

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 2.58	▼ \$ (0.05)	▼ \$ (0.01)

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 43.12	▲ \$ 0.51	▲ \$ 0.1

	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 45.87	▲ \$ 0.59	▲ \$ 0.6

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- [Short-term Weather Model Outlooks](#)
- [Lower 48 Component Models](#)
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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	0.6	-2.3	-1.4
24 Hr Chg	-1.3	-1.6	-3.8	-6.7

GFS Ensemble 00z	1-5 Day	6-10 Day	11-15 Day	Total
12 Hr Chg	-0.5	6.9	-2.7	3.7
24 Hr Chg	-1.8	1.7	-6.9	-7.0

	Current	Δ from YD	Δ from 7D Avg
US Dry Production	84.0	▼ -2.41	▼ -1.98

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	36.7	▲ 1.01	▼ -2.50

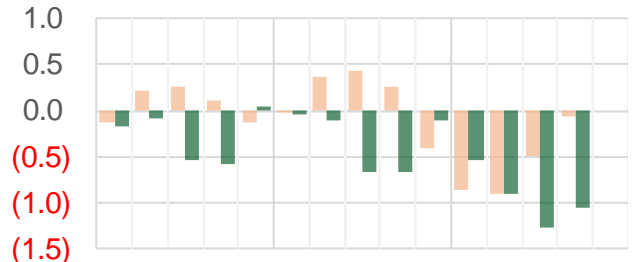
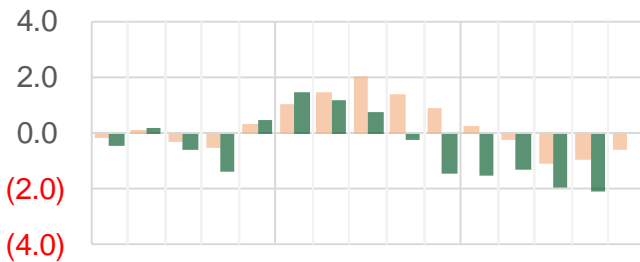
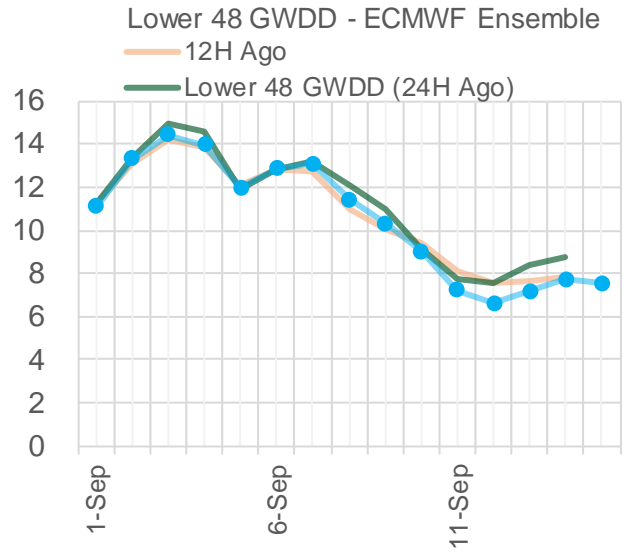
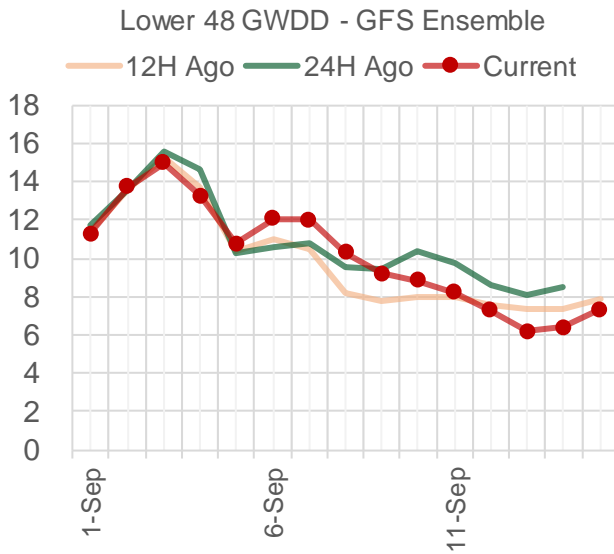
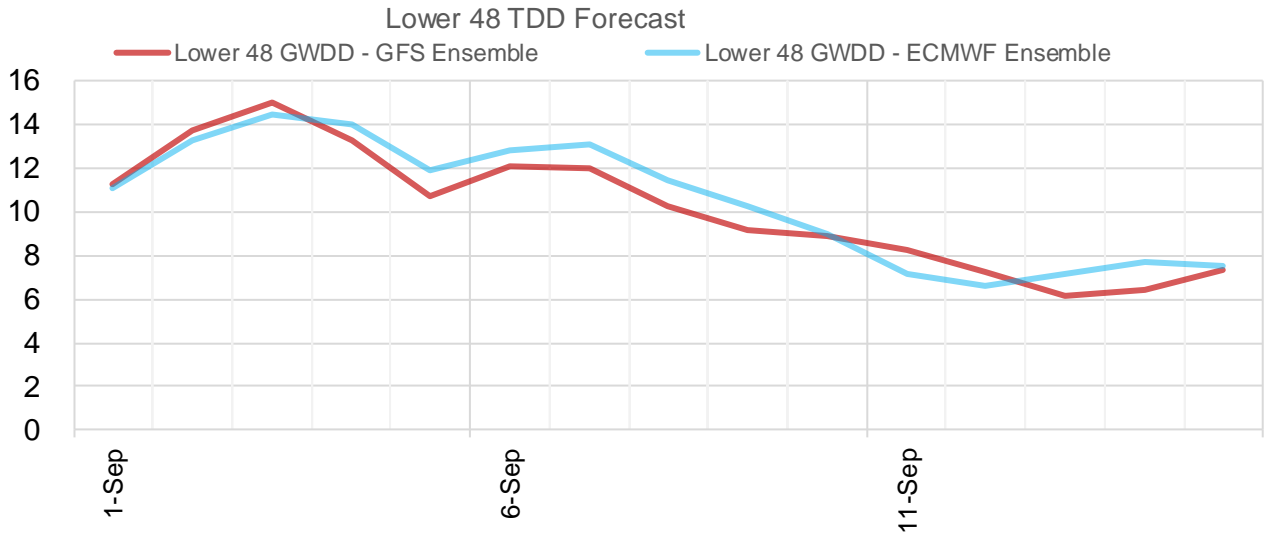
	Current	Δ from YD	Δ from 7D Avg
US ResComm	7.7	▼ -0.23	▼ -0.30

