

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 2.43	▲ \$ 0.02	▲ \$ 0.12

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 42.53	▼ \$ (0.36)	▲ \$ 0.1

	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 45.09	▼ \$ (0.37)	▲ \$ 0.0

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- [Lower 48 Component Models](#)
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- [Weather Model Storage Projection](#)
- [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	2.7	3.4	4.0	10.0
24 Hr Chg	0.1	5.7	2.6	8.4

GFS Ensemble 00z	1-5 Day	6-10 Day	11-15 Day	Total
12 Hr Chg	1.4	3.5	-4.6	0.3
24 Hr Chg	-0.7	9.5	-4.6	4.1

	Current	Δ from YD	Δ from 7D Avg
US Dry Production	85.1	▼ -1.25	▼ -1.40

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	38.0	▼ -1.62	▼ -3.99

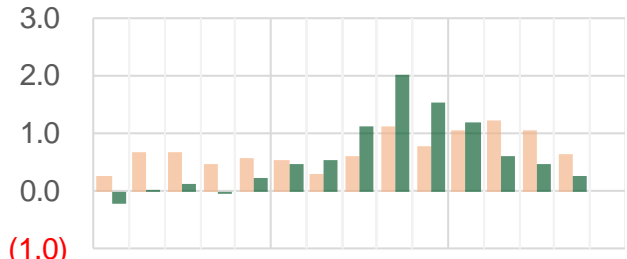
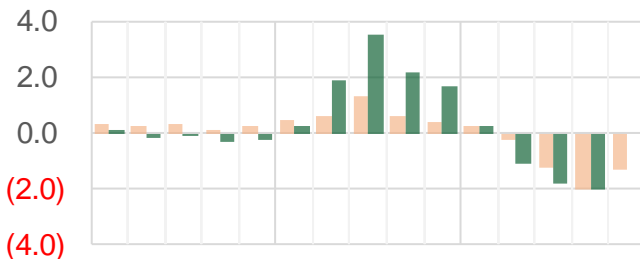
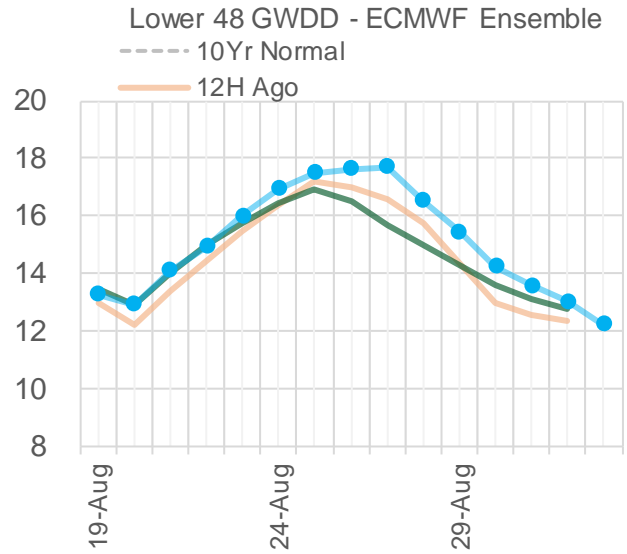
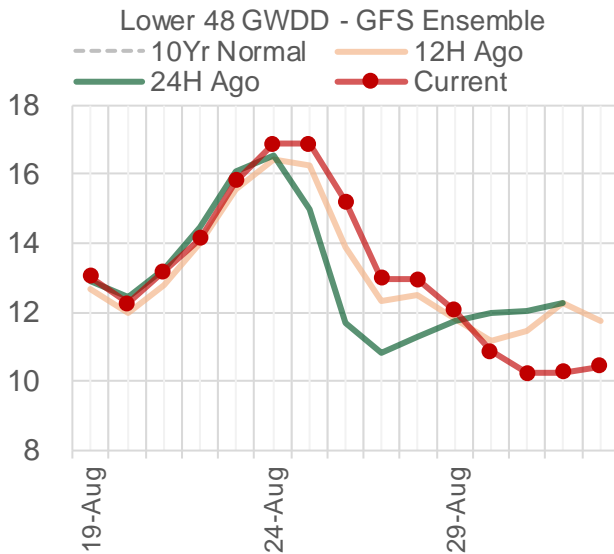
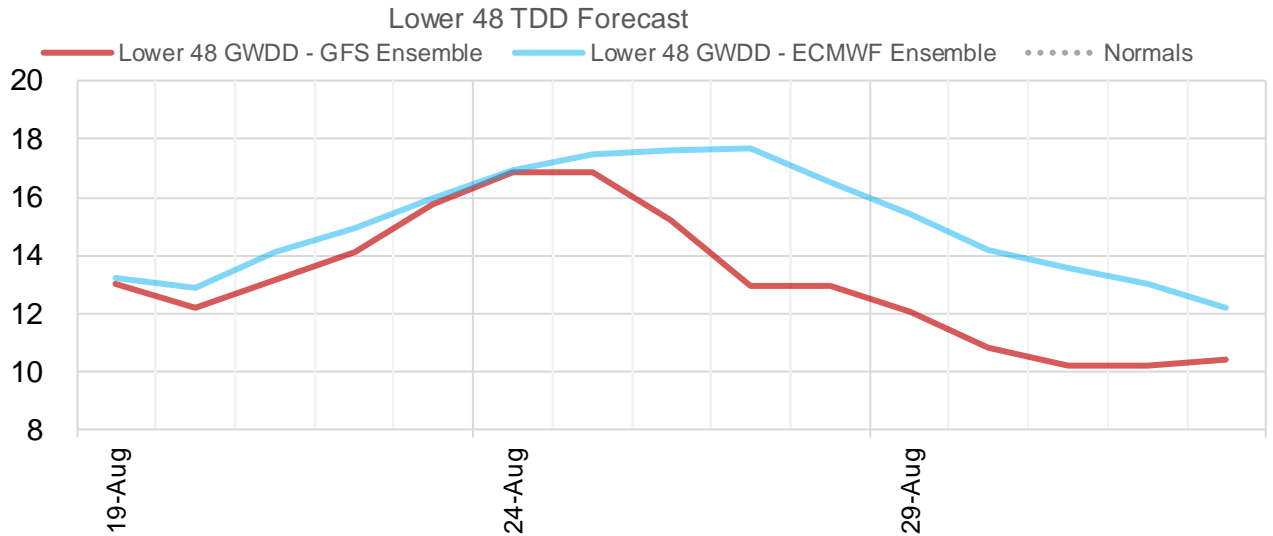
	Current	Δ from YD	Δ from 7D Avg
US ResComm	8.0	▼ -0.24	▼ -0.02

