

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 2.51	▲ \$ 0.03	▼ \$ (0.09)

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 40.67	▼ \$ (0.84)	▼ \$ (2.0)

	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 43.53	▼ \$ (0.90)	▼ \$ (1.5)

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- [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	1.8	-2.4	-1.3	-1.9
24 Hr Chg	0.3	-4.6	-1.5	-5.8

GFS Ensemble 00z	1-5 Day	6-10 Day	11-15 Day	Total
12 Hr Chg	0.8	8.1	6.8	15.7
24 Hr Chg	0.0	8.4	7.9	16.3

	Current	Δ from YD	Δ from 7D Avg
US Dry Production	85.5	▼ -0.55	▼ -0.61

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	38.9	▲ 0.66	▲ 1.27

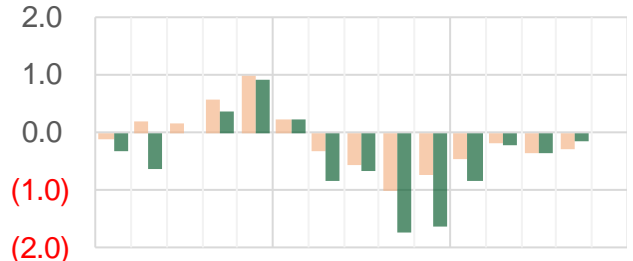
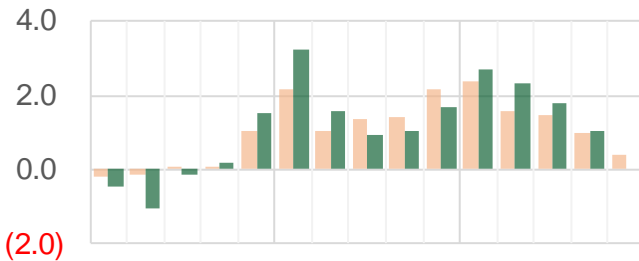
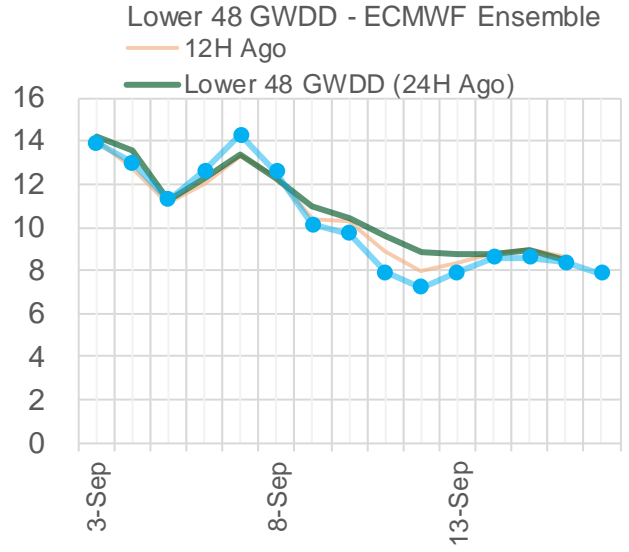
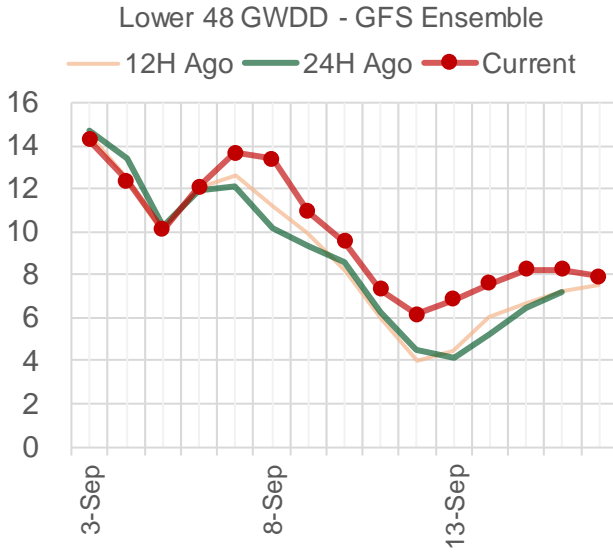
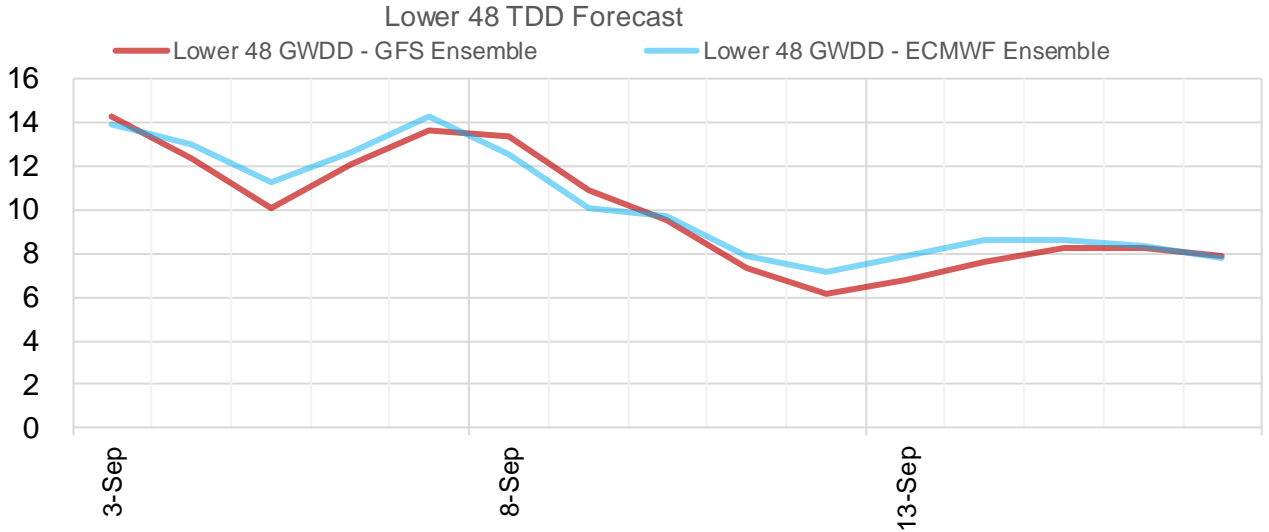
	Current	Δ from YD	Δ from 7D Avg
US ResComm	7.6	▼ -0.09	▼ -0.27

