

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 2.25	▲ \$ 0.06	▲ \$ 0.34

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 43.16	▲ \$ 1.46	▲ \$ 2.5

	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 45.90	▲ \$ 1.47	▲ \$ 2.3

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- [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	1.1	2.7	0.3	4.1
24 Hr Chg	-0.8	1.9	0.0	1.0

GFS Ensemble 00z	1-5 Day	6-10 Day	11-15 Day	Total
12 Hr Chg	-0.5	-2.3	-3.5	-6.3
24 Hr Chg	-3.8	-1.6	-6.4	-11.7

	Current	Δ from YD	Δ from 7D Avg
US Dry Production	84.4	▼ -1.31	▼ -1.48

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	38.9	▼ -0.54	▼ -4.04

	Current	Δ from YD	Δ from 7D Avg
US ResComm	7.6	▼ -0.23	▼ -0.27

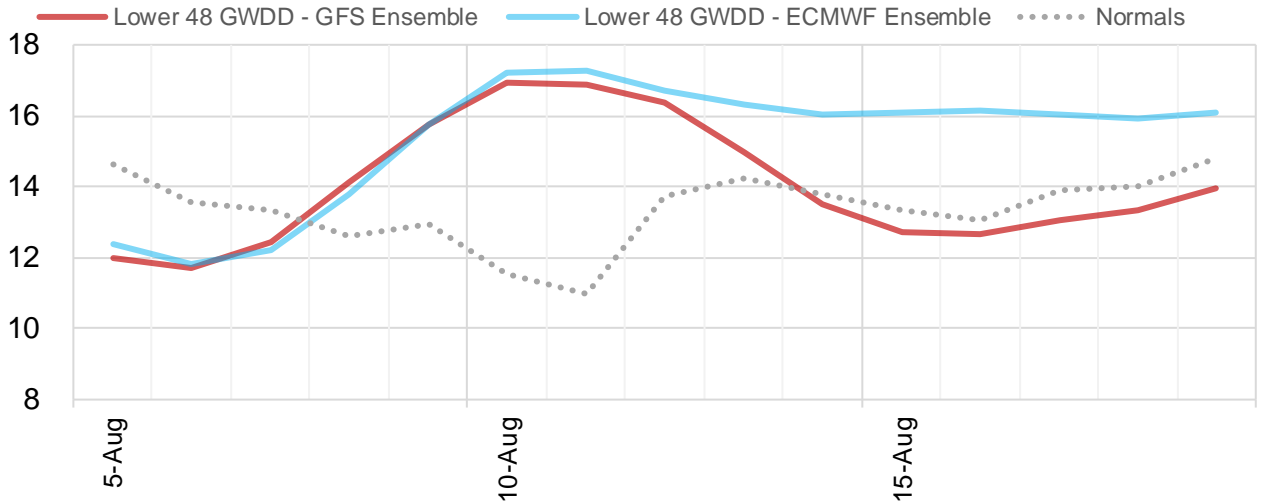
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	4.9	▲ 0.01	▲ 0.11

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	4.0	▲ 0.04	▲ 0.28

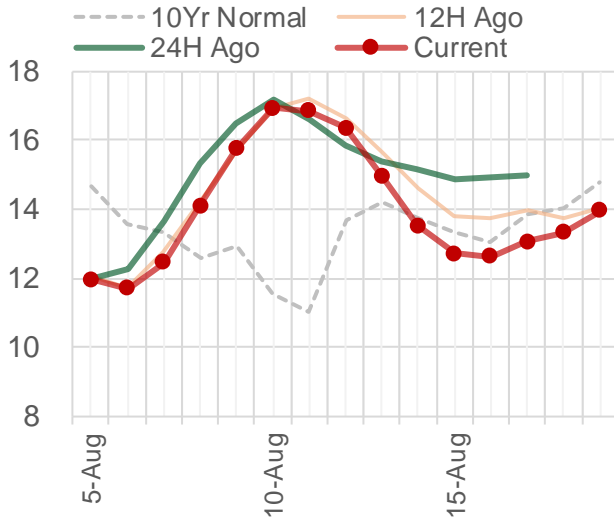
	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.3	▲ 0.04	▲ 0.07

