

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 2.35	▼ \$ (0.05)	▼ \$ (0.17)

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 37.46	▼ \$ (0.59)	▼ \$ (1.9)

	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 40.28	▼ \$ (0.51)	▼ \$ (1.8)

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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	0.8	2.0	-2.0	0.8
24 Hr Chg	-0.5	0.4	-1.8	-1.9

GFS Ensemble 00z	1-5 Day	6-10 Day	11-15 Day	Total
12 Hr Chg	-0.4	2.6	-0.2	2.0
24 Hr Chg	-1.9	0.8	-2.1	-3.3

	Current	Δ from YD	Δ from 7D Avg
US Dry Production	87.5	▼ -0.61	▼ -0.44

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	36.0	▲ 0.01	▲ 0.58

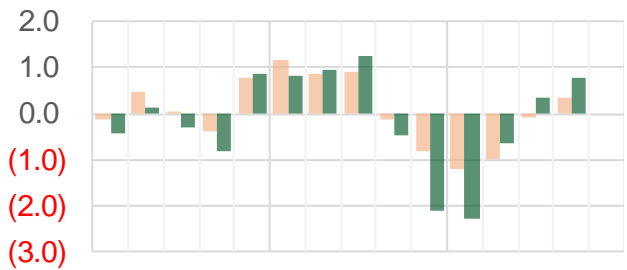
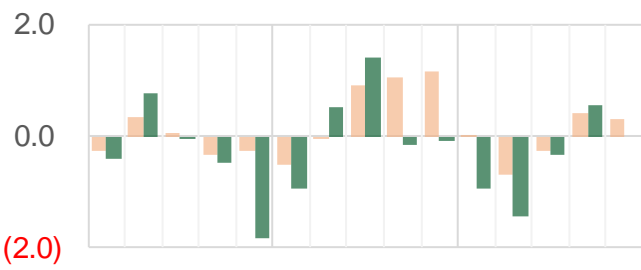
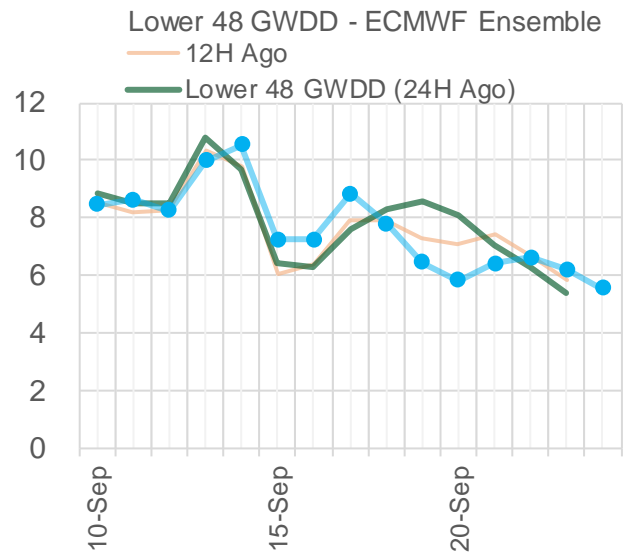
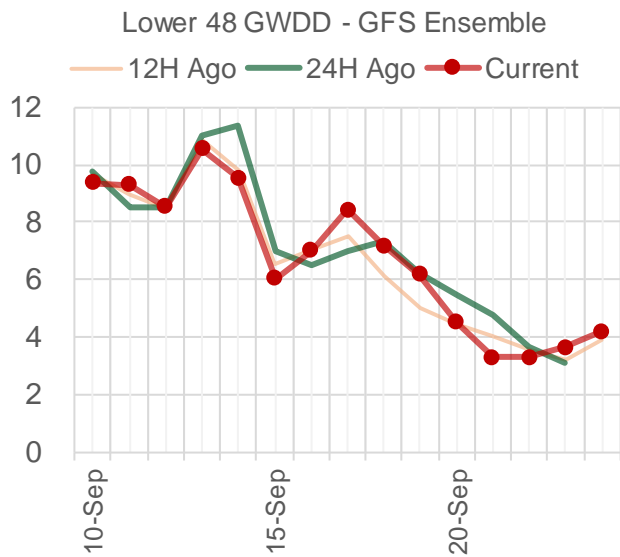
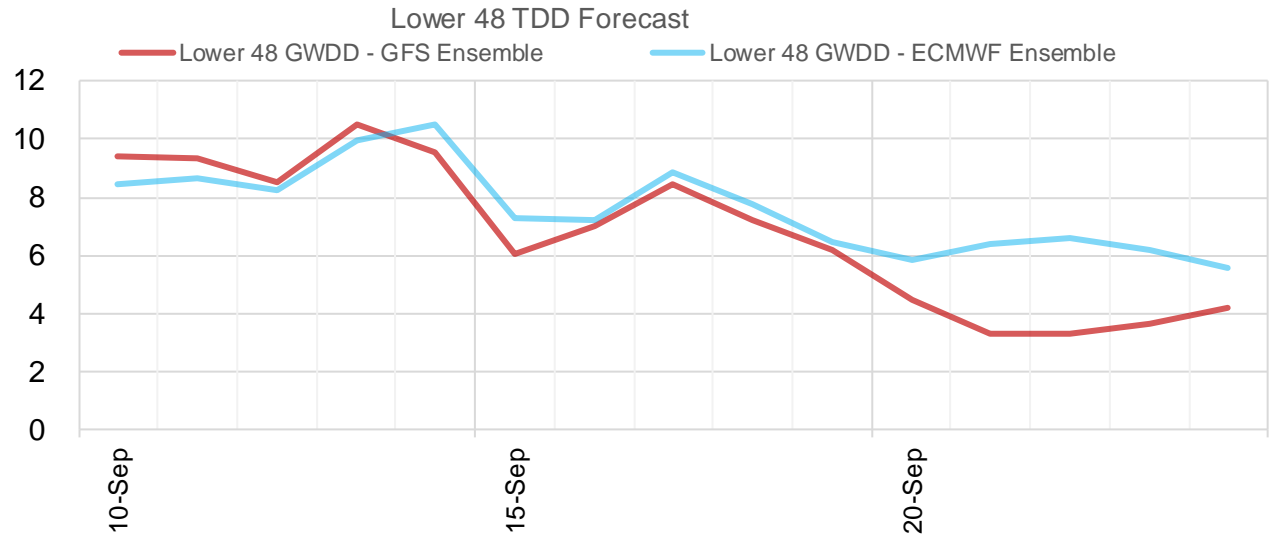
	Current	Δ from YD	Δ from 7D Avg
US ResComm	10.2	▼ -0.84	▲ 1.83