	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	4.2	▲ 0.27	▼ -0.36

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	3.9	▲ 0.72	▲ 1.06

	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.8	▼ -0.01	▲ 0.24

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



Source: WSI, Bloomberg

## Lower 48 Component Models

### Daily Balances

	28-Aug	29-Aug	30-Aug	31-Aug	1-Sep	2-Sep	3-Sep	DoD	vs. 7D
<b>Lower 48 Dry Production</b>	<b>86.7</b>	<b>86.0</b>	<b>86.3</b>	<b>86.3</b>	<b>85.6</b>	<b>86.0</b>	<b>85.5</b>	▼ -0.5	▼ -0.7
<b>Canadian Imports</b>	<b>5.0</b>	<b>4.4</b>	<b>4.3</b>	<b>4.4</b>	<b>4.5</b>	<b>3.9</b>	<b>4.2</b>	▲ 0.3	▼ -0.3
L48 Power	40.6	35.8	33.7	35.5	36.9	38.2	38.9	▲ 0.7	▲ 2.1
L48 Residential & Commercial	7.9	7.4	7.5	7.9	7.8	7.6	7.6	▼ -0.1	▼ -0.1
L48 Industrial	19.6	19.7	19.9	20.1	20.0	20.0	19.9	▼ 0.0	▲ 0.0
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	2.2	2.0	1.9	2.0	2.1	2.2	2.2	▲ 0.0	▲ 0.1
<b>L48 Regional Gas Consumption</b>	<b>75.2</b>	<b>69.7</b>	<b>67.8</b>	<b>70.4</b>	<b>71.7</b>	<b>72.8</b>	<b>73.4</b>	▲ 0.5	▲ 2.1
<b>Net LNG Exports</b>	<b>2.6</b>	<b>2.9</b>	<b>2.9</b>	<b>2.7</b>	<b>3.0</b>	<b>3.1</b>	<b>3.9</b>	▲ 0.7	▲ 1.0
<b>Total Mexican Exports</b>	<b>6.8</b>	<b>6.4</b>	<b>6.1</b>	<b>6.3</b>	<b>6.6</b>	<b>6.8</b>	<b>6.8</b>	▼ 0.0	▲ 0.3
Implied Daily Storage Activity	7.1	11.5	13.8	11.4	8.9	7.2	5.6		
EIA Reported Daily Storage Activity									
Daily Model Error									

