

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 1.97	▼ \$ (0.07)	▼ \$ (0.29)

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 40.74	▼ \$ (0.23)	▲ \$ 2.4

	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 43.04	▼ \$ (0.26)	▲ \$ 2.3

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- [Nat Gas Options Volume and Open Interest](#)
- [Nat Gas Futures Open Interest](#)
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### 00z GWDD Change

Cooler Change

Warmer Change

ECMWF Ensemble 00z	1-5 Day	6-10 Day	11-15 Day	Total
12 Hr Chg	-0.3	1.6	1.8	3.1
24 Hr Chg	0.2	1.4	1.2	2.7

GFS Ensemble 00z	1-5 Day	6-10 Day	11-15 Day	Total
12 Hr Chg	-0.3	1.0	6.5	7.1
24 Hr Chg	0.8	-1.1	1.9	1.7

	Current	Δ from YD	Δ from 7D Avg
US Dry Production	87.0	▼ -0.69	▼ -0.03

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	33.7	▲ 0.62	▲ 0.42

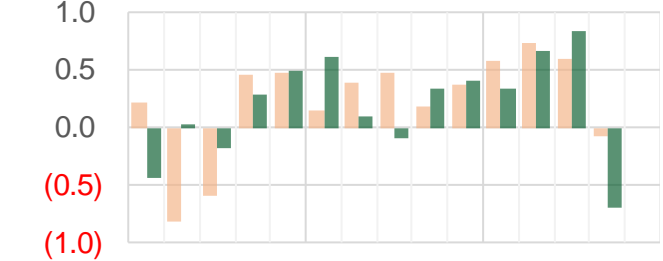
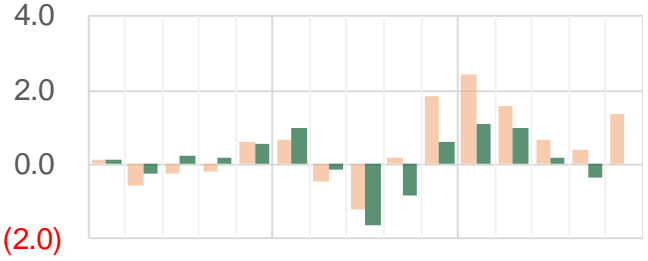
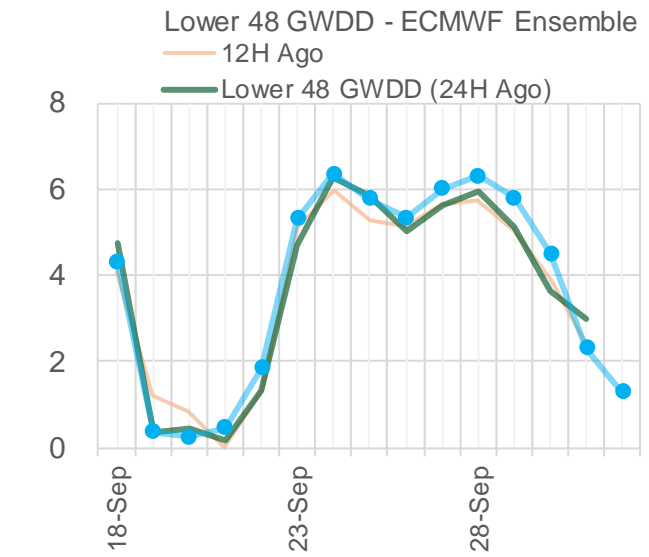
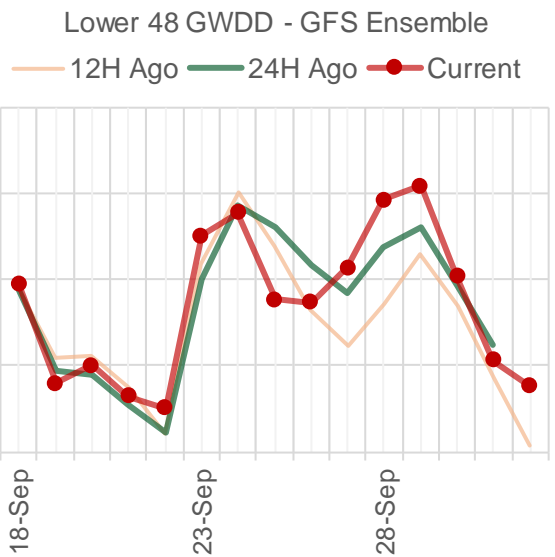
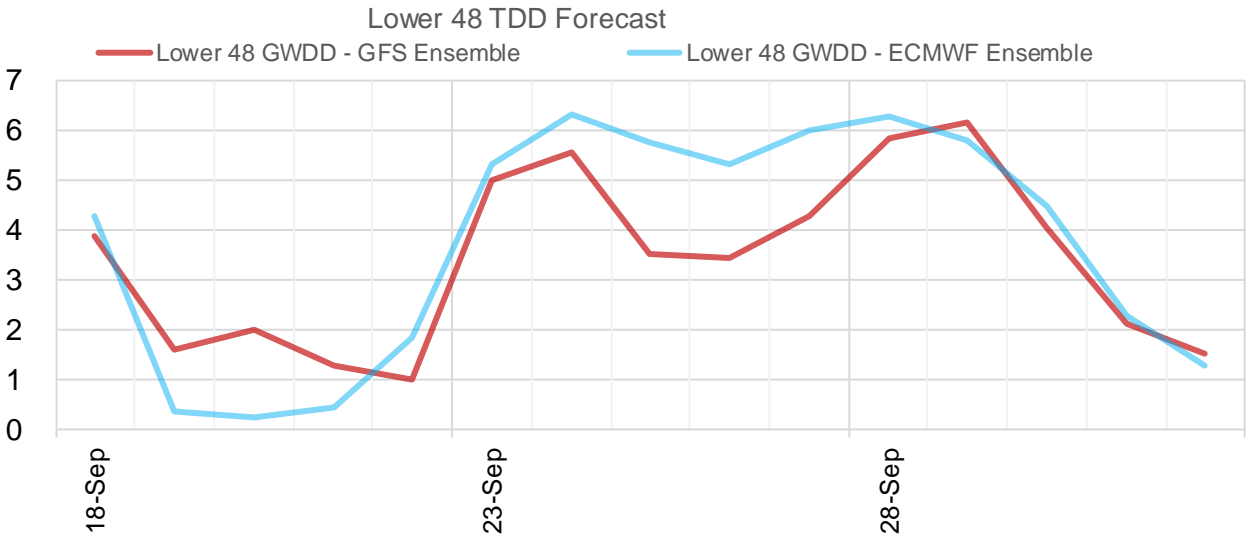
	Current	Δ from YD	Δ from 7D Avg
US ResComm	10.5	▲ 1.81	▲ 2.08