Short-term Weather Model Outlooks (00z)

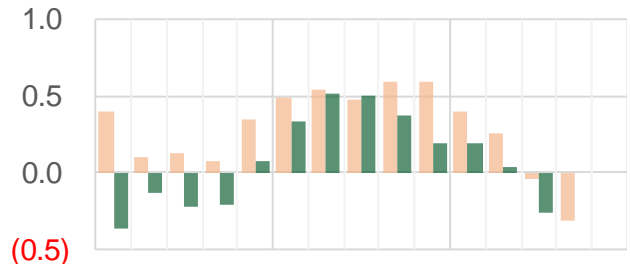
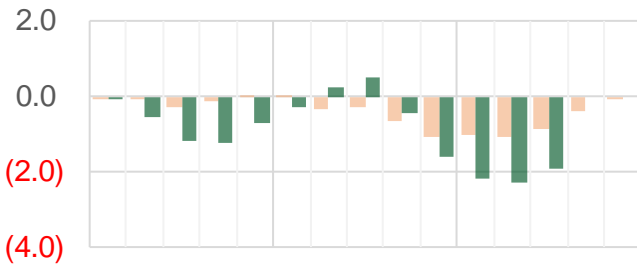
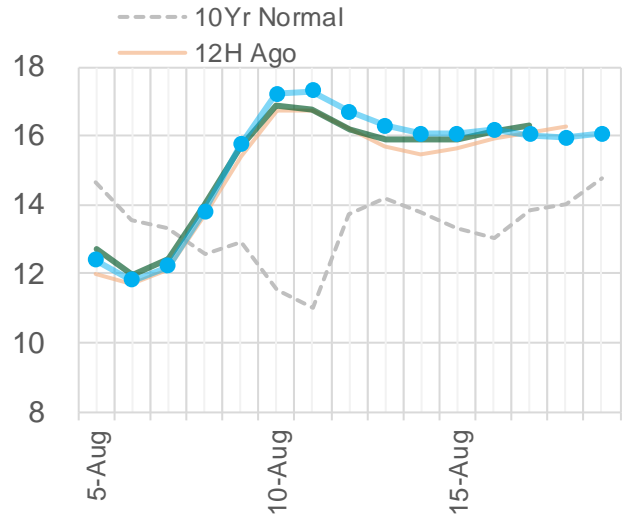
Lower 48 TDD Forecast



Lower 48 GWDD - GFS Ensemble



Lower 48 GWDD - ECMWF Ensemble



Source: WSI, Bloomberg

Lower 48 Component Models

Daily Balances

	30-Jul	31-Jul	1-Aug	2-Aug	3-Aug	4-Aug	5-Aug	DoD	vs. 7D
Lower 48 Dry Production	86.0	85.9	85.9	86.1	85.9	85.7	84.4	▼ -1.3	▼ -1.5
Canadian Imports	4.9	4.6	4.6	4.6	4.8	4.8	4.9	▲ 0.0	▲ 0.1
L48 Power	46.2	44.4	40.7	40.4	43.0	39.5	38.9	▼ -0.5	▼ -3.4
L48 Residential & Commercial	8.3	7.9	7.5	7.5	7.9	7.9	7.6	▼ -0.2	▼ -0.2
L48 Industrial	17.2	17.2	17.3	17.4	17.7	17.8	17.7	▼ -0.1	▲ 0.2
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	2.2	2.4	2.2	2.1	▼ 0.0	▼ -0.2
L48 Regional Gas Consumption	79.0	76.6	72.5	72.4	75.8	72.1	71.1	▼ -1.0	▼ -3.7
Net LNG Exports	3.3	3.3	4.1	3.9	3.9	3.9	4.0	▲ 0.0	▲ 0.2
Total Mexican Exports	6.3	6.5	6.0	5.9	6.5	6.3	6.3	▲ 0.0	▲ 0.1
Implied Daily Storage Activity	2.3	4.1	7.9	8.5	4.5	8.3	7.9		
EIA Reported Daily Storage Activity									
Daily Model Error									