	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	4.6	▼ -0.03	▼ -0.21

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	4.8	▲ 0.12	▲ 0.15

	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.1	▲ 0.11	▼ -0.05

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



Source: WSI, Bloomberg

## Lower 48 Component Models

### Daily Balances

	13-Aug	14-Aug	15-Aug	16-Aug	17-Aug	18-Aug	19-Aug	DoD	vs. 7D
<b>Lower 48 Dry Production</b>	<b>86.4</b>	<b>86.8</b>	<b>86.7</b>	<b>86.7</b>	<b>86.6</b>	<b>86.3</b>	<b>85.1</b>	▼ -1.3	▼ -1.5
<b>Canadian Imports</b>	<b>5.2</b>	<b>4.7</b>	<b>4.6</b>	<b>4.6</b>	<b>4.6</b>	<b>4.7</b>	<b>4.6</b>	▼ 0.0	▼ -0.1
L48 Power	45.3	43.8	40.1	38.7	40.7	39.7	38.0	▼ -1.6	▼ -3.3
L48 Residential & Commercial	8.2	8.1	7.6	7.6	8.0	8.2	8.0	▼ -0.2	▲ 0.0
L48 Industrial	19.3	19.5	19.6	19.6	19.7	19.7	19.6	▼ 0.0	▲ 0.1
L48 Lease and Plant Fuel	4.8	4.8	4.8	4.8	4.8	4.8	4.7	▼ -0.1	▼ -0.1
L48 Pipeline Distribution	2.5	2.4	2.2	2.1	2.2	2.2	2.1	▼ -0.1	▼ -0.2
<b>L48 Regional Gas Consumption</b>	<b>80.1</b>	<b>78.5</b>	<b>74.3</b>	<b>72.8</b>	<b>75.6</b>	<b>74.5</b>	<b>72.5</b>	▼ -2.1	▼ -3.5
<b>Net LNG Exports</b>	<b>4.5</b>	<b>4.4</b>	<b>4.8</b>	<b>4.8</b>	<b>4.8</b>	<b>4.7</b>	<b>4.8</b>	▲ 0.1	▲ 0.1
<b>Total Mexican Exports</b>	<b>6.3</b>	<b>6.3</b>	<b>6.2</b>	<b>6.0</b>	<b>6.1</b>	<b>6.0</b>	<b>6.1</b>	▲ 0.1	▼ 0.0
Implied Daily Storage Activity	0.8	2.2	5.8	7.8	4.7	5.8	6.3		
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	8.2	7.7	7.8	▲ 0.1	▼ -0.1
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	6.0	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	41.2	▼ -2.5	▲ 0.2
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	19.0	▲ 1.1	▼ -3.0
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>	▼ -1.7	▼ -3.2
<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>	▲ 1.1	▼ -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>	▼ -0.1	▲ 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 Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	4.4	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