	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	4.4	▲ 0.69	▲ 0.75

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	6.8	▲ 0.02	▲ 2.07

	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.4	▲ 0.13	▼ -0.13

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



Source: WSI , Bloomberg

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## Lower 48 Component Models

### Daily Balances

	4-Sep	5-Sep	6-Sep	7-Sep	8-Sep	9-Sep	10-Sep	DoD	vs. 7D
<b>Lower 48 Dry Production</b>	<b>87.2</b>	<b>88.5</b>	<b>88.4</b>	<b>88.6</b>	<b>88.4</b>	<b>88.1</b>	<b>87.5</b>	▼ -0.6	▼ -0.7
<b>Canadian Imports</b>	<b>3.6</b>	<b>3.5</b>	<b>3.5</b>	<b>3.5</b>	<b>3.8</b>	<b>3.8</b>	<b>4.4</b>	▲ 0.7	▲ 0.8
L48 Power	38.0	34.0	32.5	32.8	35.4	36.0	36.0	▲ 0.0	▲ 1.2
L48 Residential & Commercial	7.7	7.3	7.1	7.5	10.0	11.0	10.2	▼ -0.8	▲ 1.8
L48 Industrial	20.0	19.9	19.9	19.9	20.2	20.4	20.2	▼ -0.2	▲ 0.1
L48 Lease and Plant Fuel	4.9	4.9	4.9	4.9	4.9	4.9	4.9	▼ 0.0	▼ 0.0
L48 Pipeline Distribution	2.2	2.0	1.9	1.9	2.2	2.2	2.2	▼ 0.0	▲ 0.1
<b>L48 Regional Gas Consumption</b>	<b>72.7</b>	<b>68.1</b>	<b>66.3</b>	<b>67.0</b>	<b>72.7</b>	<b>74.6</b>	<b>73.4</b>	▼ -1.1	▲ 3.2
<b>Net LNG Exports</b>	<b>3.9</b>	<b>4.0</b>	<b>4.1</b>	<b>4.3</b>	<b>6.2</b>	<b>6.8</b>	<b>6.8</b>	▲ 0.0	▲ 1.9
<b>Total Mexican Exports</b>	<b>6.8</b>	<b>6.5</b>	<b>6.2</b>	<b>6.5</b>	<b>6.4</b>	<b>6.2</b>	<b>6.4</b>	▲ 0.1	▼ -0.1
Implied Daily Storage Activity	7.4	13.4	15.4	14.2	6.9	4.3	5.4		
EIA Reported Daily Storage Activity									
Daily Model Error									