	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	4.0	▲ 0.34	▲ 0.19

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	8.1	▲ 0.26	▲ 0.80

	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.4	▼ -0.08	▲ 0.22

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



Source: WSI , Bloomberg

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## Lower 48 Component Models

### Daily Balances

	12-Sep	13-Sep	14-Sep	15-Sep	16-Sep	17-Sep	18-Sep	DoD	vs. 7D
<b>Lower 48 Dry Production</b>	<b>87.6</b>	<b>87.3</b>	<b>87.0</b>	<b>86.4</b>	<b>85.9</b>	<b>87.7</b>	<b>87.0</b>	▼ -0.7	▲ 0.1
<b>Canadian Imports</b>	<b>3.9</b>	<b>4.0</b>	<b>4.0</b>	<b>3.6</b>	<b>3.7</b>	<b>3.6</b>	<b>4.0</b>	▲ 0.3	▲ 0.2
L48 Power	32.0	32.4	34.7	33.0	32.7	33.1	33.7	▲ 0.6	▲ 0.7
L48 Residential & Commercial	7.7	7.4	8.2	9.4	8.6	8.7	10.5	▲ 1.8	▲ 2.2
L48 Industrial	19.3	19.4	19.3	19.2	18.5	17.6	16.7	▼ -0.9	▼ -2.2
L48 Lease and Plant Fuel	4.9	4.9	4.8	4.8	4.8	4.9	4.9	▼ 0.0	▲ 0.0
L48 Pipeline Distribution	1.9	1.9	2.0	2.0	2.0	2.0	2.1	▲ 0.1	▲ 0.1
<b>L48 Regional Gas Consumption</b>	<b>65.7</b>	<b>65.9</b>	<b>69.1</b>	<b>68.4</b>	<b>66.5</b>	<b>66.2</b>	<b>67.8</b>	▲ 1.6	▲ 0.9
<b>Net LNG Exports</b>	<b>7.2</b>	<b>7.6</b>	<b>7.3</b>	<b>7.4</b>	<b>7.2</b>	<b>7.8</b>	<b>8.1</b>	▲ 0.3	▲ 0.7
<b>Total Mexican Exports</b>	<b>6.0</b>	<b>5.9</b>	<b>6.3</b>	<b>6.3</b>	<b>6.1</b>	<b>6.5</b>	<b>6.4</b>	▼ -0.1	▲ 0.2
Implied Daily Storage Activity	12.7	11.8	8.3	7.8	9.8	10.9	8.7		
EIA Reported Daily Storage Activity									
Daily Model Error									