	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	4.4	▼ -0.01	▼ -0.44

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	3.0	▲ 0.36	▲ 0.33

	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.5	▲ 0.20	▼ -0.07

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



Source: WSI , Bloomberg

## Lower 48 Component Models

### Daily Balances

	26-Aug	27-Aug	28-Aug	29-Aug	30-Aug	31-Aug	1-Sep	DoD	vs. 7D
<b>Lower 48 Dry Production</b>	<b>85.3</b>	<b>85.7</b>	<b>86.7</b>	<b>86.0</b>	<b>86.3</b>	<b>86.4</b>	<b>84.0</b>	▼ -2.4	▼ -2.1
<b>Canadian Imports</b>	<b>5.5</b>	<b>5.1</b>	<b>5.0</b>	<b>4.4</b>	<b>4.3</b>	<b>4.4</b>	<b>4.4</b>	▼ 0.0	▼ -0.4
L48 Power	41.8	42.6	40.6	35.8	33.7	35.7	36.7	▲ 1.0	▼ -1.6
L48 Residential & Commercial	8.3	8.6	7.9	7.4	7.5	8.0	7.7	▼ -0.2	▼ -0.2
L48 Industrial	19.4	19.8	20.2	20.5	20.8	21.1	20.8	▼ -0.3	▲ 0.5
L48 Lease and Plant Fuel	4.7	4.8	4.8	4.8	4.8	4.8	4.7	▼ -0.1	▼ -0.1
L48 Pipeline Distribution	2.3	2.4	2.2	2.0	1.9	2.0	2.1	▲ 0.1	▼ 0.0
<b>L48 Regional Gas Consumption</b>	<b>76.7</b>	<b>78.1</b>	<b>75.8</b>	<b>70.5</b>	<b>68.7</b>	<b>71.6</b>	<b>72.1</b>	▲ 0.4	▼ -1.5
<b>Net LNG Exports</b>	<b>2.3</b>	<b>2.4</b>	<b>2.6</b>	<b>2.9</b>	<b>2.9</b>	<b>2.7</b>	<b>3.0</b>	▲ 0.4	▲ 0.4
<b>Total Mexican Exports</b>	<b>6.8</b>	<b>7.0</b>	<b>6.8</b>	<b>6.4</b>	<b>6.1</b>	<b>6.3</b>	<b>6.5</b>	▲ 0.2	▼ -0.1
<b>Implied Daily Storage Activity</b>	<b>5.1</b>	<b>3.4</b>	<b>6.5</b>	<b>10.7</b>	<b>12.9</b>	<b>10.2</b>	<b>6.8</b>		
<b>EIA Reported Daily Storage Activity</b>									
<b>Daily Model Error</b>									