### EIA Storage Week Balances

	24-Jul	31-Jul	7-Aug	14-Aug	21-Aug	28-Aug	WoW	vs. 4W
<b>Lower 48 Dry Production</b>	<b>87.3</b>	<b>87.2</b>	<b>87.3</b>	<b>87.4</b>	<b>87.2</b>	<b>86.0</b>	▼ -1.2	▼ -1.3
<b>Canadian Imports</b>	<b>4.4</b>	<b>4.5</b>	<b>4.6</b>	<b>5.0</b>	<b>4.7</b>	<b>5.2</b>	▲ 0.5	▲ 0.5
L48 Power	45.5	45.5	40.7	42.9	40.0	41.6	▲ 1.6	▼ -0.6
L48 Residential & Commercial	8.8	8.7	8.1	8.1	8.2	8.3	▲ 0.1	▲ 0.0
L48 Industrial	17.3	17.4	18.9	19.0	20.4	19.5	▼ -0.9	▲ 0.6
L48 Lease and Plant Fuel	4.9	4.9	4.9	4.9	4.8	4.8	▼ -0.1	▼ -0.1
L48 Pipeline Distribution	2.5	2.5	2.2	2.3	2.2	2.3	▲ 0.1	▼ 0.0
<b>L48 Regional Gas Consumption</b>	<b>78.9</b>	<b>78.9</b>	<b>74.7</b>	<b>77.2</b>	<b>75.6</b>	<b>76.5</b>	▲ 0.8	▼ -0.2
<b>Net LNG Exports</b>	<b>3.6</b>	<b>3.1</b>	<b>3.9</b>	<b>4.4</b>	<b>4.7</b>	<b>3.9</b>	▼ -0.9	▼ -0.2
<b>Total Mexican Exports</b>	<b>6.4</b>	<b>6.2</b>	<b>6.1</b>	<b>6.0</b>	<b>6.2</b>	<b>6.7</b>	▲ 0.5	▲ 0.5
Implied Daily Storage Activity	2.7	3.5	7.2	4.8	5.3	4.2	-1.1	
EIA Reported Daily Storage Activity	3.7	4.7	8.3	6.1	6.4			
Daily Model Error	-1.0	-1.2	-1.1	-1.3	-1.1			

### 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>86.9</b>	<b>85.7</b>	▼ -1.1	▼ -7.7
<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>4.2</b>	▼ -0.7	▼ -0.5
L48 Power	34.2	36.4	26.9	34.8	43.8	40.6	38.0	▼ -2.6	▲ 1.7
L48 Residential & Commercial	8.5	8.3	12.9	9.0	8.6	8.1	7.7	▼ -0.4	▼ -0.6
L48 Industrial	21.6	22.3	18.9	18.3	17.8	19.5	20.0	▲ 0.4	▼ -2.3
L48 Lease and Plant Fuel	4.8	5.2	4.8	4.9	4.9	4.8	4.8	▼ 0.0	▼ -0.4
L48 Pipeline Distribution	2.0	2.1	1.9	2.0	2.4	2.2	2.2	▼ -0.1	▲ 0.0
<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>72.6</b>	▼ -2.6	▼ -1.6
<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>3.3</b>	▼ -0.7	▼ -2.8
<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>6.7</b>	▲ 0.5	▲ 1.4
Implied Daily Storage Activity	10.3	12.4	12.6	10.2	4.1	6.1	7.2		
EIA Reported Daily Storage Activity									
Daily Model Error									

Source: Bloomberg, analytix.ai

## Regional S/D Models Storage Projection

Week Ending 28-Aug

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	3.9	1.4	5.4	37
East	0.4	2.1	2.5	16
Midwest	2.6	0.7	3.3	23
Mountain	3.2	-2.5	0.7	5
South Central	-2.5	1.8	-0.6	-4
Pacific	0.3	-0.7	-0.4	-3

\*Adjustment Factor is calculated based on historical regional deltas

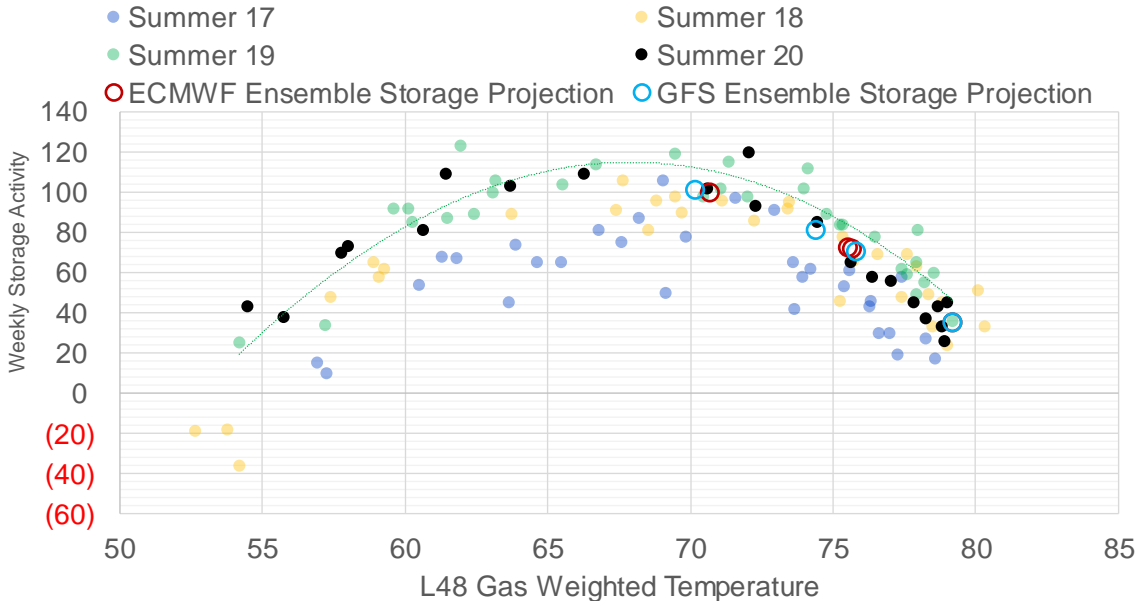
U.S. underground natural gas storage facilities by type (July 2015)