### EIA Storage Week Balances

	14-Aug	21-Aug	28-Aug	4-Sep	11-Sep	18-Sep	WoW	vs. 4W
<b>Lower 48 Dry Production</b>	<b>87.4</b>	<b>87.2</b>	<b>86.0</b>	<b>86.3</b>	<b>88.3</b>	<b>87.1</b>	▼ -1.2	▲ 0.1
<b>Canadian Imports</b>	<b>5.0</b>	<b>4.7</b>	<b>5.2</b>	<b>4.4</b>	<b>3.8</b>	<b>3.8</b>	▼ 0.0	▼ -0.7
L48 Power	42.8	40.0	41.6	37.3	35.2	33.3	▼ -2.0	▼ -5.3
L48 Residential & Commercial	8.1	8.2	8.3	7.7	8.8	8.4	▼ -0.4	▲ 0.2
L48 Industrial	19.0	20.4	19.6	19.5	18.6	18.9	▲ 0.3	▼ -0.7
L48 Lease and Plant Fuel	4.9	4.8	4.8	4.8	4.9	4.9	▼ -0.1	▲ 0.0
L48 Pipeline Distribution	2.3	2.2	2.3	2.1	2.1	2.0	▼ -0.1	▼ -0.2
<b>L48 Regional Gas Consumption</b>	<b>77.2</b>	<b>75.6</b>	<b>76.6</b>	<b>71.5</b>	<b>69.6</b>	<b>67.4</b>	▼ -2.2	▼ -5.9
<b>Net LNG Exports</b>	<b>4.4</b>	<b>4.7</b>	<b>3.9</b>	<b>3.0</b>	<b>5.2</b>	<b>7.3</b>	▲ 2.1	▲ 3.1
<b>Total Mexican Exports</b>	<b>6.0</b>	<b>6.2</b>	<b>6.6</b>	<b>6.5</b>	<b>6.4</b>	<b>6.2</b>	▼ -0.2	▼ -0.2
Implied Daily Storage Activity	4.8	5.3	4.0	9.6	11.0	10.0	-1.0	
EIA Reported Daily Storage Activity	6.1	6.4	5.0	10.0	12.7			
Daily Model Error	-1.3	-1.1	-1.0	-0.4	-1.8			

### Monthly Balances

	2Yr Ago Sep-18	LY Sep-19	May-20	Jun-20	Jul-20	Aug-20	MTD Sep-20	MoM	vs. LY
<b>Lower 48 Dry Production</b>	<b>85.2</b>	<b>93.5</b>	<b>85.8</b>	<b>85.1</b>	<b>86.6</b>	<b>86.8</b>	<b>87.4</b>	▲ 0.6	▼ -6.1
<b>Canadian Imports</b>	<b>4.5</b>	<b>4.7</b>	<b>3.9</b>	<b>4.0</b>	<b>4.4</b>	<b>4.9</b>	<b>3.9</b>	▼ -1.0	▼ -0.8
L48 Power	34.3	36.4	26.9	34.8	43.9	40.6	34.9	▼ -5.7	▼ -1.5
L48 Residential & Commercial	8.5	8.3	12.9	9.0	8.6	8.1	8.6	▲ 0.5	▲ 0.3
L48 Industrial	21.6	22.2	18.9	18.4	17.8	19.5	18.8	▼ -0.8	▼ -3.5
L48 Lease and Plant Fuel	4.8	5.2	4.8	4.9	4.9	4.8	4.9	▲ 0.0	▼ -0.3
L48 Pipeline Distribution	2.0	2.1	1.9	2.0	2.4	2.2	2.1	▼ -0.2	▼ -0.1
<b>L48 Regional Gas Consumption</b>	<b>71.2</b>	<b>74.3</b>	<b>65.5</b>	<b>69.1</b>	<b>77.5</b>	<b>75.3</b>	<b>69.2</b>	▼ -6.1	▼ -5.1
<b>Net LNG Exports</b>	<b>3.1</b>	<b>6.2</b>	<b>6.7</b>	<b>4.0</b>	<b>3.3</b>	<b>4.0</b>	<b>5.8</b>	▲ 1.8	▼ -0.3
<b>Total Mexican Exports</b>	<b>5.1</b>	<b>5.4</b>	<b>4.9</b>	<b>5.7</b>	<b>6.1</b>	<b>6.3</b>	<b>6.4</b>	▲ 0.1	▲ 1.0
Implied Daily Storage Activity	10.3	12.4	12.6	10.2	4.1	6.1	9.9		
EIA Reported Daily Storage Activity									
Daily Model Error									

Source: Bloomberg, analytix.ai

## Regional S/D Models Storage Projection

Week Ending 18-Sep

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	9.7	1.6	11.3	79
East	2.0	1.5	3.5	24
Midwest	3.6	0.3	4.0	28
Mountain	3.8	-2.8	1.0	7
South Central	-0.6	3.0	2.4	17
Pacific	1.0	-0.5	0.4	3

\*Adjustment Factor is calculated based on historical regional deltas

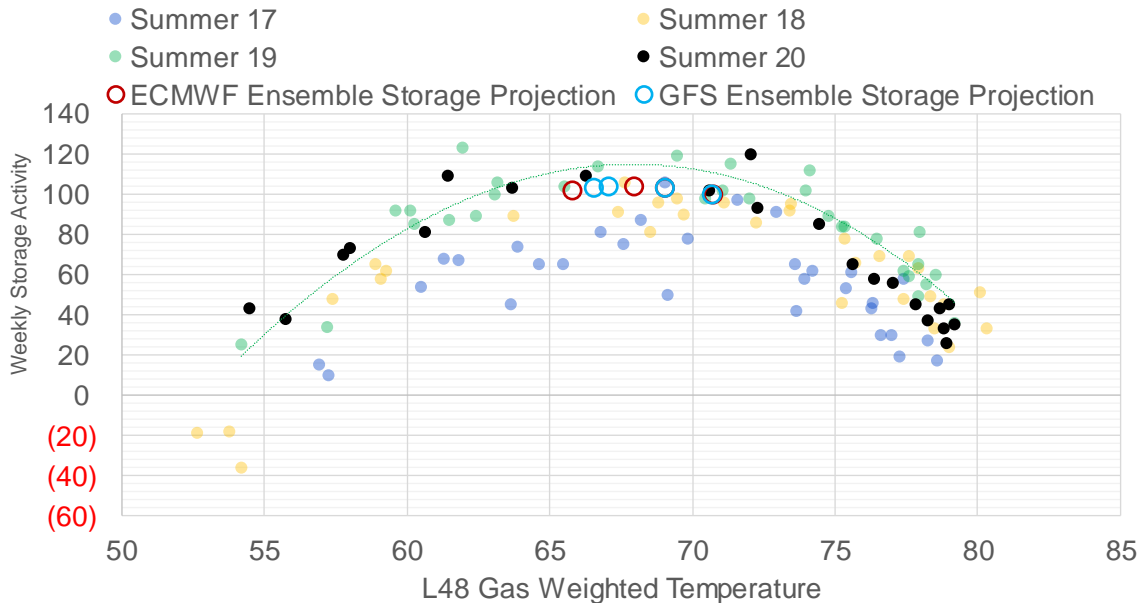
U.S. underground natural gas storage facilities by type (July 2015)