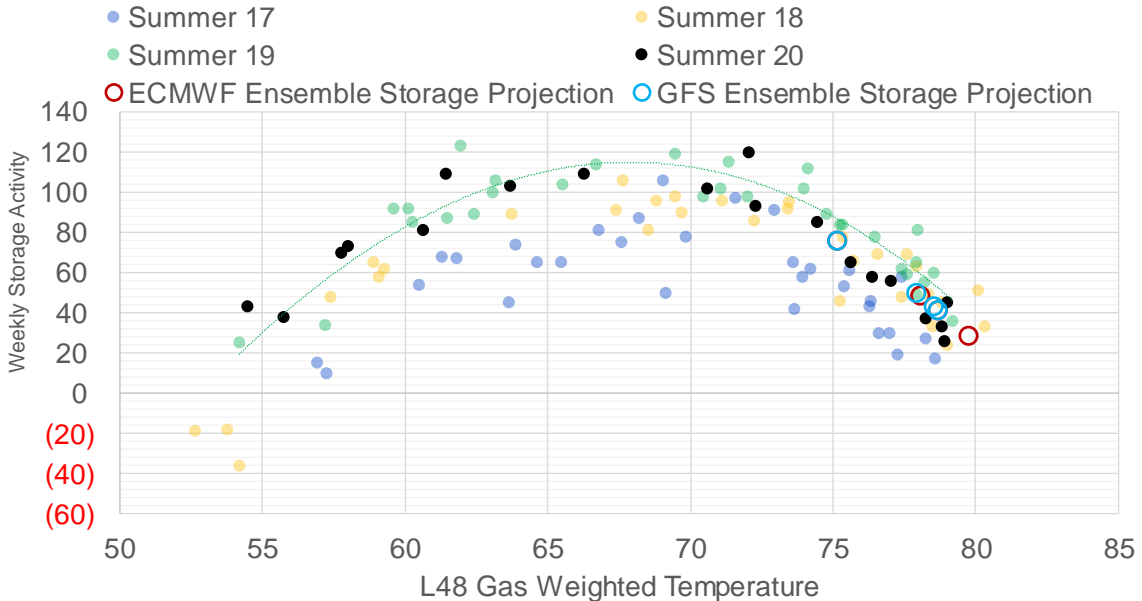
U.S. underground natural gas storage facilities by type (July 2015)



## Weather Model Storage Projection

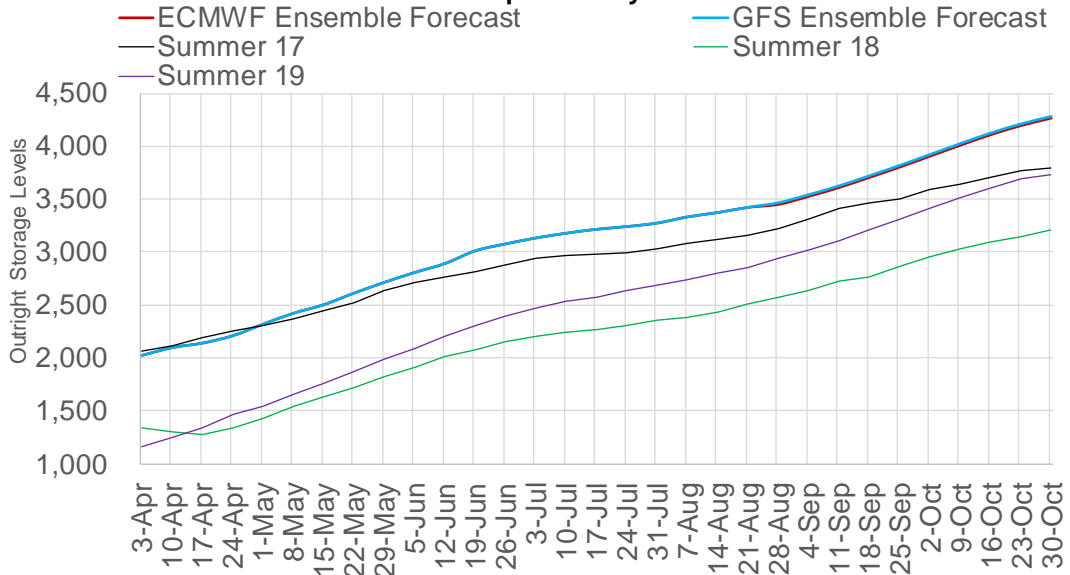
Next report and beyond	
Week Ending	Week Storage Projection
21-Aug	49
28-Aug	36
4-Sep	76

