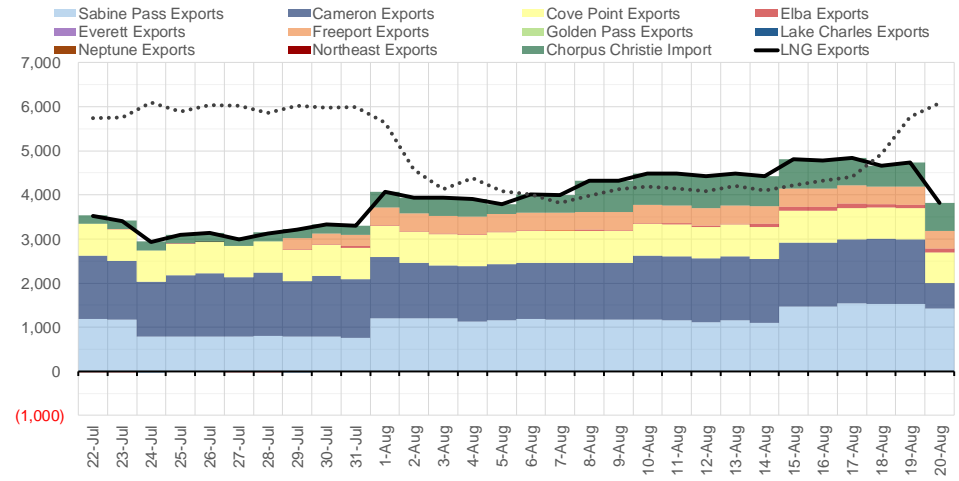
Source: Bloomberg

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



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



Source: Bloomberg

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

CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
9	2020	C	2.50	5968	9	2020	C	2.50	49628
9	2020	C	2.90	5000	10	2020	P	1.50	47401
10	2020	C	2.75	3934	10	2020	C	2.75	43988
10	2020	P	2.00	3652	10	2020	C	2.50	40287
10	2020	C	3.25	3503	3	2021	P	2.00	35598
9	2020	C	2.75	3421	10	2020	P	1.60	34378
10	2020	P	1.75	3003	10	2020	P	2.00	34337
3	2021	C	5.00	2811	10	2020	C	3.00	33622
9	2020	C	2.40	2779	10	2020	P	1.25	28752
10	2020	P	2.25	2752	10	2020	P	1.75	28444
10	2020	C	3.50	2659	11	2020	C	3.50	24321
9	2020	C	2.60	2643	9	2020	P	1.00	24289
9	2020	P	2.25	2641	10	2020	P	1.00	24016
9	2020	C	2.55	2625	9	2020	P	1.50	23369
3	2021	C	7.00	2500	9	2020	C	3.00	23223
10	2020	C	3.00	1817	9	2020	P	1.20	22867
9	2020	P	2.30	1626	9	2020	C	2.00	22545
9	2020	P	2.20	1622	9	2020	C	2.75	22177
10	2020	C	2.50	1580	3	2021	C	3.00	22129
10	2020	P	1.50	1529	10	2020	C	2.10	21987
11	2020	C	3.50	1411	9	2020	P	2.00	21903
2	2021	C	7.00	1251	9	2020	P	1.75	21682
1	2021	C	7.00	1250	10	2020	P	2.10	20715
9	2020	P	2.15	1187	1	2021	C	3.50	20106
10	2020	P	2.20	1177	3	2021	C	6.00	20104
9	2020	P	2.10	1116	9	2020	C	2.25	19537
11	2020	P	2.00	1075	9	2020	P	1.30	19363
1	2021	C	5.00	1025	9	2020	P	1.25	19214
9	2020	C	2.35	1019	10	2020	P	1.30	19116
1	2021	C	4.25	1013	1	2021	C	4.50	18866
1	2021	C	4.50	1000	12	2020	P	2.00	18723
10	2020	C	2.85	881	10	2020	C	3.25	18670
10	2020	P	1.60	869	3	2021	C	3.50	18665
10	2020	P	2.15	868	10	2020	C	2.00	18660
9	2020	P	2.35	851	10	2020	C	3.50	18506
1	2021	P	3.00	800	11	2020	C	3.00	17325
9	2020	C	2.45	755	10	2020	C	2.25	17312
9	2020	P	2.00	737	4	2021	C	5.00	16831
9	2020	C	2.65	729	1	2021	C	3.00	16668
10	2020	P	2.45	726	10	2020	P	1.80	16473
10	2020	P	2.50	716	12	2020	P	1.50	16401
11	2020	P	2.40	701	2	2021	C	5.00	15819
12	2020	P	2.50	700	11	2020	C	2.75	15733
12	2020	C	3.75	650	11	2020	C	3.25	15133
10	2020	P	1.65	606	4	2021	C	3.00	14824
10	2020	P	2.35	604	1	2021	P	2.25	14553
11	2020	C	4.00	600	1	2021	C	3.75	14327
1	2021	C	3.50	575	10	2020	P	2.25	14073
11	2020	P	2.15	556	10	2020	C	2.40	14052
					1	2021	C	5	13970.75