## Weather Model Storage Projection

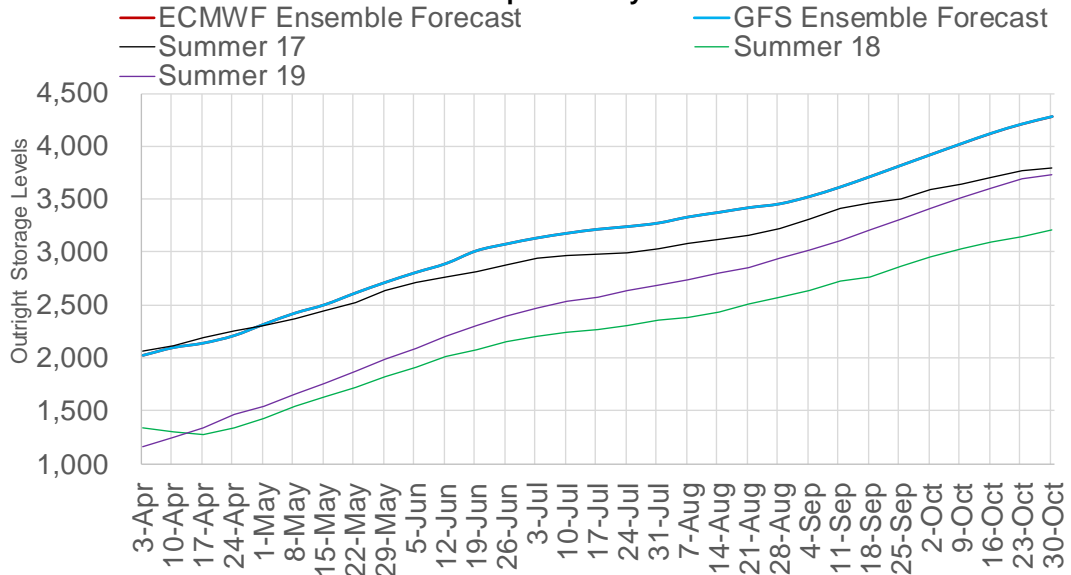
Next report and beyond	
Week Ending	Week Storage Projection
25-Sep	104
2-Oct	103
9-Oct	103