### Weather Storage Model - Next 4 Week Forecast



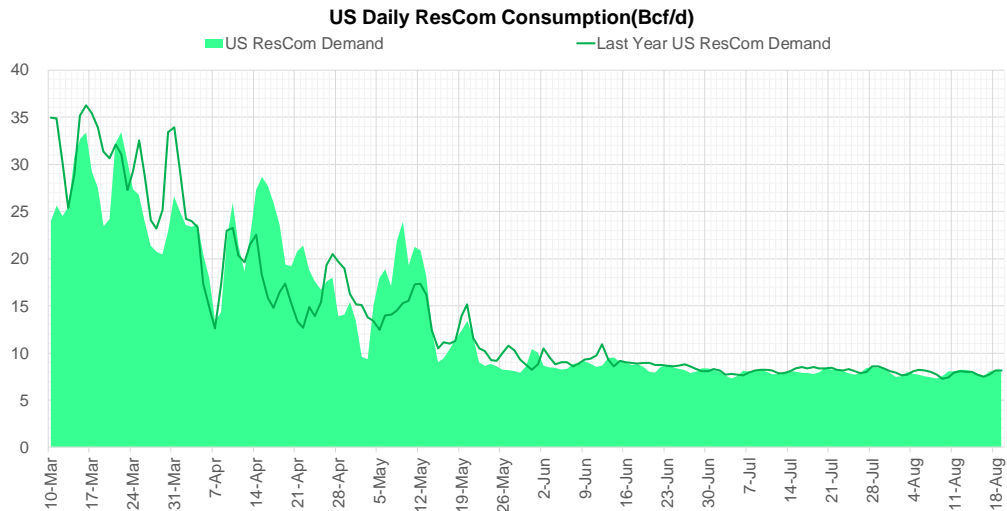
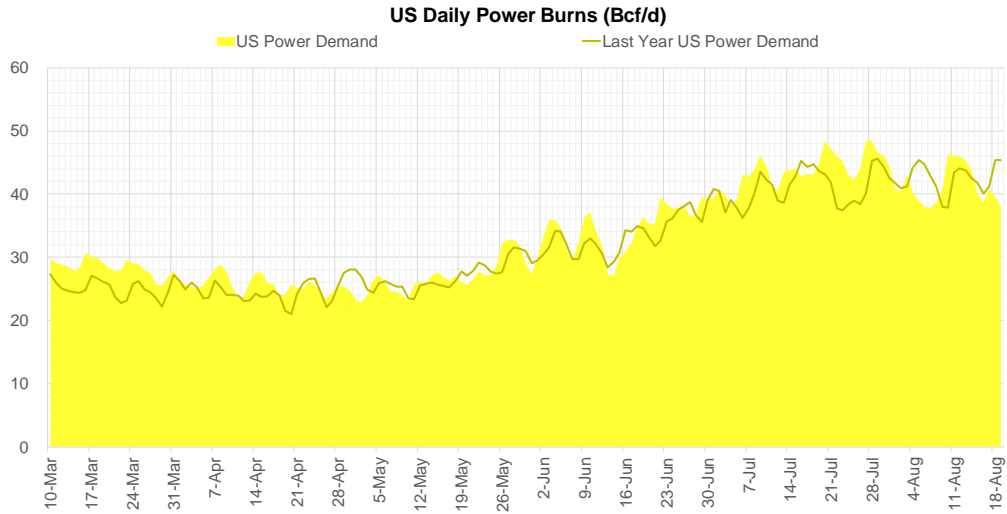
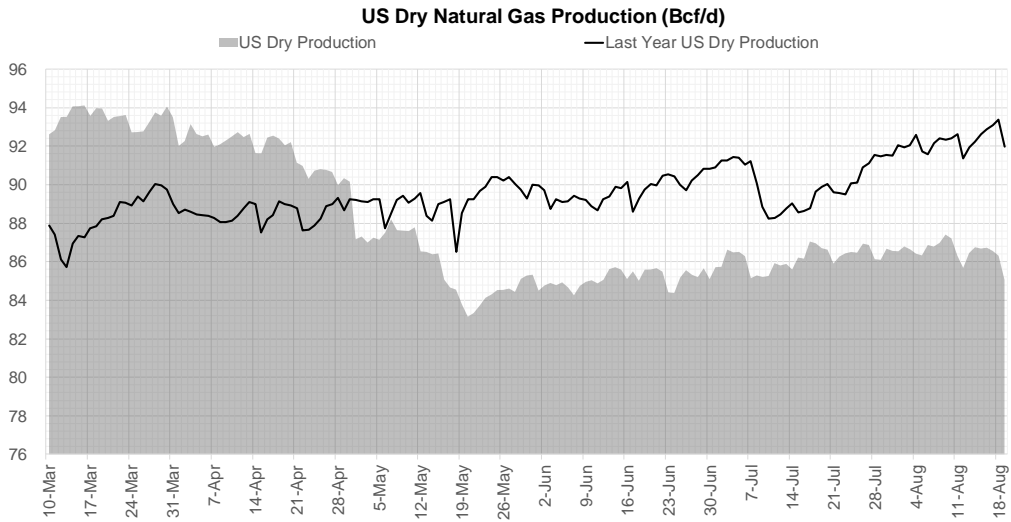
### Weather Based End of Winter Projection (Bcf)