### EIA Storage Week Balances

	31-Jul	7-Aug	14-Aug	21-Aug	28-Aug	4-Sep	WoW	vs. 4W
<b>Lower 48 Dry Production</b>	<b>87.2</b>	<b>87.3</b>	<b>87.4</b>	<b>87.2</b>	<b>86.0</b>	<b>86.3</b>	▲ 0.3	▼ -0.7
<b>Canadian Imports</b>	<b>4.5</b>	<b>4.6</b>	<b>5.0</b>	<b>4.7</b>	<b>5.2</b>	<b>4.4</b>	▼ -0.8	▼ -0.5
L48 Power	45.5	40.7	42.9	40.0	41.6	37.2	▼ -4.4	▼ -4.1
L48 Residential & Commercial	8.7	8.1	8.1	8.2	8.3	7.7	▼ -0.6	▼ -0.4
L48 Industrial	17.3	18.8	19.0	20.4	19.7	19.8	▲ 0.2	▲ 0.3
L48 Lease and Plant Fuel	4.9	4.9	4.9	4.8	4.8	4.8	▲ 0.0	▼ 0.0
L48 Pipeline Distribution	2.5	2.2	2.3	2.2	2.3	2.1	▼ -0.2	▼ -0.2
<b>L48 Regional Gas Consumption</b>	<b>78.9</b>	<b>74.7</b>	<b>77.2</b>	<b>75.7</b>	<b>76.6</b>	<b>71.7</b>	▼ -4.9	▼ -4.4
<b>Net LNG Exports</b>	<b>3.1</b>	<b>3.9</b>	<b>4.4</b>	<b>4.7</b>	<b>3.9</b>	<b>3.0</b>	▼ -0.8	▼ -1.2
<b>Total Mexican Exports</b>	<b>6.2</b>	<b>6.1</b>	<b>6.0</b>	<b>6.2</b>	<b>6.6</b>	<b>6.6</b>	▼ -0.1	▲ 0.3
Implied Daily Storage Activity	3.5	7.2	4.8	5.3	4.1	9.4	5.3	
EIA Reported Daily Storage Activity	4.7	8.3	6.1	6.4	5.0			
Daily Model Error	-1.2	-1.1	-1.3	-1.1	-0.9			

### 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>87.5</b>	▲ 0.7	▼ -5.9
<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	34.2	36.4	26.9	34.8	43.8	40.6	36.0	▼ -4.6	▼ -0.4
L48 Residential & Commercial	8.5	8.3	12.9	9.0	8.6	8.1	8.4	▲ 0.3	▲ 0.1
L48 Industrial	21.6	22.3	18.9	18.3	17.8	19.6	20.0	▲ 0.5	▼ -2.3
L48 Lease and Plant Fuel	4.8	5.2	4.8	4.9	4.9	4.8	4.9	▲ 0.1	▼ -0.3
L48 Pipeline Distribution	2.0	2.1	1.9	2.0	2.4	2.2	2.1	▼ -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>71.4</b>	▼ -3.9	▼ -2.9
<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>4.6</b>	▲ 0.6	▼ -1.6
<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>6.5</b>	▲ 0.3	▲ 1.2
Implied Daily Storage Activity	10.3	12.4	12.6	10.2	4.1	6.1	8.8		
EIA Reported Daily Storage Activity									
Daily Model Error									

Source: Bloomberg, analytix.ai

## Regional S/D Models Storage Projection

Week Ending 4-Sep

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	9.1	1.2	10.4	71
East	1.2	1.8	3.0	20
Midwest	4.0	0.5	4.5	30
Mountain	3.4	-2.9	0.5	4
South Central	-0.4	2.3	2.0	14
Pacific	1.0	-0.6	0.4	3

\*Adjustment Factor is calculated based on historical regional deltas

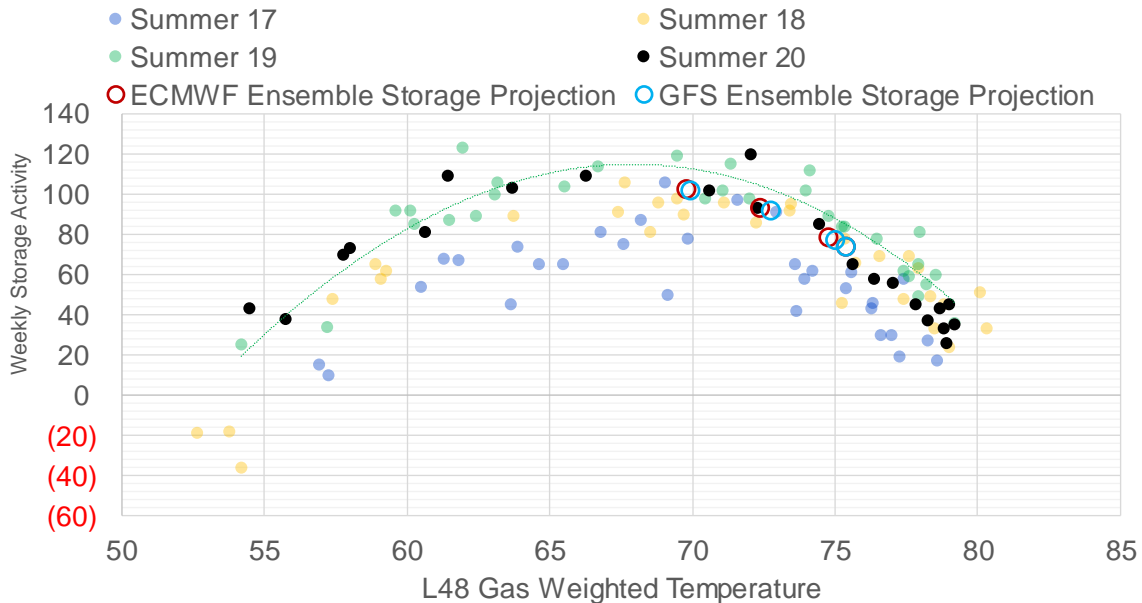
U.S. underground natural gas storage facilities by type (July 2015)