EIA Storage Week Balances

	26-Jun	3-Jul	10-Jul	17-Jul	24-Jul	31-Jul	WoW	vs. 4W
Lower 48 Dry Production	84.7	84.9	85.3	85.2	85.9	85.9	▼ 0.0	▲ 0.6
Canadian Imports	4.2	4.1	4.3	4.5	4.4	4.5	▲ 0.1	▲ 0.2
L48 Power	37.1	38.5	41.8	42.9	45.5	45.6	▲ 0.1	▲ 3.4
L48 Residential & Commercial	8.3	8.2	7.9	7.9	8.1	8.1	▲ 0.1	▲ 0.1
L48 Industrial	18.0	18.7	17.9	17.5	16.8	16.9	▲ 0.0	▼ -0.9
L48 Lease and Plant Fuel	4.8	4.8	4.8	4.8	4.8	4.8	▼ 0.0	▲ 0.0
L48 Pipeline Distribution	2.2	2.2	2.3	2.3	2.4	2.4	▲ 0.0	▲ 0.1
L48 Regional Gas Consumption	70.4	72.3	74.6	75.4	77.6	77.8	▲ 0.2	▲ 2.8
Net LNG Exports	4.0	4.0	3.0	3.3	3.6	3.1	▼ -0.5	▼ -0.4
Total Mexican Exports	5.9	5.8	5.9	6.2	6.4	6.2	▼ -0.2	▲ 0.1
Implied Daily Storage Activity	8.5	6.9	6.0	4.8	2.7	3.3	0.6	
EIA Reported Daily Storage Activity	9.3	8.0	6.4	5.3	3.7			
Daily Model Error	-0.8	-1.1	-0.4	-0.5	-1.0			

Monthly Balances

	2Yr Ago Aug-18	LY Aug-19	Apr-20	May-20	Jun-20	Jul-20	MTD Aug-20	MoM	vs. LY
Lower 48 Dry Production	83.3	92.4	91.7	86.0	84.8	85.6	85.6	▲ 0.0	▼ -6.8
Canadian Imports	5.0	4.4	3.9	3.9	4.0	4.4	4.7	▲ 0.4	▲ 0.3
L48 Power	38.2	41.0	25.5	26.9	34.4	43.7	40.5	▼ -3.2	▼ -0.5
L48 Residential & Commercial	7.8	7.8	20.4	13.0	8.6	8.0	7.7	▼ -0.3	▼ -0.1
L48 Industrial	20.3	21.9	20.7	18.7	18.2	17.4	17.6	▲ 0.2	▼ -4.3
L48 Lease and Plant Fuel	4.7	5.1	5.1	4.8	4.8	4.8	4.8	▼ 0.0	▼ -0.4
L48 Pipeline Distribution	2.1	2.3	2.1	1.9	2.1	2.3	2.2	▼ -0.1	▼ 0.0
L48 Regional Gas Consumption	73.1	78.1	73.8	65.4	68.0	76.2	72.8	▼ -3.4	▼ -5.3
Net LNG Exports	3.3	5.2	8.2	6.7	4.0	3.3	4.0	▲ 0.7	▼ -1.2
Total Mexican Exports	5.0	5.4	4.9	4.9	5.7	6.1	6.2	▲ 0.1	▲ 0.8
Implied Daily Storage Activity	6.9	8.1	8.7	12.9	11.0	4.4	7.4		
EIA Reported Daily Storage Activity									
Daily Model Error									

Source: Bloomberg, analytix.ai

Regional S/D Models Storage Projection

Week Ending 31-Jul

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	3.1	1.1	4.1	29
East	-1.2	2.4	1.2	8
Midwest	2.4	-0.5	1.9	13
Mountain	3.0	-2.3	0.7	5
South Central	-1.8	1.9	0.2	1
Pacific	0.6	-0.5	0.2	1