10Y normals past 15 day forecast window



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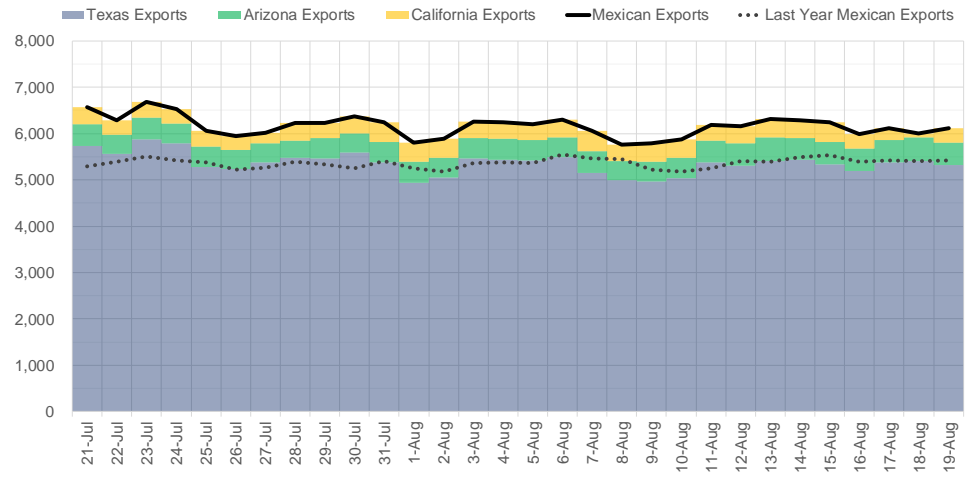
## Supply – Demand Trends