### 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	18.8	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>79.0</b>	<b>78.9</b>	<b>74.7</b>	<b>77.2</b>	<b>75.7</b>	<b>76.5</b>	▲ 0.8	▼ -0.1
<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
<b>Implied Daily Storage Activity</b>	<b>2.7</b>	<b>3.5</b>	<b>7.2</b>	<b>4.8</b>	<b>5.3</b>	<b>4.2</b>	-1.1	
<b>EIA Reported Daily Storage Activity</b>	<b>3.7</b>	<b>4.7</b>	<b>8.3</b>	<b>6.1</b>	<b>6.4</b>			
<b>Daily Model Error</b>	<b>-1.0</b>	<b>-1.2</b>	<b>-1.0</b>	<b>-1.3</b>	<b>-1.2</b>			

### Monthly Balances

	2Yr Ago Sep-18	LY Sep-19	Apr-20	May-20	Jun-20	Jul-20	MTD Aug-20	MoM	vs. LY
<b>Lower 48 Dry Production</b>	<b>85.2</b>	<b>93.5</b>	<b>91.6</b>	<b>85.8</b>	<b>85.1</b>	<b>86.6</b>	<b>87.2</b>	▲ 0.6	▼ -6.3
<b>Canadian Imports</b>	<b>4.5</b>	<b>4.7</b>	<b>3.9</b>	<b>3.9</b>	<b>4.0</b>	<b>4.4</b>	<b>4.6</b>	▲ 0.2	▼ -0.1
L48 Power	34.2	36.4	25.5	26.9	34.8	43.8	40.7	▼ -3.1	▲ 4.3
L48 Residential & Commercial	8.5	8.3	20.3	12.9	9.0	8.6	7.9	▼ -0.8	▼ -0.4
L48 Industrial	21.6	22.3	20.7	18.9	18.3	17.8	18.6	▲ 0.8	▼ -3.7
L48 Lease and Plant Fuel	4.8	5.2	5.1	4.8	4.9	4.9	4.8	▼ 0.0	▼ -0.4
L48 Pipeline Distribution	2.0	2.1	2.1	1.9	2.0	2.4	2.2	▼ -0.1	▲ 0.1
<b>L48 Regional Gas Consumption</b>	<b>71.2</b>	<b>74.3</b>	<b>73.8</b>	<b>65.5</b>	<b>69.1</b>	<b>77.5</b>	<b>74.2</b>	▼ -3.3	▼ 0.0
<b>Net LNG Exports</b>	<b>3.1</b>	<b>6.2</b>	<b>8.2</b>	<b>6.7</b>	<b>4.0</b>	<b>3.3</b>	<b>4.1</b>	▲ 0.8	▼ -2.1
<b>Total Mexican Exports</b>	<b>5.1</b>	<b>5.4</b>	<b>4.9</b>	<b>4.9</b>	<b>5.7</b>	<b>6.1</b>	<b>5.8</b>	▼ -0.3	▲ 0.4
<b>Implied Daily Storage Activity</b>	<b>10.3</b>	<b>12.4</b>	<b>8.6</b>	<b>12.6</b>	<b>10.2</b>	<b>4.1</b>	<b>7.7</b>		
<b>EIA Reported Daily Storage Activity</b>									
<b>Daily Model Error</b>									

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	5.3	37
East	0.4	2.1	2.5	17
Midwest	2.5	0.7	3.3	23
Mountain	3.2	-2.5	0.7	5
South Central	-2.5	1.8	-0.6	-4
Pacific	0.2	-0.7	-0.4	-3

\*Adjustment Factor is calculated based on historical regional deltas

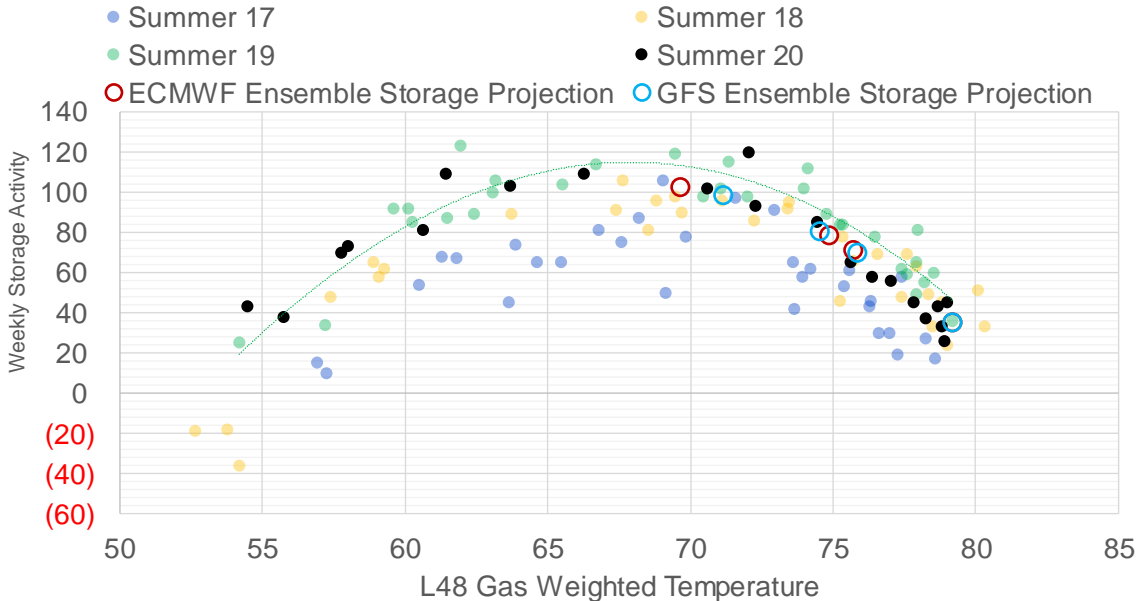
U.S. underground natural gas storage facilities by type (July 2015)