*Adjustment Factor is calculated based on historical regional deltas

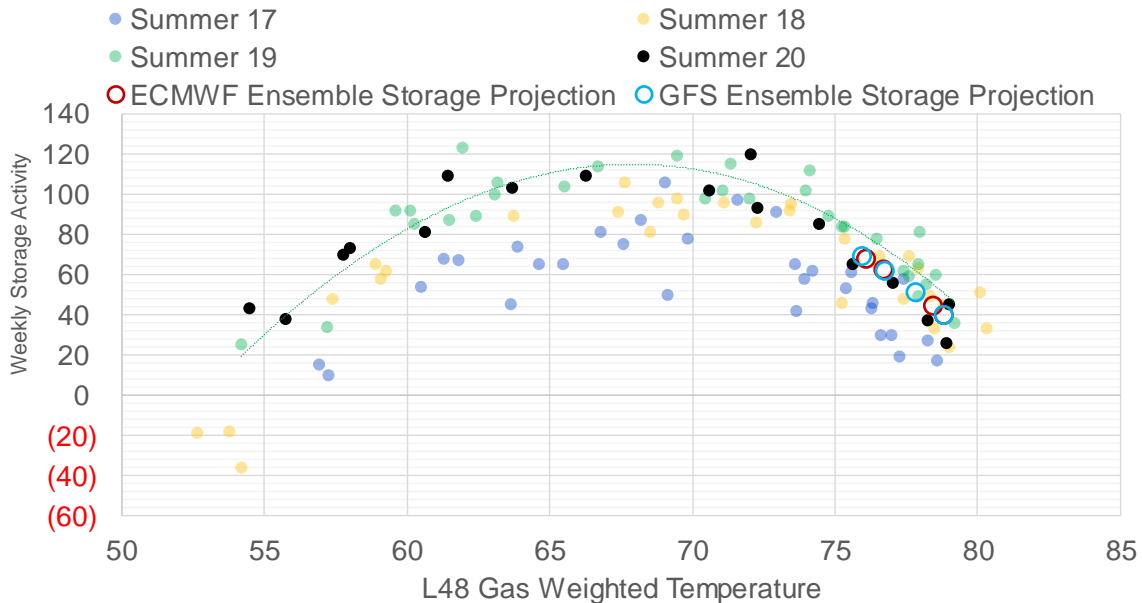
U.S. underground natural gas storage facilities by type (July 2015)



Weather Model Storage Projection

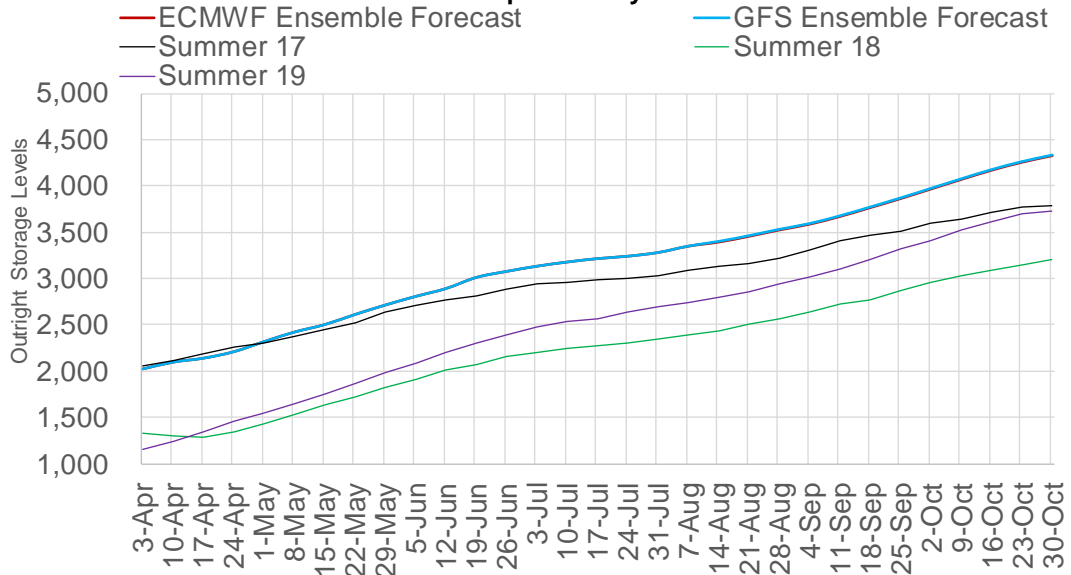
Next report and beyond	
Week Ending	Week Storage Projection
7-Aug	69
14-Aug	48
21-Aug	62