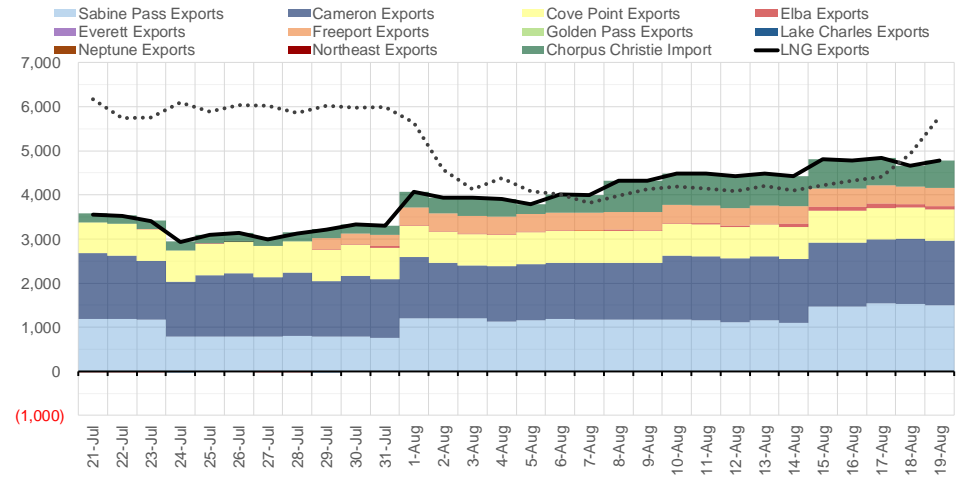
Source: Bloomberg

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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	7189	9	2020	C	2.50	47929
11	2020	C	3.50	6327	10	2020	P	1.50	46659
9	2020	C	2.75	5858	10	2020	C	2.75	43427
10	2020	P	2.00	4888	10	2020	C	2.50	39967
9	2020	P	2.15	3859	10	2020	P	2.00	35869
9	2020	P	2.25	3156	3	2021	P	2.00	35597
9	2020	P	2.30	3057	10	2020	P	1.60	34373
9	2020	P	2.20	2886	10	2020	C	3.00	34088
10	2020	P	2.40	2660	10	2020	P	1.75	28817
11	2020	C	3.00	2520	10	2020	P	1.25	28752
9	2020	C	2.65	2460	11	2020	C	3.50	24499
1	2021	C	3.50	2353	9	2020	P	1.00	24289
10	2020	C	3.00	2249	10	2020	P	1.00	23623
11	2020	P	1.75	2045	9	2020	P	1.50	23369
9	2020	C	3.00	1926	9	2020	C	3.00	23018
12	2020	P	2.00	1910	9	2020	C	2.00	22952
12	2020	P	2.25	1902	9	2020	P	1.20	22867
10	2020	C	2.75	1768	9	2020	P	2.00	22769
9	2020	P	2.00	1728	3	2021	C	3.00	22329
9	2020	C	2.70	1589	9	2020	P	1.75	22327
10	2020	C	3.75	1500	10	2020	C	2.10	21987
10	2020	P	2.25	1465	9	2020	C	2.75	20585
11	2020	C	4.00	1463	10	2020	P	2.10	20483
12	2020	C	4.50	1451	3	2021	C	6.00	20354
9	2020	C	2.60	1445	1	2021	C	3.50	20128
9	2020	P	2.35	1432	12	2020	P	2.00	19587
10	2020	C	3.50	1271	9	2020	C	2.25	19540
10	2020	P	2.15	1229	9	2020	P	1.30	19363
9	2020	C	2.40	1153	9	2020	P	1.25	19214
10	2020	P	1.75	1149	10	2020	P	1.30	19117
2	2021	P	1.75	1100	1	2021	C	4.50	18924
11	2020	C	3.25	1028	3	2021	C	3.50	18664
9	2020	C	2.90	1022	10	2020	C	2.00	18661
12	2020	C	6.00	1007	10	2020	C	3.25	18465
2	2021	P	2.00	1006	10	2020	C	3.50	17702
4	2021	C	5.00	1000	10	2020	C	2.25	17319
9	2020	P	2.10	960	11	2020	C	3.00	17061
10	2020	C	2.65	956	4	2021	C	5.00	16781
12	2020	P	2.60	936	1	2021	C	3.00	16633
9	2020	C	2.55	920	10	2020	P	1.80	16514
10	2020	C	2.90	920	12	2020	P	1.50	16401
2	2021	C	6.00	880	11	2020	C	2.75	15858
12	2020	C	4.00	849	2	2021	C	5.00	15819
12	2020	P	2.75	836	11	2020	C	3.25	15133
10	2020	P	2.20	783	4	2021	C	3.00	14824
1	2021	C	4.50	764	1	2021	P	2.25	14553
9	2020	P	1.75	763	1	2021	C	3.75	14327
1	2021	C	3.75	706	10	2020	C	2.40	14053
2	2021	C	3.75	700	1	2021	C	5.00	13936
					10	2020	P	2.25	13896.5