### Weather Storage Model - Next 4 Week Forecast



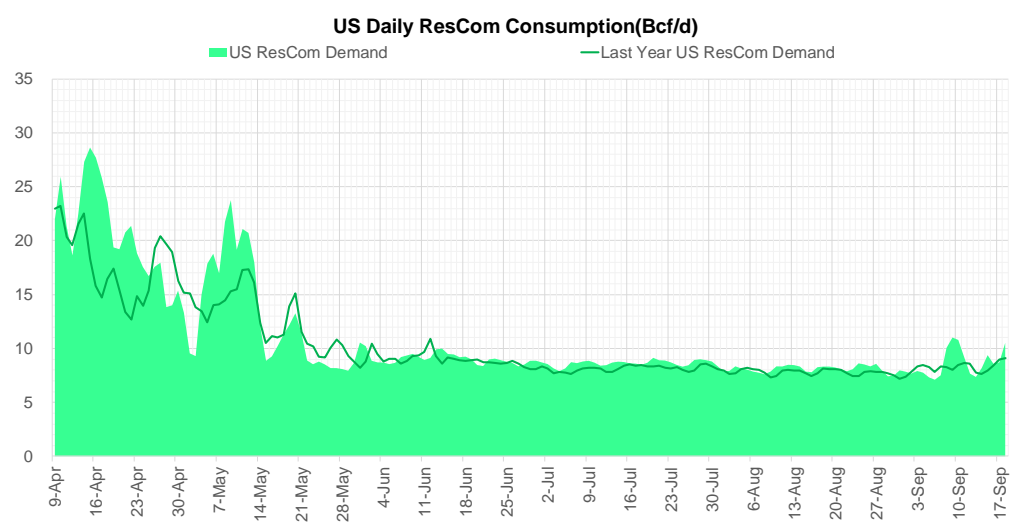
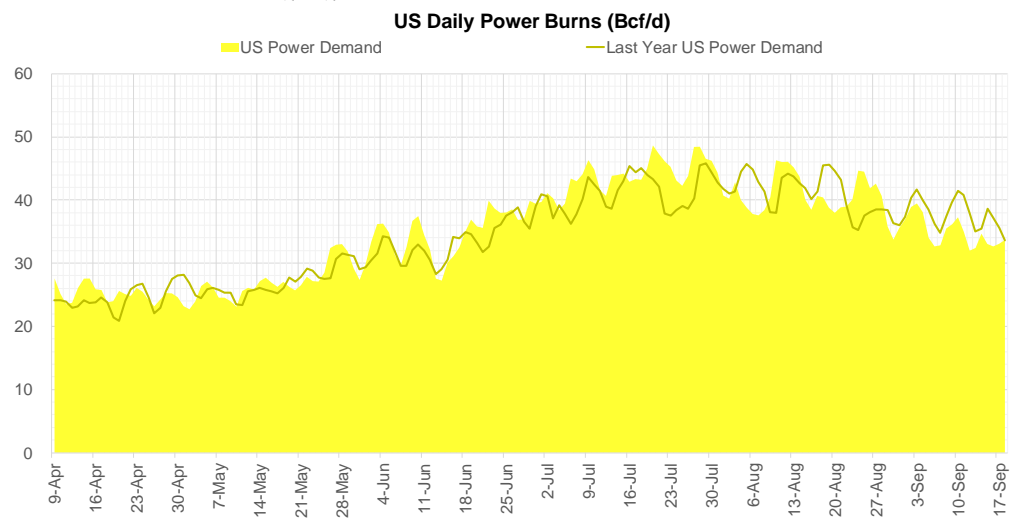
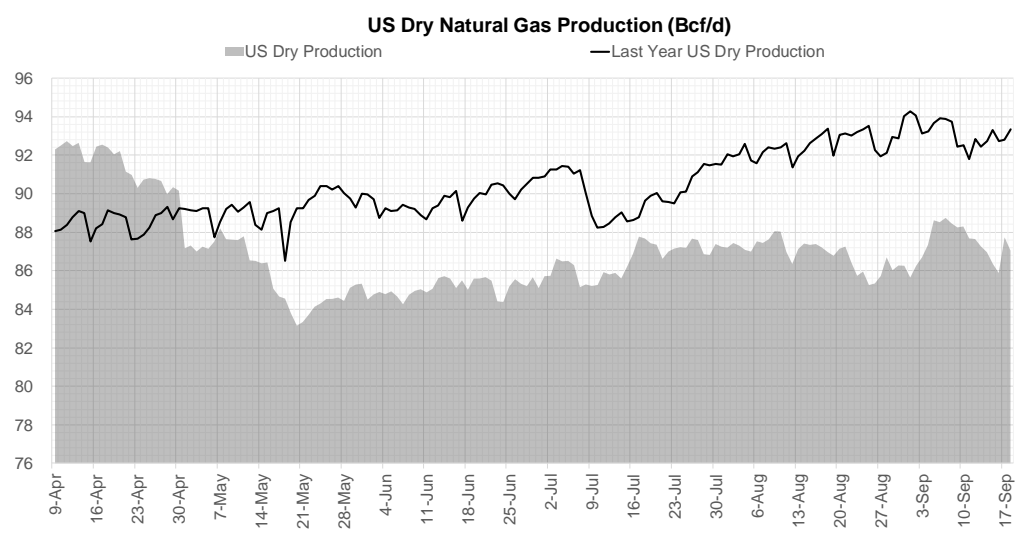
### Weather Based End of Winter Projection (Bcf)

10Y normals past 15 day forecast window



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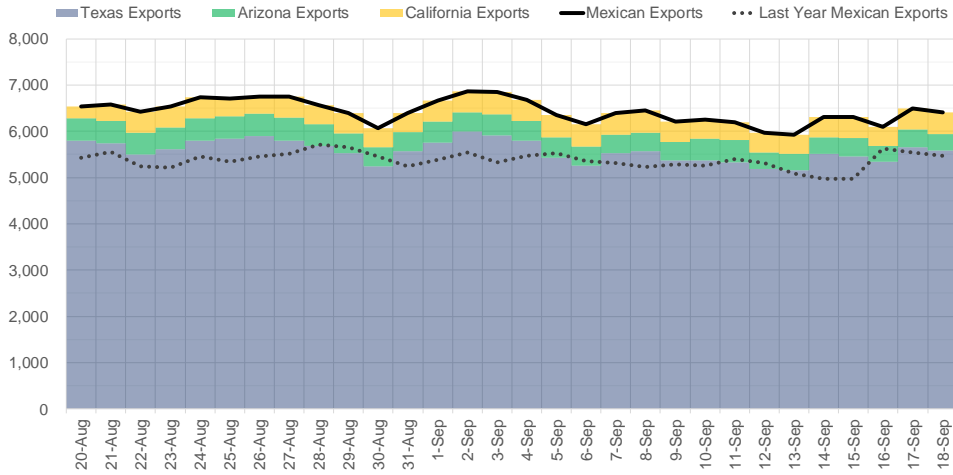
## Supply – Demand Trends