## Weather Model Storage Projection

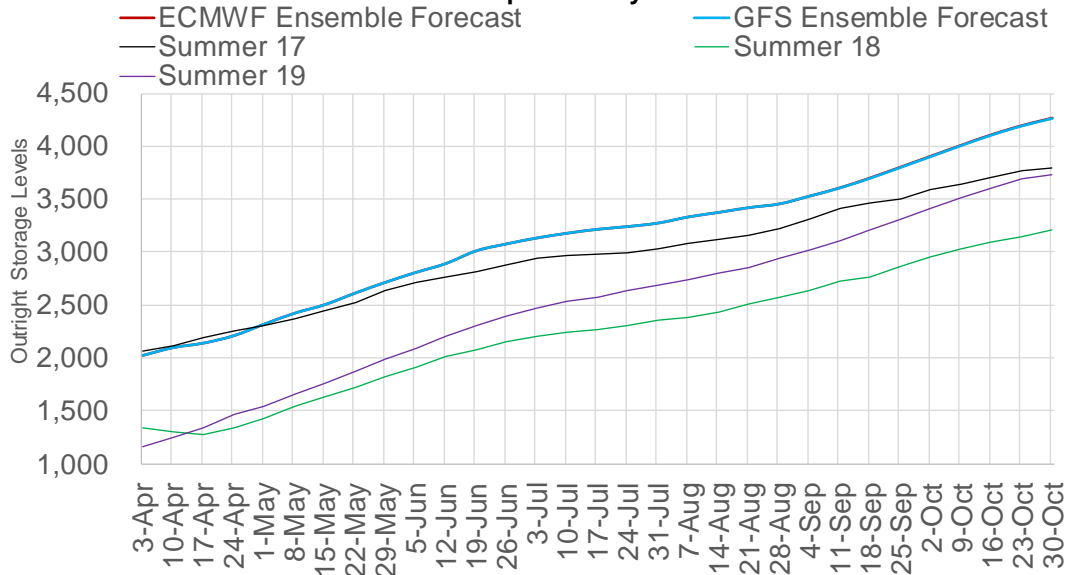
Next report and beyond	
Week Ending	Week Storage Projection
11-Sep	78
18-Sep	93
25-Sep	102