### Weather Model Storage Projection

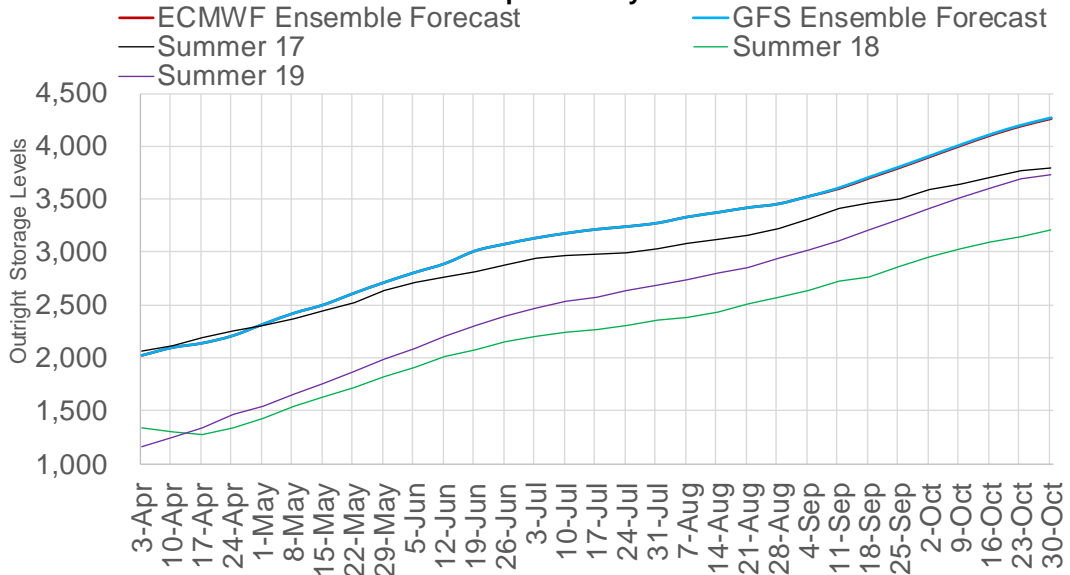
Next report and beyond	
Week Ending	Week Storage Projection
4-Sep	71
11-Sep	77
18-Sep	101

### Weather Storage Model - Next 4 Week Forecast



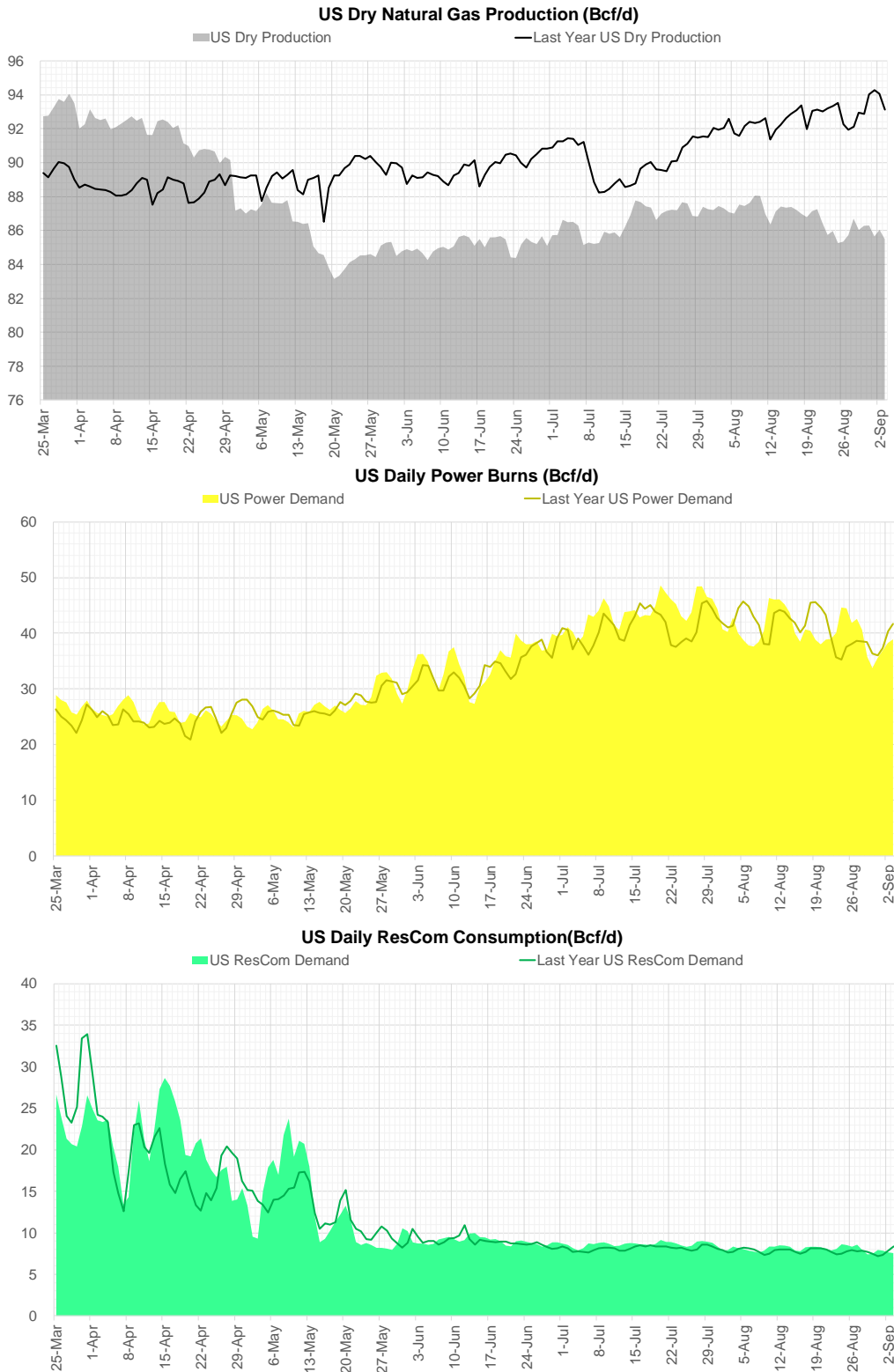
### Weather Based End of Winter Projection (Bcf)