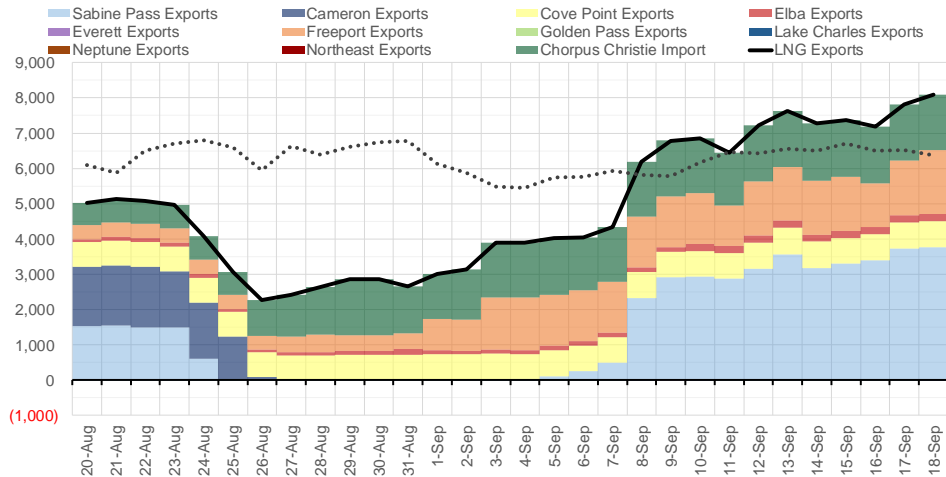
Source: Bloomberg

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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
10	2020	P	2.00	25883	10	2020	C	2.75	50694
10	2020	P	1.90	17729	10	2020	P	2.00	49381
10	2020	P	1.75	16467	10	2020	C	3.00	47837
10	2020	P	1.85	14162	10	2020	P	1.50	44286
10	2020	P	1.80	9823	10	2020	P	2.25	38961
11	2020	C	5.00	8504	10	2020	P	1.60	35251
10	2020	C	2.25	6798	10	2020	C	2.50	35222
10	2020	P	2.25	6559	10	2020	P	1.75	34315
10	2020	C	2.40	6552	3	2021	P	2.00	33142
10	2020	P	2.10	6243	4	2021	C	5.00	32687
10	2020	P	2.05	5995	10	2020	P	1.25	28902
11	2020	P	2.00	5736	11	2020	C	5.00	27491
11	2020	C	3.50	5696	11	2020	C	3.50	26512
10	2020	C	2.20	5610	11	2020	P	2.00	26306
10	2020	P	1.50	5346	3	2021	C	3.25	26195
10	2020	C	2.45	5154	3	2021	C	4.00	25759
10	2020	P	1.60	5143	10	2020	P	2.10	25114
11	2020	P	2.25	5082	10	2020	P	1.00	24016
10	2020	P	1.95	4986	10	2020	P	1.90	23817
10	2020	P	1.70	4819	10	2020	P	2.20	23672
10	2020	P	2.15	4668	1	2021	C	3.50	23548
11	2020	C	3.25	4133	10	2020	C	3.25	23428
10	2020	P	2.20	3939	12	2020	P	2.00	23199
10	2020	C	2.50	3928	1	2021	C	4.50	23165
11	2020	C	3.00	3722	10	2020	C	2.10	21978
1	2021	C	3.75	3656	3	2021	C	3.00	21686
10	2020	C	2.35	3456	11	2020	P	2.25	21437
10	2020	P	1.40	2750	10	2020	P	1.80	21233
11	2020	P	2.50	2649	3	2021	C	6.00	21205
1	2021	C	4.00	2390	1	2021	C	5.00	20139
10	2020	C	2.10	2102	11	2020	P	2.50	19816
10	2020	P	2.30	2093	10	2020	P	1.30	19457
10	2020	C	2.15	2029	10	2020	C	2.80	19357
10	2020	C	2.30	1920	12	2020	P	2.50	18837
1	2021	C	3.50	1726	10	2020	C	3.50	18823
11	2020	P	1.75	1725	10	2020	C	2.00	18736
10	2020	P	1.65	1621	3	2021	C	3.50	18731
11	2020	P	2.35	1616	10	2020	C	2.60	17943
7	2021	C	3.50	1500	11	2020	C	3.00	17826
10	2020	P	1.45	1382	10	2020	C	3.25	17447
10	2020	C	2.75	1303	10	2020	C	2.40	17332
11	2020	C	2.75	1303	2	2021	C	5.00	17151
10	2020	P	2.35	1258	1	2021	C	3.00	16784
11	2020	C	2.55	1229	1	2021	C	3.75	16559
11	2020	P	2.75	1191	10	2020	C	2.25	16527
10	2020	P	2.40	1114	10	2020	P	1.85	16489
11	2020	C	4.00	1105	10	2020	P	1.40	15908
6	2021	C	3.00	1030	10	2020	P	2.05	15262
11	2020	P	2.40	1002	12	2020	C	4.00	15161
					10	2020	P	1.7	14760