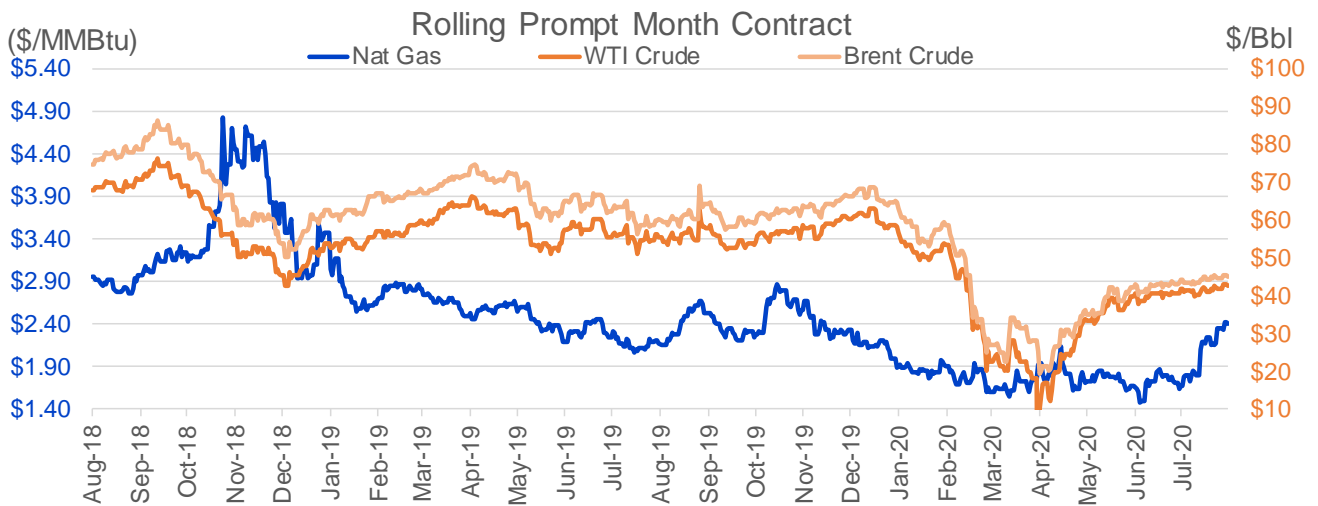
Source: CME, Nasdaq, ICE



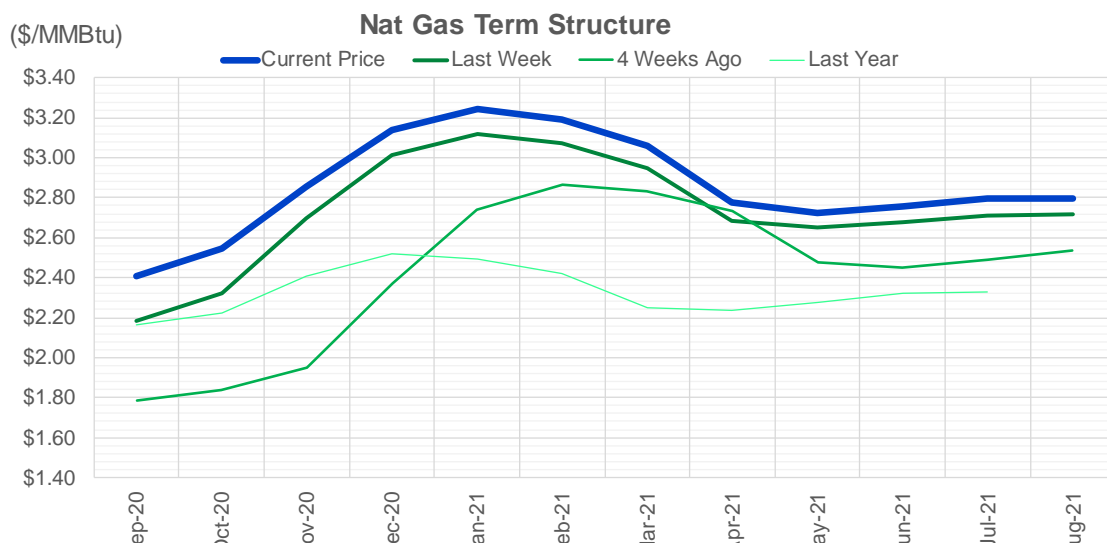
## Nat Gas Futures Open Interest CME, and ICE Combined

CME Henry Hub Futures (10,000 MMBtu)				ICE Henry Hub Futures Contract Equivalent (10,000 MM			
	Current	Prior	Daily Change	FOR JUNE 26	Current	Prior	Daily Change
SEP 20	78311	96147	-17836	SEP 20	68837	67884	952.5
OCT 20	213449	211553	1896	OCT 20	84986	84973	13.75
NOV 20	191397	188992	2405	NOV 20	75661	73394	2267.5
DEC 20	99171	98440	731	DEC 20	72732	72396	336.25
JAN 21	128347	126533	1814	JAN 21	87993	88158	-164.25
FEB 21	43971	43541	430	FEB 21	54410	54152	257.75
MAR 21	81577	81196	381	MAR 21	71651	71301	350
APR 21	78148	77249	899	APR 21	61909	61608	300.5
MAY 21	45821	45612	209	MAY 21	51053	50756	296.25
JUN 21	24788	24824	-36	JUN 21	48641	48290	351.25
JUL 21	18535	18427	108	JUL 21	50215	49954	261