10Y normals past 15 day forecast window



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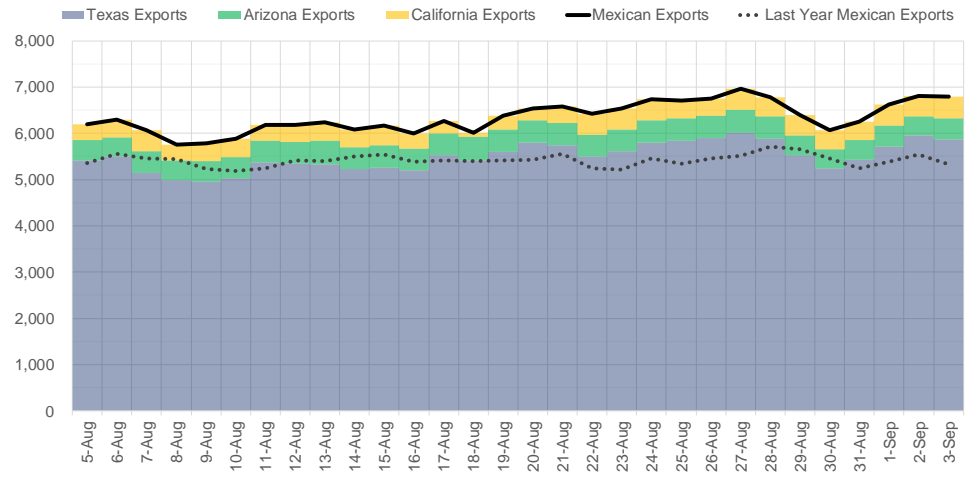
## Supply – Demand Trends