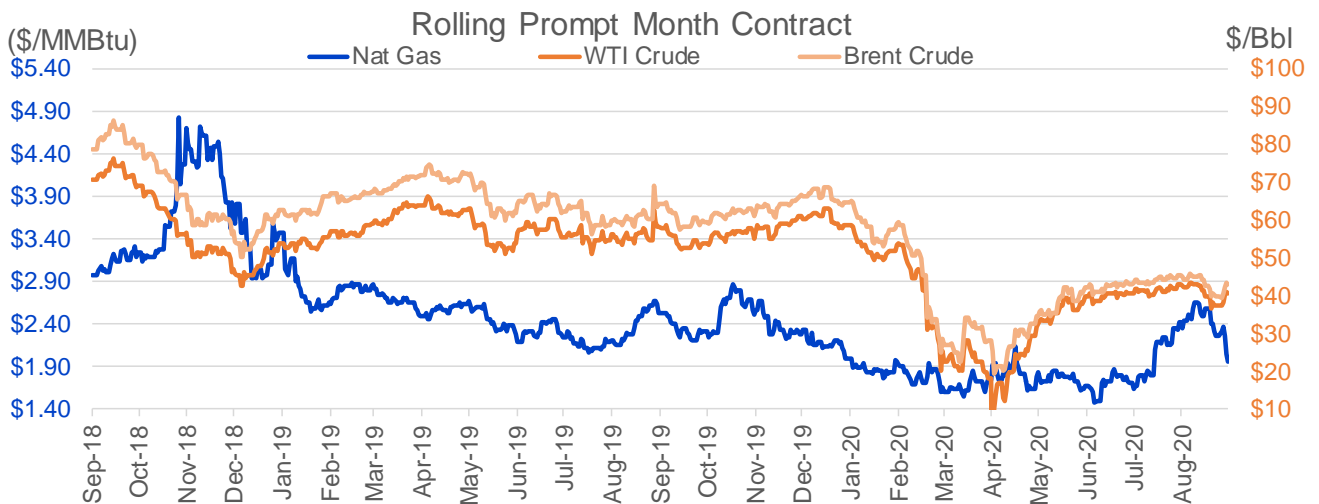
Source: CME, Nasdaq, ICE

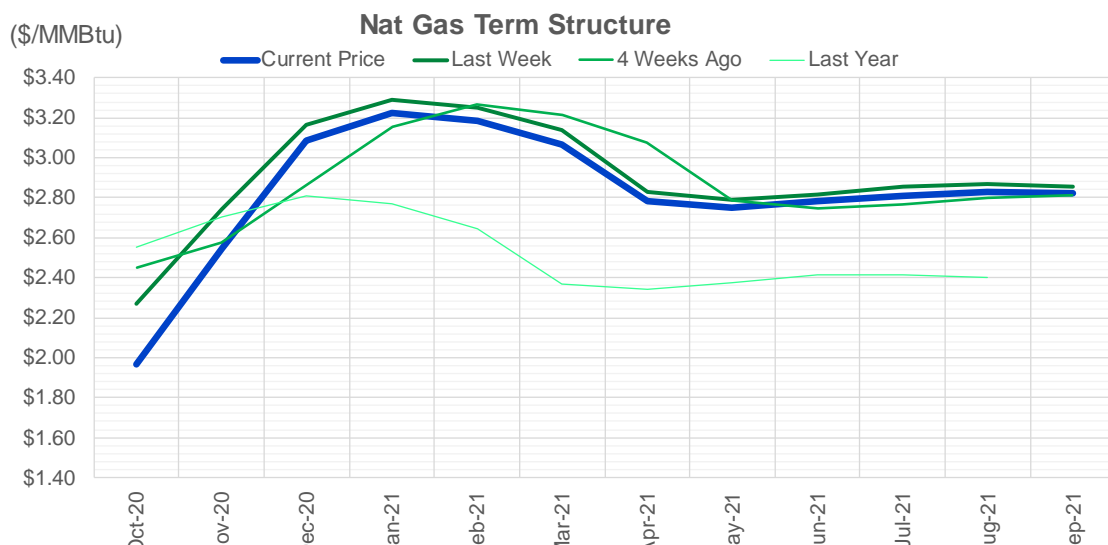


## Nat Gas Futures Open Interest CME, and ICE Combined

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
OCT 20	87663	101856	-14193	OCT 20	78269	80312	-2042.25
NOV 20	275308	264318	10990	NOV 20	82964	84698	-1734.75
DEC 20	125879	119379	6500	DEC 20	77401	75327	2074.25
JAN 21	145175	141132	4043	JAN 21	87716	87555	160.5
FEB 21	56579	56200	379	FEB 21	58990	59051	-60.5
MAR 21	117995	115941	2054	MAR 21	78839	78495	344.25
APR 21	80082	78868	1214	APR 21	64990	65107	-117
MAY 21	42996	45635	-2639	MAY 21	55675	55359	315.75
JUN 21	27924	28598	-674	JUN 21	51817	51457	359.75
JUL 21	20437	20734	-297	JUL 21	54493	53904	588.75
AUG 21	22133	22275	-142	AUG 21	53913	53676	236.75
SEP 21	28324	28109	215	SEP 21	50944	50492	452.5
OCT 21	70814	70139	675	OCT 21	75891	75077	814.5
NOV 21	27284	27137	147	NOV 21	43359	43111	247.75
DEC 21	23856	24141	-285	DEC 21	43425	43185	239.75
JAN 22	24833	24144	689	JAN 22	37207	37037	170
FEB 22	13380	12983	397	FEB 22	32346	32237	109
MAR 22	18171	18267	-96	MAR 22	34460	34250	210.25
APR 22	21808	22506	-698	APR 22	34562	34627	-64.75
MAY 22	6735	6374	361	MAY 22	25203	25124	79.25
JUN 22	3625	3623	2	JUN 22	23910	23985	-75
JUL 22	2990	2987	3	JUL 22	25379	25308	71.5
AUG 22	2136	2170	-34	AUG 22	24454	24532	-77.5
SEP 22	2179	2177	2	SEP 22	23502	23577	-75
OCT 22	3354	3309	45	OCT 22	25092	25051	40.5
NOV 22	2509	2513	-4	NOV 22	22742	22700	42
DEC 22	2500	2491	9	DEC 22	24806	24763	43.25
JAN 23	2832	2832	0	JAN 23	12639	12528	111
FEB 23	855	855	0	FEB 23	12049	12004	45.5
MAR 23	911	901	10	MAR 23	12043	11953	89.5