Weather Storage Model - Next 4 Week Forecast

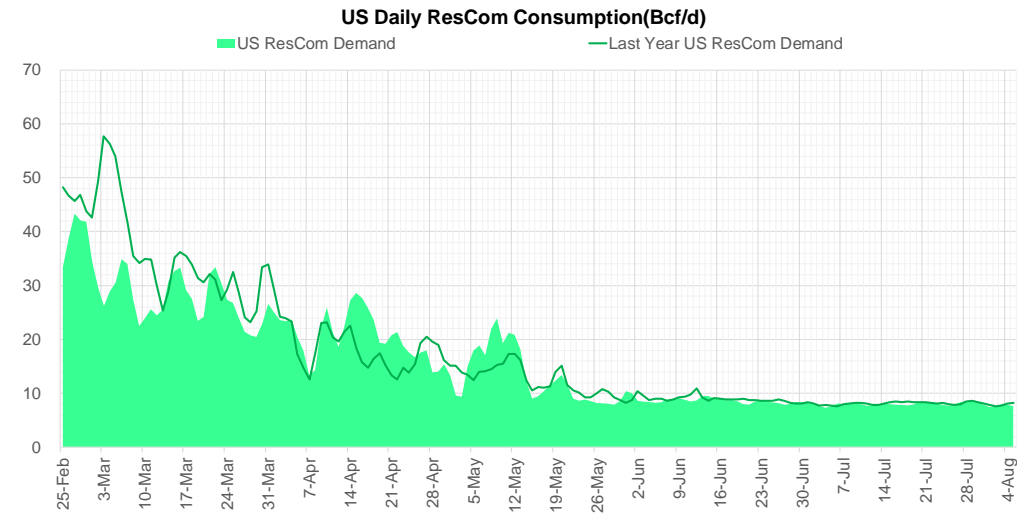
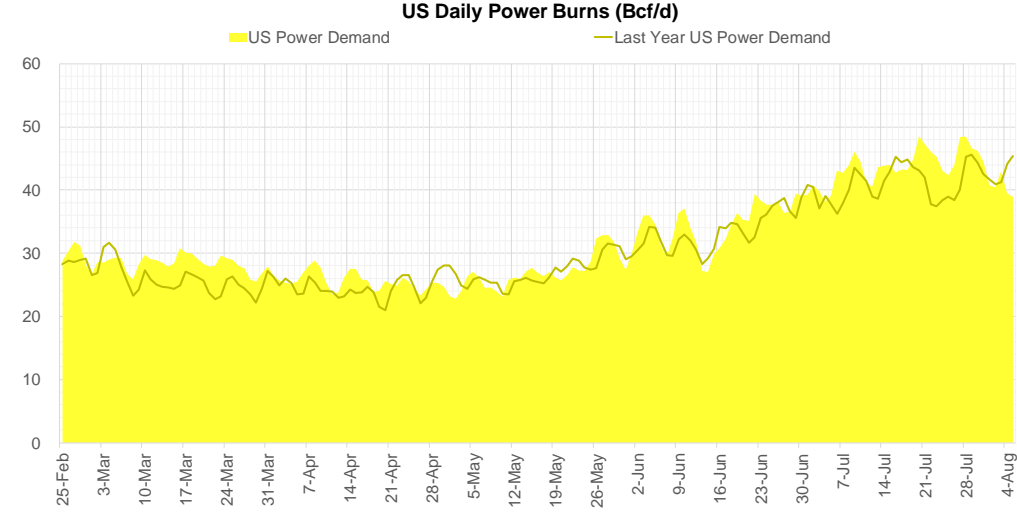
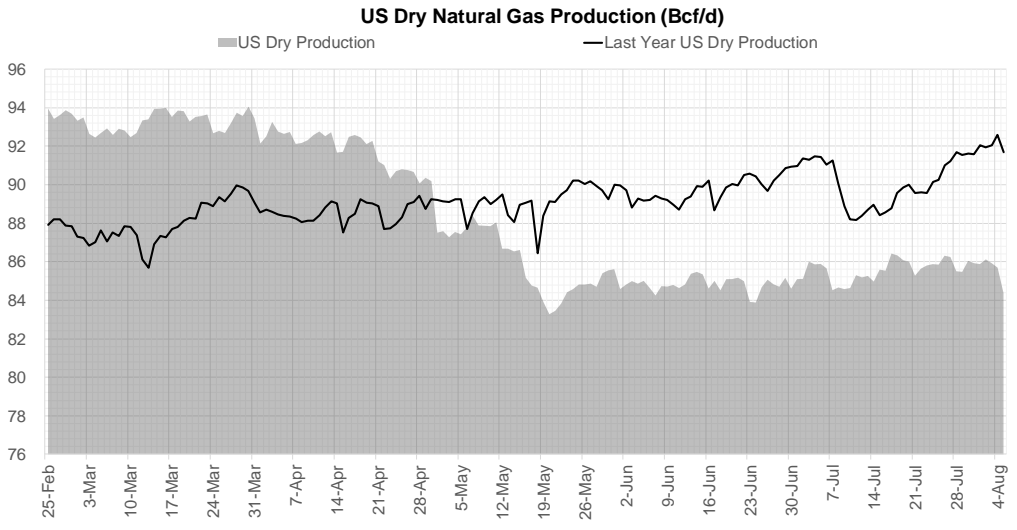