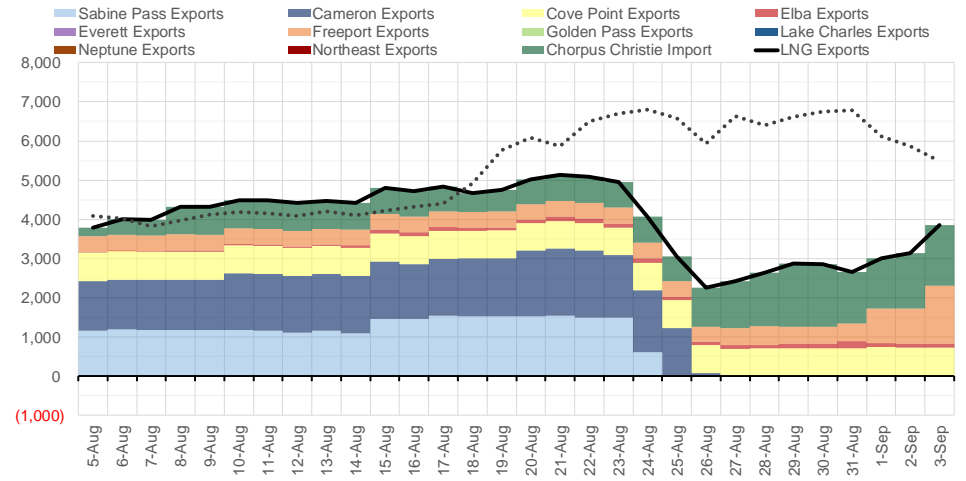
Source: Bloomberg

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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	C	3.00	13129	10	2020	P	2.00	48427
10	2020	C	2.75	9085	10	2020	P	1.50	46713
10	2020	P	2.00	8242	10	2020	C	3.00	43362
4	2021	C	5.00	5656	10	2020	C	2.75	42809
10	2020	P	2.25	4635	10	2020	C	2.50	34559
10	2020	C	3.25	4325	10	2020	P	1.60	34051
10	2020	P	1.75	3853	3	2021	P	2.00	31292
10	2020	C	2.55	3754	10	2020	P	1.75	29702
10	2020	P	2.20	3366	10	2020	P	1.25	28894
12	2020	C	3.75	3306	3	2021	C	3.25	25853
10	2020	P	2.30	3263	3	2021	C	4.00	24679
11	2020	C	3.25	3007	10	2020	P	1.00	24016
10	2020	P	1.50	2636	11	2020	C	3.50	23385
10	2020	P	1.95	2607	10	2020	C	3.25	23134
11	2020	P	2.20	2559	11	2020	P	2.00	23125
11	2020	P	2.25	2525	1	2021	C	4.50	23116
5	2021	C	3.50	2250	12	2020	P	2.00	22653
11	2020	C	3.50	2202	10	2020	P	2.25	22406
12	2020	C	4.25	2100	3	2021	C	3.00	22302
11	2020	C	4.00	2079	10	2020	C	2.10	21985
12	2020	C	4.00	1930	1	2021	C	3.50	21662
11	2020	P	2.60	1916	10	2020	P	2.10	21238
10	2020	C	2.50	1847	4	2021	C	5.00	20537
10	2020	C	2.80	1565	3	2021	C	3.50	20231
10	2020	P	2.50	1518	3	2021	C	6.00	20080
10	2020	C	3.20	1465	1	2021	C	5.00	19672
10	2020	P	2.15	1411	10	2020	C	3.50	19607
1	2021	P	3.00	1357	1	2021	C	3.75	19295
10	2020	P	2.35	1337	10	2020	P	1.30	19131
11	2020	C	3.10	1235	10	2020	C	2.00	18664
10	2020	P	2.10	1163	10	2020	P	1.80	18411
10	2020	P	2.45	1157	10	2020	C	2.25	17294
10	2020	P	1.80	1093	11	2020	P	2.25	17234
10	2020	C	2.60	1079	11	2020	C	3.00	17007
11	2020	P	2.00	1015	1	2021	C	3.00	16783
10	2020	C	2.90	953	12	2020	C	4.00	16413
10	2020	P	2.05	870	11	2020	P	2.50	16364
10	2020	P	1.85	777	2	2021	C	5.00	15519
3	2021	C	7.00	650	11	2020	C	3.25	15497
10	2020	C	2.65	620	11	2020	C	5.00	15470
11	2020	P	1.75	617	11	2020	C	2.75	14928
10	2020	C	3.50	601	1	2021	P	2.25	14314
10	2020	P	2.40	580	4	2021	C	3.00	14217
10	2020	C	2.70	571	10	2020	C	2.40	13903
11	2020	C	3.75	558	10	2020	P	1.40	13891
10	2020	C	3.10	525	4	2021	P	2.00	13794
11	2020	C	4.50	503	11	2020	C	4.00	13633
10	2020	C	4.00	500	10	2020	P	1.70	13601
1	2021	C	4.00	495	10	2020	C	2.60	13583
					10	2020	C	2.7	13500