Source: CME, ICE





	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21
<b>Current Price</b>	<b>\$1.968</b>	<b>\$2.545</b>	<b>\$3.089</b>	<b>\$3.222</b>	<b>\$3.183</b>	<b>\$3.067</b>	<b>\$2.784</b>	<b>\$2.752</b>	<b>\$2.781</b>	<b>\$2.810</b>	<b>\$2.832</b>	<b>\$2.825</b>
Last Week	\$2.269	\$2.744	\$3.165	\$3.290	\$3.253	\$3.138	\$2.826	\$2.788	\$2.817	\$2.854	\$2.866	\$2.854
vs. Last Week	-\$0.301	-\$0.199	-\$0.076	-\$0.068	-\$0.070	-\$0.071	-\$0.042	-\$0.036	-\$0.036	-\$0.044	-\$0.034	-\$0.029
4 Weeks Ago	\$2.448	\$2.573	\$2.866	\$3.158	\$3.266	\$3.216	\$3.079	\$2.788	\$2.745	\$2.769	\$2.802	\$2.810
vs. 4 Weeks Ago	-\$0.480	-\$0.028	\$0.223	\$0.064	-\$0.083	-\$0.149	-\$0.295	-\$0.036	\$0.036	\$0.041	\$0.030	\$0.015
Last Year	\$2.534	\$2.555	\$2.705	\$2.811	\$2.771	\$2.646	\$2.370	\$2.341	\$2.373	\$2.411	\$2.415	\$2.400
vs. Last Year	-\$0.566	-\$0.010	\$0.384	\$0.411	\$0.412	\$0.421	\$0.414	\$0.411	\$0.408	\$0.399	\$0.417	\$0.425

	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	1.15	1.58	0.43
TETCO M3	\$/MMBtu	0.84	1.29	0.45
FGT Zone 3	\$/MMBtu	0.86	2.28	1.42
Zone 6 NY	\$/MMBtu	0.86	1.26	0.40
Chicago Citygate	\$/MMBtu	1.65	1.95	0.30
Michcon	\$/MMBtu	1.60	1.84	0.24
Columbia TCO Pool	\$/MMBtu	1.46	1.45	-0.01
Ventura	\$/MMBtu	1.55	1.83	0.28
Rockies/Opal	\$/MMBtu	2.40	1.79	-0.61
El Paso Permian Basin	\$/MMBtu	1.31	1.46	0.15
Socal Citygate	\$/MMBtu	2.53	2.06	-0.47
Malin	\$/MMBtu	2.25	1.99	-0.26
Houston Ship Channel	\$/MMBtu	1.91	2.23	0.32
Henry Hub Cash	\$/MMBtu	1.65	1.97	0.32
AECO Cash	C\$/GJ	1.59	1.68	0.09
Station2 Cash	C\$/GJ	1.53	2.16	0.63
Dawn Cash	C\$/GJ	1.60	1.84	0.24

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks		vs. Last Year
				Ago		
NatGas Jan/Apr	\$/MMBtu	-0.44	▲ 0.026	▲ 0.040	▼ -0.003	
NatGas Mar/Apr	\$/MMBtu	-0.283	▲ 0.029	▼ -0.574	▼ -0.549	
NatGas Oct/Nov	\$/MMBtu	0.58	▲ 0.102	▲ 0.284	▲ 0.521	
NatGas Oct/Jan	\$/MMBtu	1.25	▲ 0.233	▲ 0.561	▲ 0.916	
WTI Crude	\$/Bbl	40.74	▲ 3.410	▼ -1.600	▼ -17.350	
Brent Crude	\$/Bbl	43.04	▲ 3.210	▼ -1.310	▼ -21.240	
Fuel Oil, NY Harbour 1%	\$/Bbl	98.03	▲ 0.000	▲ 0.000	▲ 0.000	
Heating Oil	cents/Gallon	115.18	▲ 6.220	▼ -5.620	▼ -83.450	
Propane, Mt. Bel	cents/Gallon	0.50	▲ 0.023	▼ -0.007	▲ 0.050	
Ethane, Mt. Bel	cents/Gallon	0.20	▼ -0.010	▼ -0.045	▼ -0.016	
Coal, PRB	\$/MTon	12.30	▲ 0.000	▲ 0.000	▲ 0.150	
Coal, ILB	\$/MTon	31.05	▲ 0.000	▲ 0.000	▼ -4.500	