## Weather Model Storage Projection

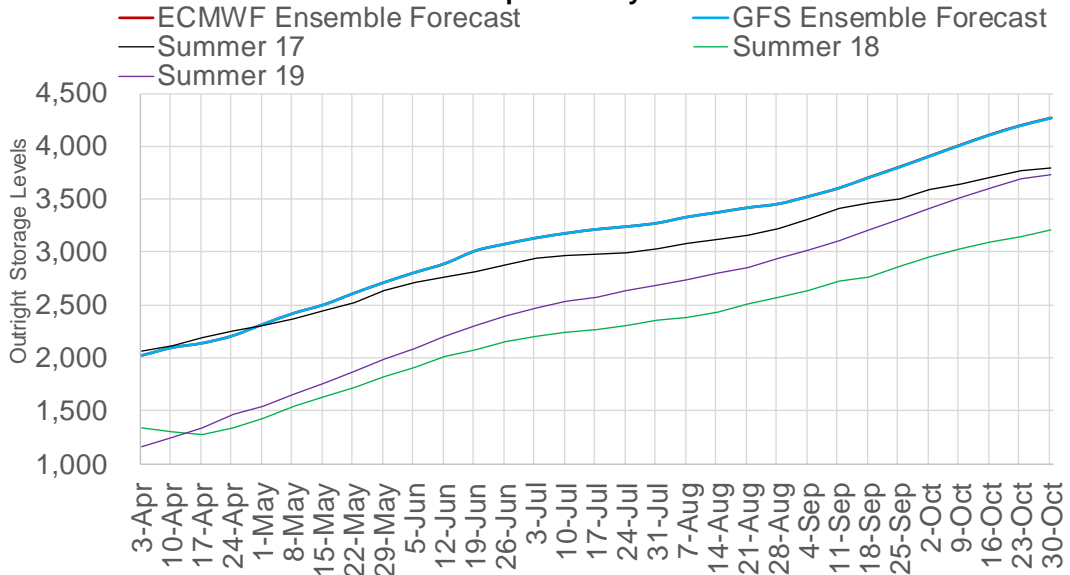
Next report and beyond	
Week Ending	Week Storage Projection
4-Sep	71
11-Sep	79
18-Sep	101