### Weather Storage Model - Next 4 Week Forecast

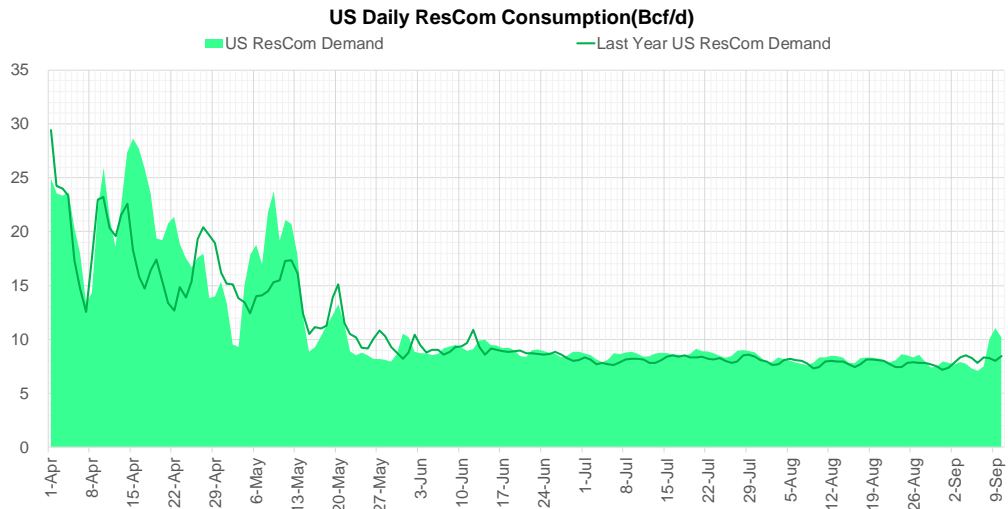
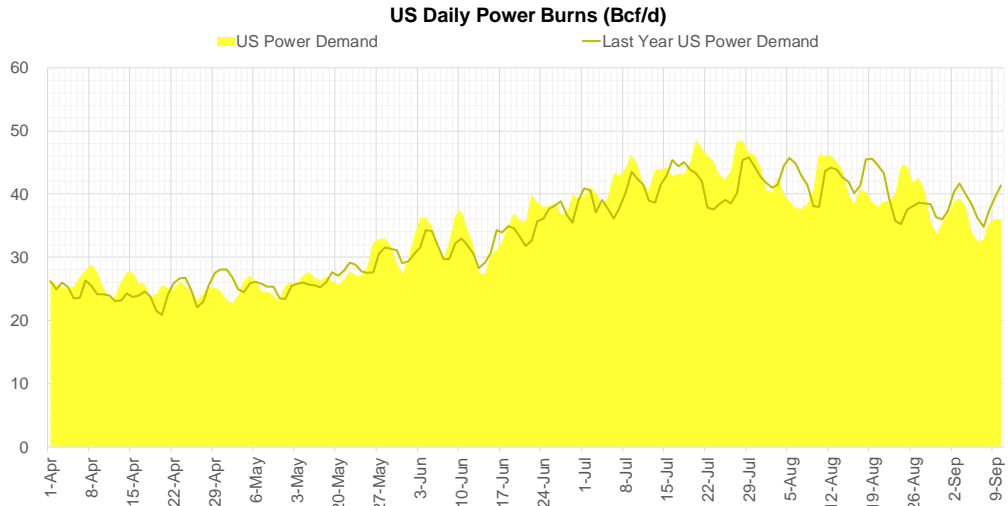
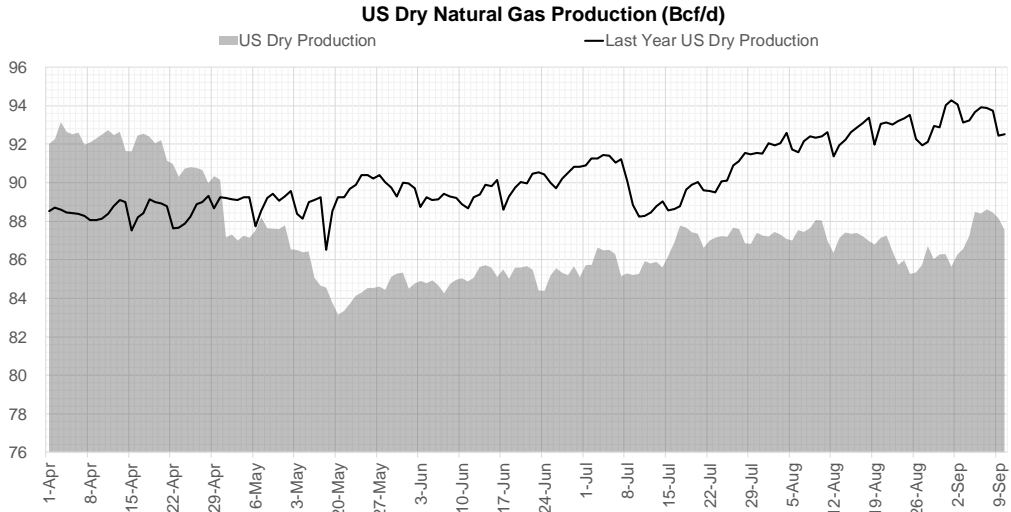