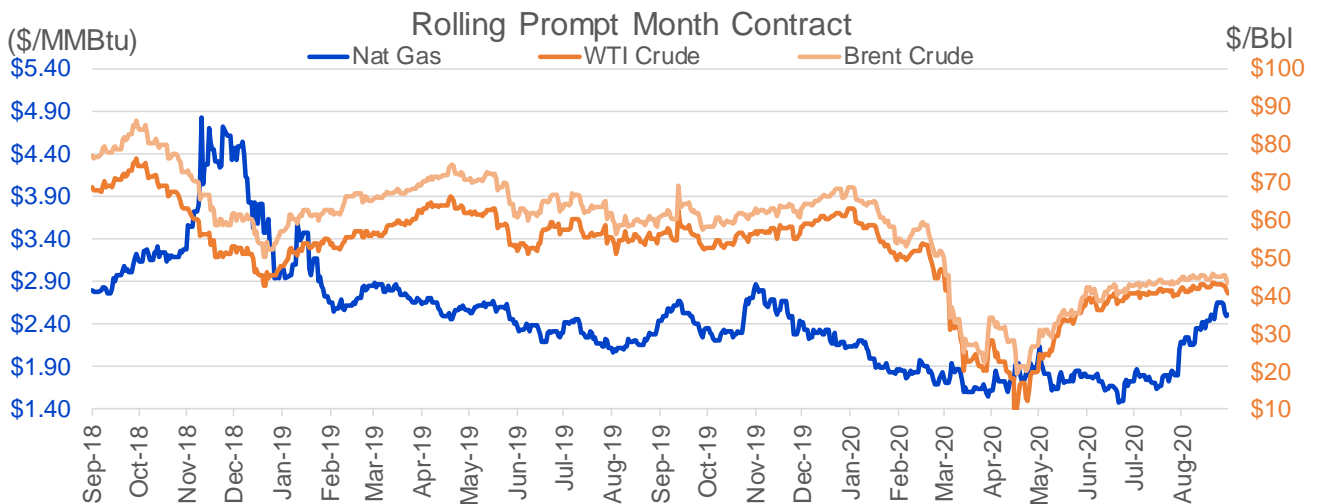
Source: CME, Nasdaq, ICE

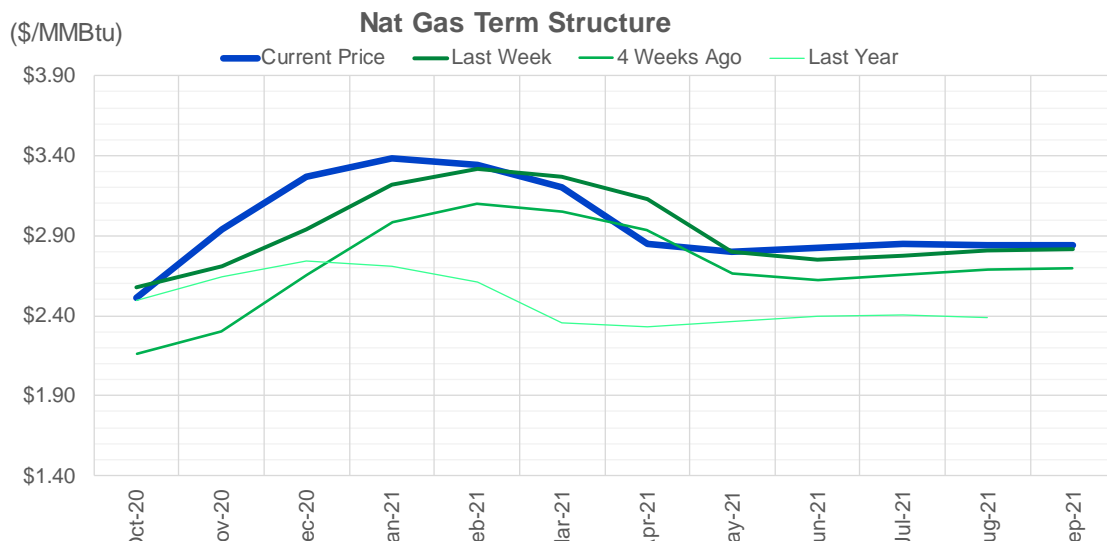


## Nat Gas Futures Open Interest CME, and ICE Combined

CME Henry Hub Futures (10,000 MMBtu)				ICE Henry Hub Futures Contract Equivalent (10,000 MMBtu)			
	Current	Prior	Daily Change	FOR JUNE 26	Current	Prior	Daily Change
OCT 20	217866	223332	-5466	OCT 20	91880	93728	-1848.25
NOV 20	204702	212973	-8271	NOV 20	81908	81665	243
DEC 20	105620	112512	-6892	DEC 20	72839	72633	206
JAN 21	129141	129907	-766	JAN 21	85000	86360	-1359.75
FEB 21	47471	47461	10	FEB 21	56652	56461	190.25
MAR 21	97311	93693	3618	MAR 21	75657	78763	-3106
APR 21	79020	79333	-313	APR 21	63371	63210	160.75
MAY 21	46408	46353	55	MAY 21	53953	53625	328
JUN 21	27301	27185	116	JUN 21	50036	49928	108.5
JUL 21	19925	19667	258	JUL 21	52197	52123	74.25
AUG 21	20540	19529	1011	AUG 21	52529	52059	470.25
SEP 21	26970	25628	1342	SEP 21	48896	48561	335.25
OCT 21	64901	64643	258	OCT 21	72660	72439	221.25
NOV 21	27533	27019	514	NOV 21	42057	42073	-16
DEC 21	23472	22763	709	DEC 21	42354	42196	158.25
JAN 22	21779	21827	-48	JAN 22	36158	36085	73.5
FEB 22	11777	11758	19	FEB 22	31635	31533	102
MAR 22	17485	17487	-2	MAR 22	33686	33589	96.5
APR 22	20462	20726	-264	APR 22	34060	33926	134
MAY 22	6008	5995	13	MAY 22	24663	24550	113.25
JUN 22	3145	3143	2	JUN 22	23888	23829	59
JUL 22	2727	2727	0	JUL 22	24404	24303	101.25
AUG 22	1950	1957	-7	AUG 22	24222	24153	68.25
SEP 22	2132	2132	0	SEP 22	23346	23279	66.5
OCT 22	3165	3161	4	OCT 22	24476	24449	27
NOV 22	2104	2035	69	NOV 22	21961	21924	37.75
DEC 22	2200	2148	52	DEC 22	23040	23002	37.75
JAN 23	2868	2868	0	JAN 23	12545	12557	-12
FEB 23	858	858	0	FEB 23	11419	11436	-16.5
MAR 23	898	898	0	MAR 23	11897	11916	-18.75