### Weather Storage Model - Next 4 Week Forecast



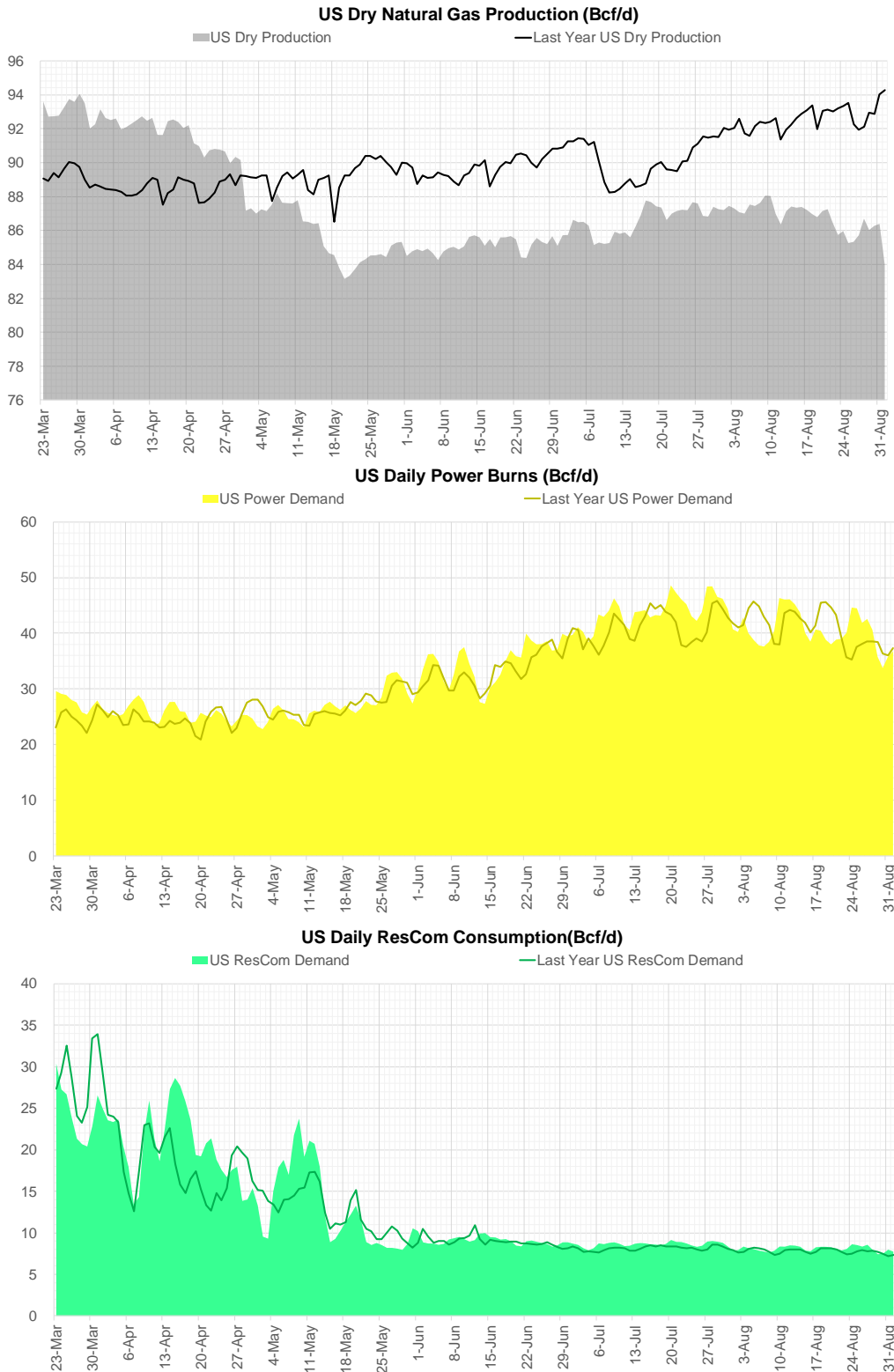
### Weather Based End of Winter Projection (Bcf)

10Y normals past 15 day forecast window



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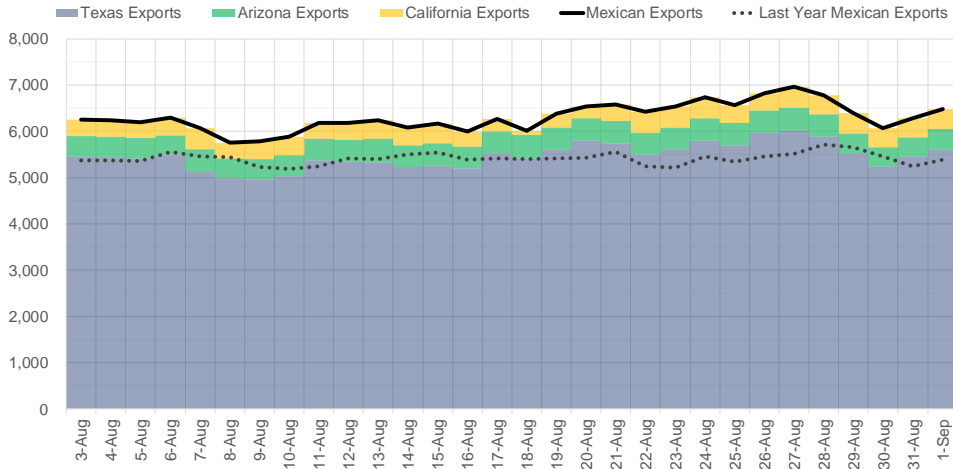
## Supply – Demand Trends