AUG 21	18746	18391	355	AUG 21	49526	49392	134
SEP 21	22572	22244	328	SEP 21	47115	46956	159
OCT 21	57414	55951	1463	OCT 21	68422	68292	130.5
NOV 21	26305	26014	291	NOV 21	41397	41297	99.25
DEC 21	20945	20764	181	DEC 21	41646	41539	107
JAN 22	19405	19300	105	JAN 22	35138	34958	180.25
FEB 22	11157	11213	-56	FEB 22	29697	29660	37.25
MAR 22	16743	16263	480	MAR 22	32583	32464	118.5
APR 22	18592	18125	467	APR 22	32355	32228	127
MAY 22	5526	5523	3	MAY 22	23595	23513	82
JUN 22	2898	2898	0	JUN 22	22917	22850	67
JUL 22	2183	2177	6	JUL 22	23250	23152	97.75
AUG 22	1708	1708	0	AUG 22	23219	23142	77.25
SEP 22	2111	2236	-125	SEP 22	22367	22292	74.5
OCT 22	2838	2827	11	OCT 22	23891	23798	92.75
NOV 22	1982	1984	-2	NOV 22	21644	21577	67
DEC 22	1937	1936	1	DEC 22	22377	22316	61.75
JAN 23	2768	2668	100	JAN 23	12095	12226	-130.75
FEB 23	832	708	124	FEB 23	11126	11218	-91.5