### Weather Based End of Winter Projection (Bcf)

10Y normals past 15 day forecast window



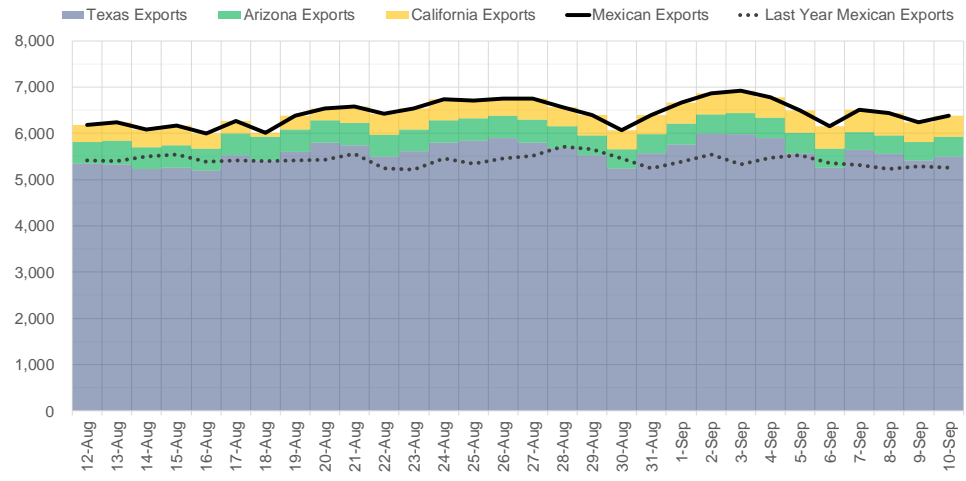
## Supply – Demand Trends



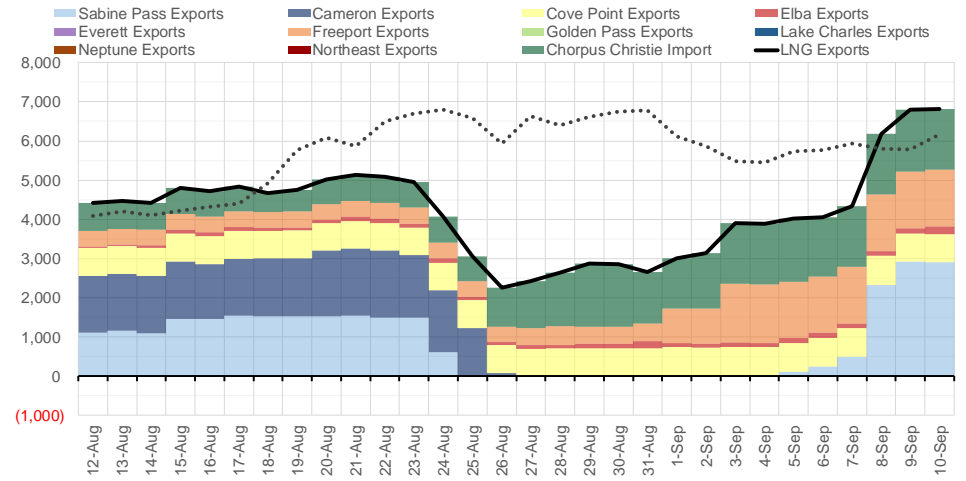
Source: Bloomberg

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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	9321	10	2020	P	2.00	50013
10	2020	C	2.75	7628	10	2020	P	1.50	44771
10	2020	P	2.00	6334	10	2020	C	3.00	44504
10	2020	P	2.25	5252	10	2020	C	2.75	43985
10	2020	P	1.75	4849	10	2020	C	2.50	34597
10	2020	C	2.60	4686	10	2020	P	2.25	34245
10	2020	C	3.25	3323	10	2020	P	1.60	33911
11	2020	C	3.50	3034	3	2021	P	2.00	32439
11	2020	C	3.20	3015	4	2021	C	5.00	30337
11	2020	P	2.25	2472	10	2020	P	1.75	30265
10	2020	C	2.50	2417	10	2020	P	1.25	28897
11	2020	P	2.50	2390	3	2021	C	3.25	26418
10	2020	P	2.10	2381	3	2021	C	4.00	26231
11	2020	C	3.00	2345	11	2020	C	3.50	25323
11	2020	P	2.80	2196	10	2020	P	1.00	24016
11	2020	C	3.25	2005	11	2020	P	2.00	23836
1	2021	C	4.50	2000	10	2020	P	2.10	23225
10	2020	P	2.30	1639	1	2021	C	4.50	23165
10	2020	P	2.35	1606	12	2020	P	2.00	23139
1	2021	C	3.75	1600	11	2020	C	5.00	22948
10	2020	P	1.90	1421	10	2020	C	3.25	22560
11	2020	C	3.75	1340	10	2020	C	2.10	21984
12	2020	C	3.75	1322	1	2021	C	3.50	21981
10	2020	P	2.20	1284	3	2021	C	3.00	21961
10	2020	P	2.15	1281	10	2020	P	1.80	21455
12	2020	C	4.25	1217	10	2020	P	2.20	20985
3	2021	C	4.50	1200	3	2021	C	6.00	20105
3	2021	C	5.50	1200	11	2020	P	2.25	19761
10	2020	C	2.40	1164	3	2021	C	3.50	19456
10	2020	P	2.40	1119	1	2021	C	3.75	19295
11	2020	C	3.40	1113	10	2020	P	1.30	19133
10	2020	P	1.70	1065	10	2020	C	3.50	19023
11	2020	P	2.10	1065	10	2020	C	2.00	18663
10	2020	C	2.30	1000	1	2021	C	5.00	17968
10	2020	P	1.80	900	10	2020	C	2.25	17302
10	2020	C	3.20	869	2	2021	C	5.00	17295
10	2020	C	2.80	814	10	2020	P	1.90	16958
10	2020	C	2.85	785	1	2021	C	3.00	16783
10	2020	C	2.65	728	11	2020	P	2.50	16626
12	2020	P	2.75	728	11	2020	C	3.25	16427
11	2020	P	2.35	701	11	2020	C	3.00	15936
11	2020	C	3.10	687	12	2020	P	2.50	15391
12	2020	C	5.00	672	12	2020	C	4.00	15106
11	2020	C	3.05	598	11	2020	C	2.75	14582
10	2020	C	2.90	593	10	2020	P	1.40	14494
10	2020	P	1.95	570	12	2020	C	3.75	14469
1	2021	C	3.50	550	11	2020	C	4.00	14380
10	2020	P	1.50	534	1	2021	P	2.25	14314
11	2020	P	2.60	531	10	2020	C	2.70	14308
					10	2020	C	2.6	14273