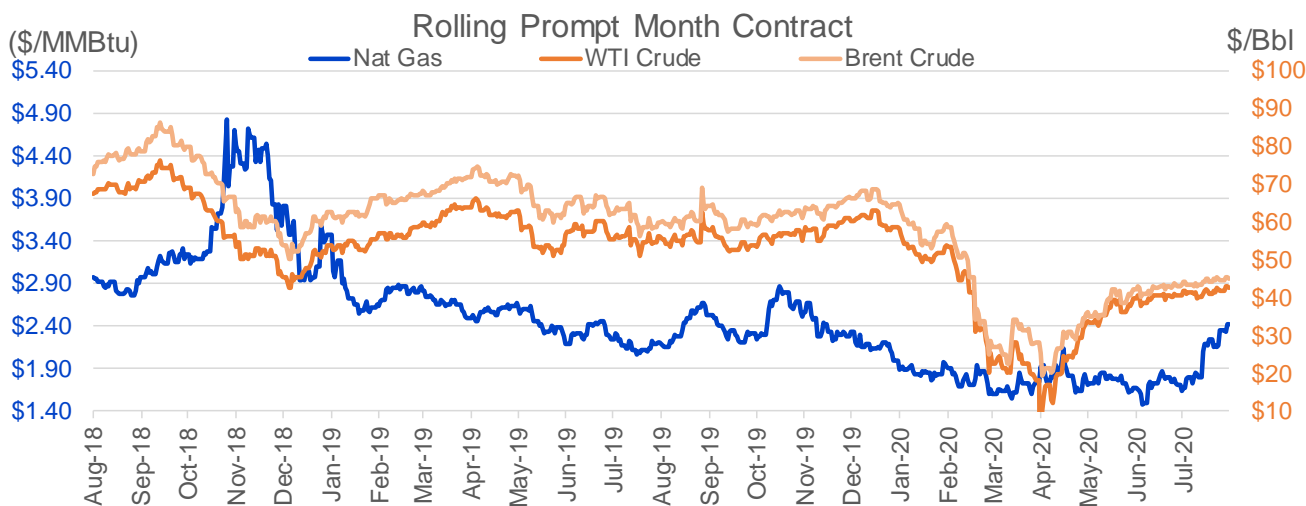
Source: CME, Nasdaq, ICE



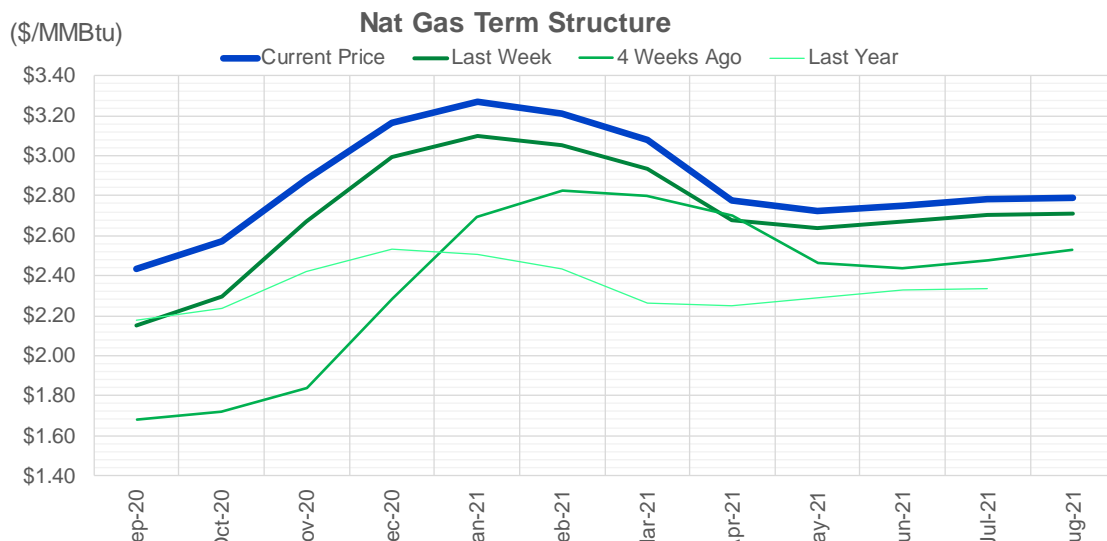
## Nat Gas Futures Open Interest CME, and ICE Combined

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	96218	108819	-12601	SEP 20	67884	70850	-2966.25
OCT 20	211810	209791	2019	OCT 20	84973	84248	724.5
NOV 20	188992	184557	4435	NOV 20	73394	72323	1070.5
DEC 20	98246	97436	810	DEC 20	72396	72930	-534.25
JAN 21	126505	126365	140	JAN 21	88158	87494	663.25
FEB 21	43344	42959	385	FEB 21	54152	53851	301.5
MAR 21	81196	80366	830	MAR 21	71301	69286	2015.75
APR 21	77249	75715	1534	APR 21	61608	59567	2041.25
MAY 21	45612	45944	-332	MAY 21	50756	50295	461.25
JUN 21	24824	24584	240	JUN 21	48290	48090	199.25
JUL 21	18427	18546	-119	JUL 21	49954	49794	160.5
AUG 21	18391	17797	594	AUG 21	49392	49005	386.25
SEP 21	22244	21926	318	SEP 21	46956	46563	393.5
OCT 21	55951	54303	1648	OCT 21	68292	68130	161.25
NOV 21	26014	25627	387	NOV 21	41297	41253	44.75
DEC 21	20764	20479	285	DEC 21	41539	41274	264.75
JAN 22	19300	19025	275	JAN 22	34958	34839	118.5
FEB 22	11213	11193	20	FEB 22	29660	29311	348.25
MAR 22	16263	16695	-432	MAR 22	32464	32259	205
APR 22	18125	17979	146	APR 22	32228	32288	-59.25
MAY 22	5523	5496	27	MAY 22	23513	23460	53.5
JUN 22	2898	2901	-3	JUN 22	22850	23059	-209
JUL 22	2177	2170	7	JUL 22	23152	23060	92
AUG 22	1708	1706	2	AUG 22	23142	23077	65.5
SEP 22	2236	2236	0	SEP 22	22292	22229	63
OCT 22	2827	2827	0	OCT 22	23798	23631	167.5
NOV 22	1984	1981	3	NOV 22	21577	21517	60
DEC 22	1936	1941	-5	DEC 22	22316	22261	54.75
JAN 23	2668	2646	22	JAN 23	12226	12324	-97.5
FEB 23	708	693	15	FEB 23	11218	11215	2.5