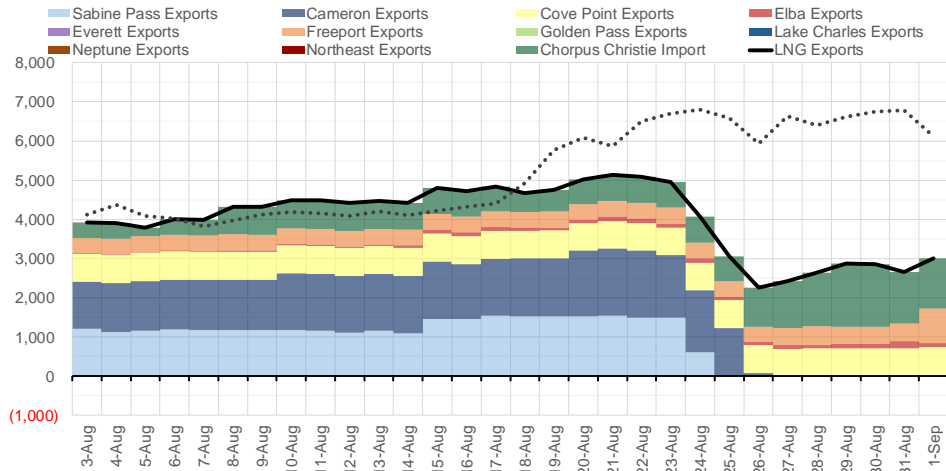
Source: Bloomberg

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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
11	2020	P	2.25	7700	10	2020	P	1.50	46658
11	2020	P	2.00	7658	10	2020	P	2.00	46192
10	2020	C	2.75	5520	10	2020	C	2.75	43536
10	2020	C	3.00	5455	10	2020	C	3.00	39625
10	2020	C	2.50	5163	10	2020	C	2.50	35527
10	2020	P	2.00	5055	10	2020	P	1.60	34054
11	2020	C	4.50	5004	3	2021	P	2.00	31292
10	2020	C	3.25	4873	10	2020	P	1.75	30360
10	2020	P	2.25	4531	10	2020	P	1.25	28894
11	2020	P	2.05	4027	11	2020	C	3.50	24803
11	2020	P	1.95	4001	3	2021	C	3.25	24754
11	2020	P	2.50	3460	10	2020	P	1.00	24016
10	2020	C	2.85	3242	3	2021	C	4.00	23376
4	2021	C	5.00	3211	11	2020	P	2.00	23038
1	2021	C	5.00	3121	1	2021	C	4.50	22841
3	2021	C	3.25	3055	12	2020	P	2.00	22548
3	2021	C	4.00	3000	3	2021	C	3.00	22302
10	2020	P	2.40	2705	10	2020	C	2.10	21985
10	2020	C	4.00	2550	1	2021	C	3.50	21662
1	2021	C	3.75	2550	10	2020	P	2.10	21433
10	2020	C	2.60	2495	10	2020	C	3.50	21106
1	2021	C	4.00	2162	10	2020	C	3.25	20683
10	2020	P	2.50	1989	10	2020	P	2.25	20266
10	2020	C	2.70	1912	3	2021	C	3.50	20131
1	2021	C	3.25	1905	3	2021	C	6.00	19980
10	2020	P	2.20	1807	10	2020	P	1.30	19128
10	2020	C	3.20	1742	10	2020	C	2.00	18665
11	2020	C	3.00	1728	10	2020	P	1.80	18399
12	2020	C	5.00	1701	4	2021	C	5.00	17931
10	2020	C	4.25	1390	11	2020	C	3.00	17358
10	2020	C	3.50	1389	10	2020	C	2.25	17294
11	2020	C	3.50	1342	11	2020	P	2.25	16797
12	2020	C	3.50	1240	1	2021	C	3.00	16673
10	2020	P	2.35	1213	2	2021	C	5.00	15319
10	2020	P	1.75	1060	12	2020	C	4.00	14865
10	2020	P	2.05	978	11	2020	C	2.75	14854
11	2020	C	4.00	882	11	2020	C	5.00	14638
10	2020	C	2.65	811	11	2020	C	3.25	14637
2	2021	C	5.00	810	1	2021	C	3.75	14337
12	2020	C	4.50	650	1	2021	P	2.25	14304
12	2020	P	3.00	619	4	2021	C	3.00	14267
11	2020	C	5.00	613	1	2021	C	5.00	14166
5	2021	C	3.50	600	11	2020	P	2.50	14089
12	2020	C	3.25	555	10	2020	C	2.40	14018
10	2020	P	2.10	542	10	2020	P	1.40	13898
1	2021	C	3.00	450	4	2021	P	2.00	13594
2	2021	C	3.70	450	3	2021	C	5.00	13412
12	2020	C	3.15	407	1	2021	P	2.50	13228
12	2020	C	3.30	407	6	2021	C	4.00	13225
					12	2020	P	2.5	13119