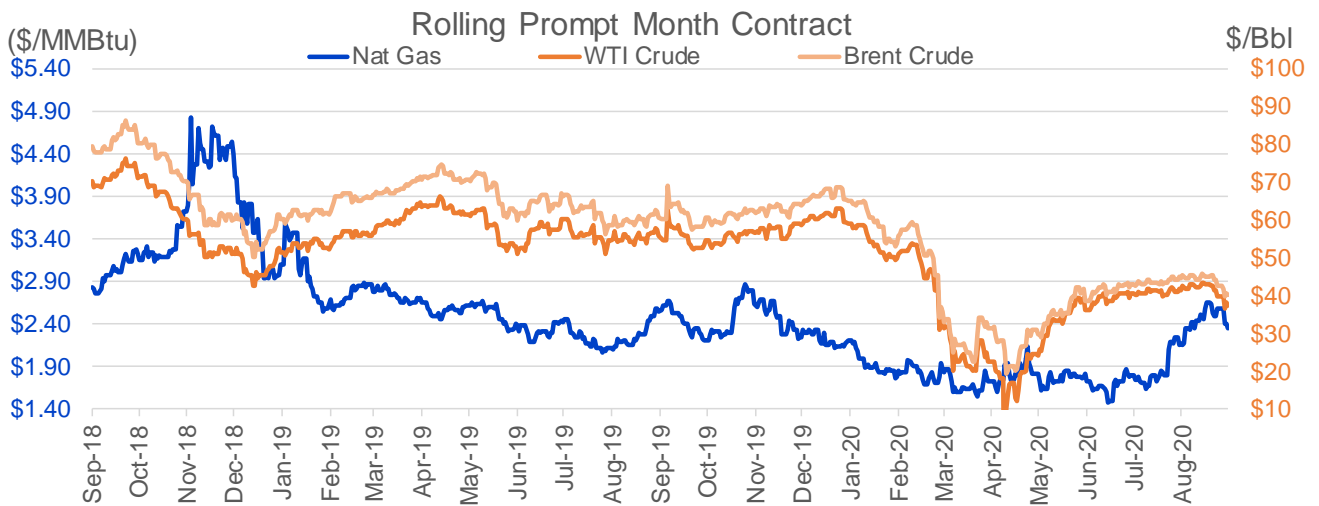
Source: CME, Nasdaq, ICE



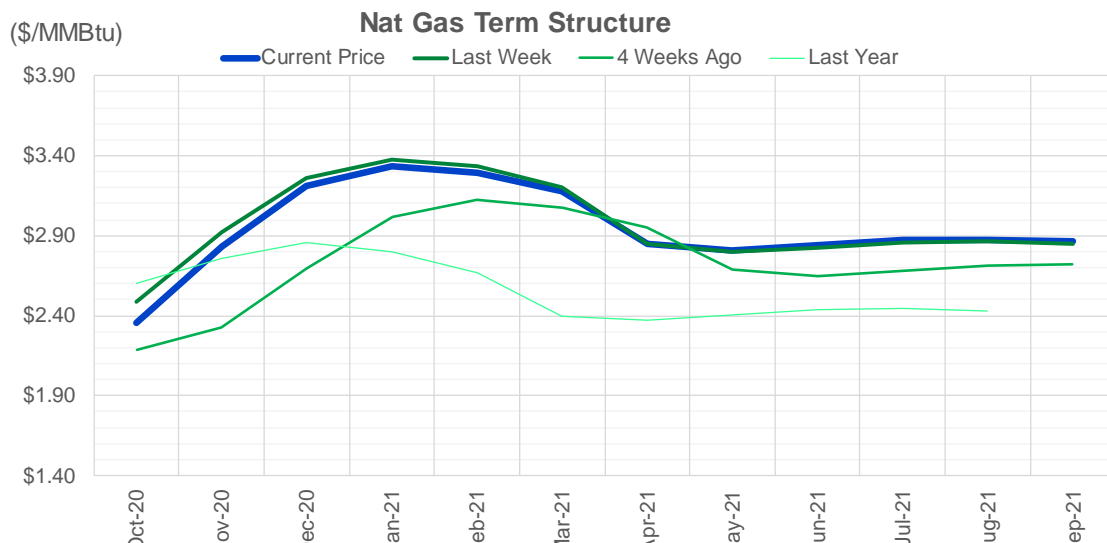
## Nat Gas Futures Open Interest CME, and ICE Combined

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	173615	189891	-16276	OCT 20	90772	91315	-543.25
NOV 20	218147	211184	6963	NOV 20	83046	82889	157.25
DEC 20	100449	100715	-266	DEC 20	74261	74539	-278
JAN 21	130671	130918	-247	JAN 21	86912	85637	1275
FEB 21	54145	51781	2364	FEB 21	58636	57690	945.25
MAR 21	105987	102119	3868	MAR 21	77450	77082	368
APR 21	78590	78707	-117	APR 21	63608	63898	-290
MAY 21	46500	45765	735	MAY 21	56408	55067	1340.5
JUN 21	29316	28451	865	JUN 21	50661	50413	247.75
JUL 21	20357	20266	91	JUL 21	53087	52681	406.75
AUG 21	22010	21283	727	AUG 21	53021	53023	-2
SEP 21	27752	27464	288	SEP 21	49529	49306	223.5
OCT 21	66978	66362	616	OCT 21	73739	73595	144
NOV 21	27183	27289	-106	NOV 21	42524	42306	218.5
DEC 21	24285	23856	429	DEC 21	42744	42732	11.75
JAN 22	22429	22498	-69	JAN 22	36873	36816	57
FEB 22	12581	12529	52	FEB 22	32024	31925	98.75
MAR 22	18027	17732	295	MAR 22	33927	33821	105.5
APR 22	21166	21189	-23	APR 22	33761	33694	66.25
MAY 22	6050	6035	15	MAY 22	24583	24790	-206.75
JUN 22	3620	3116	504	JUN 22	23908	23812	96
JUL 22	2945	2928	17	JUL 22	24885	24500	385.25
AUG 22	1944	1960	-16	AUG 22	24298	24199	98.5
SEP 22	2059	2058	1	SEP 22	23373	23292	81
OCT 22	3295	3295	0	OCT 22	25023	24885	137.75
NOV 22	2326	2325	1	NOV 22	22068	22017	51
DEC 22	2223	2223	0	DEC 22	23168	23112	56.75
JAN 23	2873	2873	0	JAN 23	12440	12423	17
FEB 23	858	858	0	FEB 23	11437	11421	15.75
MAR 23	900	900	0	MAR 23	11902	11831	71.25