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>\$2.432</b>	<b>\$2.572</b>	<b>\$2.880</b>	<b>\$3.167</b>	<b>\$3.269</b>	<b>\$3.214</b>	<b>\$3.077</b>	<b>\$2.775</b>	<b>\$2.726</b>	<b>\$2.751</b>	<b>\$2.783</b>	<b>\$2.788</b>
Last Week	\$2.152	\$2.297	\$2.672	\$2.997	\$3.101	\$3.055	\$2.932	\$2.675	\$2.641	\$2.669	\$2.704	\$2.710
vs. Last Week	\$0.280	\$0.275	\$0.208	\$0.170	\$0.168	\$0.159	\$0.145	\$0.100	\$0.085	\$0.082	\$0.079	\$0.078
4 Weeks Ago	\$1.681	\$1.718	\$1.838	\$2.288	\$2.694	\$2.826	\$2.797	\$2.703	\$2.464	\$2.434	\$2.477	\$2.528
vs. 4 Weeks Ago	\$0.751	\$0.854	\$1.042	\$0.879	\$0.575	\$0.388	\$0.280	\$0.072	\$0.262	\$0.317	\$0.306	\$0.260
Last Year	\$2.170	\$2.177	\$2.239	\$2.421	\$2.532	\$2.505	\$2.435	\$2.261	\$2.248	\$2.288	\$2.330	\$2.338
vs. Last Year	\$0.262	\$0.395	\$0.641	\$0.746	\$0.737	\$0.709	\$0.642	\$0.514	\$0.478	\$0.463	\$0.453	\$0.450

	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	1.55	1.62	0.07
TETCO M3	\$/MMBtu	1.60	1.34	-0.26
FGT Zone 3	\$/MMBtu	1.42	2.22	0.80
Zone 6 NY	\$/MMBtu	1.42	1.46	0.04
Chicago Citygate	\$/MMBtu	2.20	1.92	-0.28
Michcon	\$/MMBtu	2.14	1.86	-0.28
Columbia TCO Pool	\$/MMBtu	1.69	1.68	-0.01
Ventura	\$/MMBtu	2.12	1.88	-0.24
Rockies/Opal	\$/MMBtu	2.43	1.83	-0.60
El Paso Permian Basin	\$/MMBtu	1.74	1.46	-0.28
Socal Citygate	\$/MMBtu	6.22	2.11	-4.12
Malin	\$/MMBtu	2.39	1.95	-0.44
Houston Ship Channel	\$/MMBtu	2.32	2.12	-0.20
Henry Hub Cash	\$/MMBtu	2.32	1.97	-0.35
AECO Cash	C\$/GJ	2.02	1.67	-0.35
Station2 Cash	C\$/GJ	2.07	1.94	-0.13
Dawn Cash	C\$/GJ	2.17	1.87	-0.30

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks		vs. Last Year
				Ago		
NatGas Jan/Apr	\$/MMBtu	-0.49	▼ -0.068	▼ -0.132	▼ -0.094	
NatGas Mar/Apr	\$/MMBtu	-0.302	▼ -0.045	▼ -0.541	▼ -0.558	
NatGas Oct/Nov	\$/MMBtu	0.31	▼ -0.067	▼ -0.142	▲ 0.246	
NatGas Oct/Jan	\$/MMBtu	0.70	▼ -0.107	▼ -0.291	▲ 0.363	
WTI Crude	\$/Bbl	42.53	▼ -0.140	▲ 0.630	▼ -13.150	
Brent Crude	\$/Bbl	45.09	▼ -0.340	▲ 0.800	▼ -15.210	
Fuel Oil, NY Harbour 1%	\$/Bbl	98.03	▲ 0.000	▲ 0.000	▲ 0.000	
Heating Oil	cents/Gallon	124.33	▼ -1.390	▼ -2.740	▼ -61.400	
Propane, Mt. Bel	cents/Gallon	0.50	▼ -0.002	▲ 0.008	▲ 0.112	
Ethane, Mt. Bel	cents/Gallon	0.24	▲ 0.014	▲ 0.031	▲ 0.089	
Coal, PRB	\$/MTon	12.30	▲ 0.000	▲ 0.000	▲ 0.200	
Coal, ILB	\$/MTon	31.05	▲ 0.000	▲ 0.000	▼ -7.000	