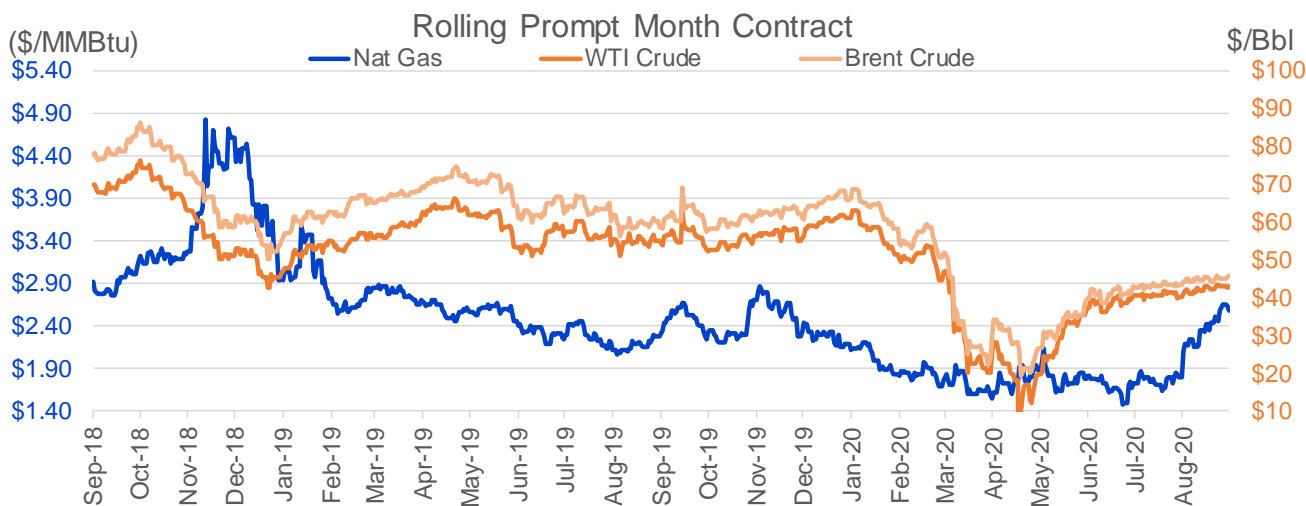
Source: CME, Nasdaq, ICE

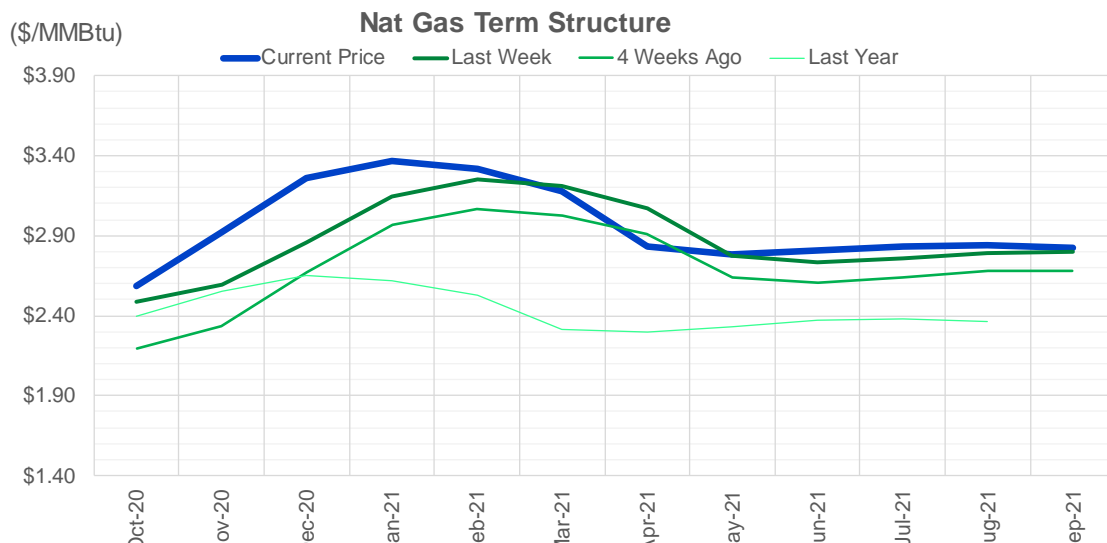


## Nat Gas Futures Open Interest CME, and ICE Combined

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	226490	227765	-1275	OCT 20	91665	90850	815
NOV 20	208197	199836	8361	NOV 20	81824	79128	2695.25
DEC 20	112759	103082	9677	DEC 20	74474	72070	2404.5
JAN 21	130421	129686	735	JAN 21	88180	88929	-748.25
FEB 21	47424	47220	204	FEB 21	56504	56277	227.25
MAR 21	93124	94272	-1148	MAR 21	78924	78390	533.5
APR 21	79589	80146	-557	APR 21	63221	62963	258.75
MAY 21	45881	45916	-35	MAY 21	53232	53218	14.25
JUN 21	27051	26459	592	JUN 21	49754	49913	-158.75
JUL 21	18942	19117	-175	JUL 21	51741	51702	39.75
AUG 21	19568	19073	495	AUG 21	51637	51537	100.75
SEP 21	25221	25066	155	SEP 21	48188	48307	-118.75
OCT 21	62891	62695	196	OCT 21	72529	72330	199
NOV 21	26658	26402	256	NOV 21	41819	41808	11
DEC 21	22391	22196	195	DEC 21	42392	42453	-61.5
JAN 22	21677	21006	671	JAN 22	35955	35748	207.5
FEB 22	11768	11766	2	FEB 22	31421	31356	65.25
MAR 22	17748	17607	141	MAR 22	33483	33398	84.5
APR 22	20954	19201	1753	APR 22	33779	33705	74.25
MAY 22	5995	5983	12	MAY 22	24506	24349	157.25
JUN 22	3146	3148	-2	JUN 22	23756	23660	96.75
JUL 22	2737	2687	50	JUL 22	24287	24138	149.5
AUG 22	1955	1957	-2	AUG 22	24086	23978	107.5
SEP 22	2132	2132	0	SEP 22	23206	23102	104.25
OCT 22	3157	3157	0	OCT 22	24439	24348	91.5
NOV 22	2211	2156	55	NOV 22	21798	21690	108.25
DEC 22	2071	2061	10	DEC 22	22888	22776	112.25
JAN 23	2868	2865	3	JAN 23	12461	12397	63.25
FEB 23	858	858	0	FEB 23	11341	11291	50
MAR 23	898	863	35	MAR 23	11863	11800	63