Source: CME, ICE



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	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21
<b>Current Price</b>	<b>\$2.410</b>	<b>\$2.543</b>	<b>\$2.855</b>	<b>\$3.142</b>	<b>\$3.241</b>	<b>\$3.194</b>	<b>\$3.062</b>	<b>\$2.775</b>	<b>\$2.722</b>	<b>\$2.758</b>	<b>\$2.794</b>	<b>\$2.797</b>
Last Week	\$2.182	\$2.324	\$2.699	\$3.016	\$3.121	\$3.075	\$2.950	\$2.685	\$2.650	\$2.678	\$2.713	\$2.719
vs. Last Week	\$0.228	\$0.219	\$0.156	\$0.126	\$0.120	\$0.119	\$0.112	\$0.090	\$0.072	\$0.080	\$0.081	\$0.078
4 Weeks Ago	\$1.785	\$1.835	\$1.952	\$2.371	\$2.739	\$2.864	\$2.831	\$2.733	\$2.480	\$2.449	\$2.490	\$2.539
vs. 4 Weeks Ago	\$0.625	\$0.708	\$0.903	\$0.771	\$0.502	\$0.330	\$0.231	\$0.042	\$0.242	\$0.309	\$0.304	\$0.258
Last Year	\$2.159	\$2.163	\$2.222	\$2.406	\$2.518	\$2.493	\$2.424	\$2.250	\$2.239	\$2.278	\$2.320	\$2.329
vs. Last Year	\$0.251	\$0.380	\$0.633	\$0.736	\$0.723	\$0.701	\$0.638	\$0.525	\$0.483	\$0.480	\$0.474	\$0.468

	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	1.55	1.64	0.09
TETCO M3	\$/MMBtu	1.25	1.47	0.22
FGT Zone 3	\$/MMBtu	1.19	2.26	1.07
Zone 6 NY	\$/MMBtu	1.19	1.49	0.30
Chicago Citygate	\$/MMBtu	2.22	2.00	-0.22
Michcon	\$/MMBtu	2.15	1.92	-0.23
Columbia TCO Pool	\$/MMBtu	1.24	1.71	0.47
Ventura	\$/MMBtu	2.12	1.98	-0.14
Rockies/Opal	\$/MMBtu	2.43	1.90	-0.53
El Paso Permian Basin	\$/MMBtu	1.75	1.49	-0.26
Socal Citygate	\$/MMBtu	6.07	2.48	-3.60
Malin	\$/MMBtu	2.40	2.13	-0.28
Houston Ship Channel	\$/MMBtu	2.34	2.17	-0.18
Henry Hub Cash	\$/MMBtu	2.32	2.01	-0.31
AECO Cash	C\$/GJ	2.04	1.73	-0.31
Station2 Cash	C\$/GJ	2.06	2.08	0.02
Dawn Cash	C\$/GJ	2.14	1.92	-0.22

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks	
				Ago	vs. Last Year
NatGas Jan/Apr	\$/MMBtu	-0.47	▼ -0.030	▼ -0.082	▼ -0.066
NatGas Mar/Apr	\$/MMBtu	-0.287	▼ -0.022	▼ -0.540	▼ -0.543
NatGas Oct/Nov	\$/MMBtu	0.31	▼ -0.063	▼ -0.107	▲ 0.250
NatGas Oct/Jan	\$/MMBtu	0.70	▼ -0.099	▼ -0.214	▲ 0.364
WTI Crude	\$/Bbl	42.50	▲ 0.260	▲ 1.430	▼ -12.850
Brent Crude	\$/Bbl	44.89	▼ -0.070	▲ 1.580	▼ -15.030
Fuel Oil, NY Harbour 1%	\$/Bbl	98.03	▲ 0.000	▲ 0.000	▲ 0.000
Heating Oil	cents/Gallon	123.71	▼ -0.100	▼ -1.700	▼ -60.420
Propane, Mt. Bel	cents/Gallon	0.51	▲ 0.004	▲ 0.010	▲ 0.112
Ethane, Mt. Bel	cents/Gallon	0.24	▲ 0.012	▲ 0.028	▲ 0.087
Coal, PRB	\$/MTon	12.30	▲ 0.000	▲ 0.000	▲ 0.200
Coal, ILB	\$/MTon	31.05	▲ 0.000	▲ 0.000	▼ -7.000