Source: CME, ICE



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	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>\$2.352</b>	<b>\$2.831</b>	<b>\$3.215</b>	<b>\$3.336</b>	<b>\$3.296</b>	<b>\$3.179</b>	<b>\$2.851</b>	<b>\$2.810</b>	<b>\$2.838</b>	<b>\$2.871</b>	<b>\$2.877</b>	<b>\$2.868</b>
Last Week	\$2.487	\$2.927	\$3.259	\$3.374	\$3.333	\$3.201	\$2.850	\$2.803	\$2.825	\$2.855	\$2.862	\$2.850
vs. Last Week	-\$0.135	-\$0.096	-\$0.044	-\$0.038	-\$0.037	-\$0.022	\$0.001	\$0.007	\$0.013	\$0.016	\$0.015	\$0.018
4 Weeks Ago	\$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. 4 Weeks Ago	\$0.170	\$0.507	\$0.516	\$0.320	\$0.175	\$0.104	-\$0.099	\$0.125	\$0.188	\$0.193	\$0.164	\$0.149
Last Year	\$2.574	\$2.605	\$2.758	\$2.857	\$2.803	\$2.669	\$2.400	\$2.374	\$2.404	\$2.438	\$2.443	\$2.428
vs. Last Year	-\$0.222	\$0.226	\$0.457	\$0.479	\$0.493	\$0.510	\$0.451	\$0.436	\$0.434	\$0.433	\$0.434	\$0.440

	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	1.90	1.67	-0.23
TETCO M3	\$/MMBtu	1.55	1.41	-0.14
FGT Zone 3	\$/MMBtu	1.64	2.51	0.87
Zone 6 NY	\$/MMBtu	1.64	1.13	-0.52
Chicago Citygate	\$/MMBtu	1.95	2.19	0.24
Michcon	\$/MMBtu	1.90	2.08	0.18
Columbia TCO Pool	\$/MMBtu	1.74	1.56	-0.18
Ventura	\$/MMBtu	1.95	2.15	0.20
Rockies/Opal	\$/MMBtu	2.41	2.05	-0.36
El Paso Permian Basin	\$/MMBtu	1.29	1.71	0.42
Socal Citygate	\$/MMBtu	3.12	2.48	-0.64
Malin	\$/MMBtu	1.97	2.30	0.33
Houston Ship Channel	\$/MMBtu	2.17	2.45	0.28
Henry Hub Cash	\$/MMBtu	2.19	2.25	0.06
AECO Cash	C\$/GJ	1.85	1.93	0.08
Station2 Cash	C\$/GJ	1.87	2.46	0.59
Dawn Cash	C\$/GJ	1.91	2.09	0.18

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks		vs. Last Year
				Ago		
NatGas Jan/Apr	\$/MMBtu	-0.49	▲ 0.039	▼ -0.049	▼ -0.039	
NatGas Mar/Apr	\$/MMBtu	-0.328	▲ 0.023	▼ -0.593	▼ -0.600	
NatGas Oct/Nov	\$/MMBtu	0.48	▲ 0.039	▲ 0.104	▲ 0.426	
NatGas Oct/Jan	\$/MMBtu	0.98	▲ 0.097	▲ 0.187	▲ 0.658	
WTI Crude	\$/Bbl	37.46	▼ -3.910	▼ -4.780	▼ -17.630	
Brent Crude	\$/Bbl	40.28	▼ -3.790	▼ -4.680	▼ -20.100	
Fuel Oil, NY Harbour 1%	\$/Bbl	98.03	▲ 0.000	▲ 0.000	▲ 0.000	
Heating Oil	cents/Gallon	108.32	▼ -8.450	▼ -15.490	▼ -80.190	
Propane, Mt. Bel	cents/Gallon	0.47	▼ -0.028	▼ -0.035	▲ 0.040	
Ethane, Mt. Bel	cents/Gallon	0.21	▲ 0.022	▼ -0.020	▼ -0.012	
Coal, PRB	\$/MTon	12.30	▲ 0.000	▲ 0.000	▲ 0.150	
Coal, ILB	\$/MTon	31.05	▲ 0.000	▲ 0.000	▼ -4.500	