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>\$2.512</b>	<b>\$2.941</b>	<b>\$3.267</b>	<b>\$3.381</b>	<b>\$3.340</b>	<b>\$3.201</b>	<b>\$2.849</b>	<b>\$2.797</b>	<b>\$2.825</b>	<b>\$2.846</b>	<b>\$2.842</b>	<b>\$2.841</b>
Last Week	\$2.579	\$2.710	\$2.943	\$3.216	\$3.318	\$3.266	\$3.125	\$2.799	\$2.753	\$2.778	\$2.810	\$2.819
vs. Last Week	-\$0.067	\$0.231	\$0.324	\$0.165	\$0.022	-\$0.065	-\$0.276	-\$0.002	\$0.072	\$0.068	\$0.032	\$0.022
4 Weeks Ago	\$2.165	\$2.305	\$2.654	\$2.985	\$3.096	\$3.053	\$2.936	\$2.661	\$2.625	\$2.654	\$2.690	\$2.697
vs. 4 Weeks Ago	\$0.347	\$0.636	\$0.613	\$0.396	\$0.244	\$0.148	-\$0.087	\$0.136	\$0.200	\$0.192	\$0.152	\$0.144
Last Year	\$2.435	\$2.491	\$2.641	\$2.741	\$2.708	\$2.608	\$2.358	\$2.331	\$2.364	\$2.400	\$2.405	\$2.385
vs. Last Year	\$0.077	\$0.450	\$0.626	\$0.640	\$0.632	\$0.593	\$0.491	\$0.466	\$0.461	\$0.446	\$0.437	\$0.456

	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	1.80	2.14	0.34
TETCO M3	\$/MMBtu	1.79	1.34	-0.45
FGT Zone 3	\$/MMBtu	1.74	2.63	0.89
Zone 6 NY	\$/MMBtu	1.74	1.32	-0.42
Chicago Citygate	\$/MMBtu	2.15	2.34	0.19
Michcon	\$/MMBtu	2.13	2.18	0.05
Columbia TCO Pool	\$/MMBtu	1.68	1.73	0.05
Ventura	\$/MMBtu	2.03	2.23	0.20
Rockies/Opal	\$/MMBtu	2.42	2.22	-0.20
El Paso Permian Basin	\$/MMBtu	1.94	1.62	-0.32
Socal Citygate	\$/MMBtu	3.17	2.94	-0.23
Malin	\$/MMBtu	2.40	2.47	0.07
Houston Ship Channel	\$/MMBtu	2.35	2.55	0.20
Henry Hub Cash	\$/MMBtu	2.15	2.37	0.22
AECO Cash	C\$/GJ	2.08	2.01	-0.08
Station2 Cash	C\$/GJ	2.11	2.43	0.32
Dawn Cash	C\$/GJ	2.12	2.25	0.13

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks	
				Ago	vs. Last Year
NatGas Jan/Apr	\$/MMBtu	-0.53	▼ -0.013	▼ -0.097	▼ -0.129
NatGas Mar/Apr	\$/MMBtu	-0.352	▼ -0.026	▼ -0.627	▼ -0.606
NatGas Oct/Nov	\$/MMBtu	0.43	▲ 0.196	▲ 0.080	▲ 0.375
NatGas Oct/Jan	\$/MMBtu	0.87	▲ 0.261	▲ 0.078	▲ 0.538
WTI Crude	\$/Bbl	40.67	▼ -2.370	▼ -1.280	▼ -15.630
Brent Crude	\$/Bbl	43.53	▼ -1.560	▼ -1.560	▼ -17.420
Fuel Oil, NY Harbour 1%	\$/Bbl	98.03	▲ 0.000	▲ 0.000	▲ 0.000
Heating Oil	cents/Gallon	115.30	▼ -5.770	▼ -9.690	▼ -73.550
Propane, Mt. Bel	cents/Gallon	0.50	▼ -0.002	▼ -0.002	▲ 0.066
Ethane, Mt. Bel	cents/Gallon	0.20	▼ -0.037	▼ -0.025	▼ -0.008
Coal, PRB	\$/MTon	12.30	▲ 0.000	▲ 0.000	▲ 0.150
Coal, ILB	\$/MTon	31.05	▲ 0.000	▲ 0.000	▼ -4.500