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>\$2.583</b>	<b>\$2.921</b>	<b>\$3.264</b>	<b>\$3.371</b>	<b>\$3.322</b>	<b>\$3.178</b>	<b>\$2.829</b>	<b>\$2.782</b>	<b>\$2.804</b>	<b>\$2.835</b>	<b>\$2.842</b>	<b>\$2.824</b>
Last Week	\$2.489	\$2.596	\$2.853	\$3.142	\$3.253	\$3.210	\$3.071	\$2.778	\$2.737	\$2.762	\$2.795	\$2.803
vs. Last Week	\$0.094	\$0.325	\$0.411	\$0.229	\$0.069	-\$0.032	-\$0.242	\$0.004	\$0.067	\$0.073	\$0.047	\$0.021
4 Weeks Ago	\$2.193	\$2.334	\$2.669	\$2.965	\$3.065	\$3.024	\$2.907	\$2.640	\$2.605	\$2.637	\$2.676	\$2.684
vs. 4 Weeks Ago	\$0.390	\$0.587	\$0.595	\$0.406	\$0.257	\$0.154	-\$0.078	\$0.142	\$0.199	\$0.198	\$0.166	\$0.140
Last Year	\$2.358	\$2.397	\$2.550	\$2.651	\$2.618	\$2.529	\$2.315	\$2.297	\$2.332	\$2.370	\$2.377	\$2.360
vs. Last Year	\$0.225	\$0.524	\$0.714	\$0.720	\$0.704	\$0.649	\$0.514	\$0.485	\$0.472	\$0.465	\$0.465	\$0.464

	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	1.20	1.43	0.23
TETCO M3	\$/MMBtu	1.20	1.22	0.02
FGT Zone 3	\$/MMBtu	1.09	2.54	1.45
Zone 6 NY	\$/MMBtu	1.09	1.19	0.10
Chicago Citygate	\$/MMBtu	2.07	2.29	0.22
Michcon	\$/MMBtu	2.04	2.13	0.09
Columbia TCO Pool	\$/MMBtu	1.34	1.63	0.29
Ventura	\$/MMBtu	2.03	2.21	0.18
Rockies/Opal	\$/MMBtu	2.27	2.18	-0.09
El Paso Permian Basin	\$/MMBtu	1.56	1.59	0.03
Socal Citygate	\$/MMBtu	3.04	3.11	0.07
Malin	\$/MMBtu	2.32	2.47	0.15
Houston Ship Channel	\$/MMBtu	2.22	2.46	0.24
Henry Hub Cash	\$/MMBtu	2.30	2.29	-0.01
AECO Cash	C\$/GJ	1.99	1.94	-0.05
Station2 Cash	C\$/GJ	2.04	2.38	0.34
Dawn Cash	C\$/GJ	2.05	2.17	0.12

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks		vs. Last Year
				Ago		
NatGas Jan/Apr	\$/MMBtu	-0.54	▼ -0.067	▼ -0.117	▼ -0.147	
NatGas Mar/Apr	\$/MMBtu	-0.349	▼ -0.056	▼ -0.616	▼ -0.599	
NatGas Oct/Nov	\$/MMBtu	0.34	▲ 0.081	▲ 0.003	▲ 0.278	
NatGas Oct/Jan	\$/MMBtu	0.79	▲ 0.131	▲ 0.057	▲ 0.450	
WTI Crude	\$/Bbl	43.12	▼ -0.230	▲ 1.420	▼ -10.820	
Brent Crude	\$/Bbl	45.87	▲ 0.010	▲ 1.440	▼ -12.390	
Fuel Oil, NY Harbour 1%	\$/Bbl	98.03	▲ 0.000	▲ 0.000	▲ 0.000	
Heating Oil	cents/Gallon	122.92	▼ -3.090	▼ -2.920	▼ -57.410	
Propane, Mt. Bel	cents/Gallon	0.51	▼ -0.001	▲ 0.004	▲ 0.098	
Ethane, Mt. Bel	cents/Gallon	0.24	▼ 0.000	▲ 0.021	▲ 0.032	
Coal, PRB	\$/MTon	12.30	▲ 0.000	▲ 0.000	▲ 0.150	
Coal, ILB	\$/MTon	31.05	▲ 0.000	▲ 0.000	▼ -4.500	