Weather Based End of Winter Projection (Bcf)

10Y normals past 15 day forecast window



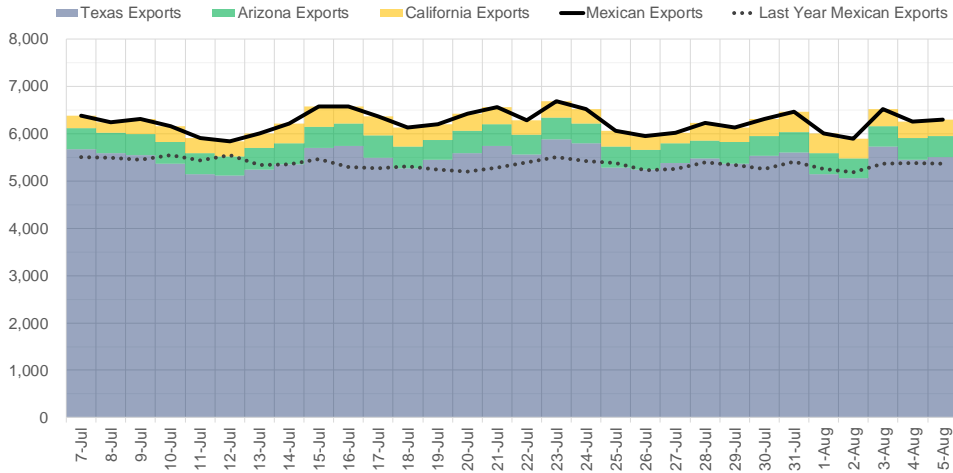
Supply – Demand Trends



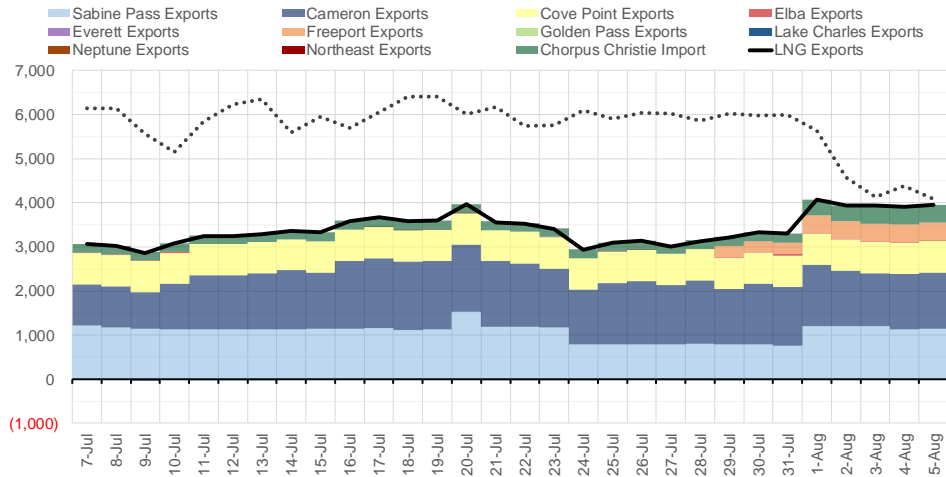
Source: Bloomberg

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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

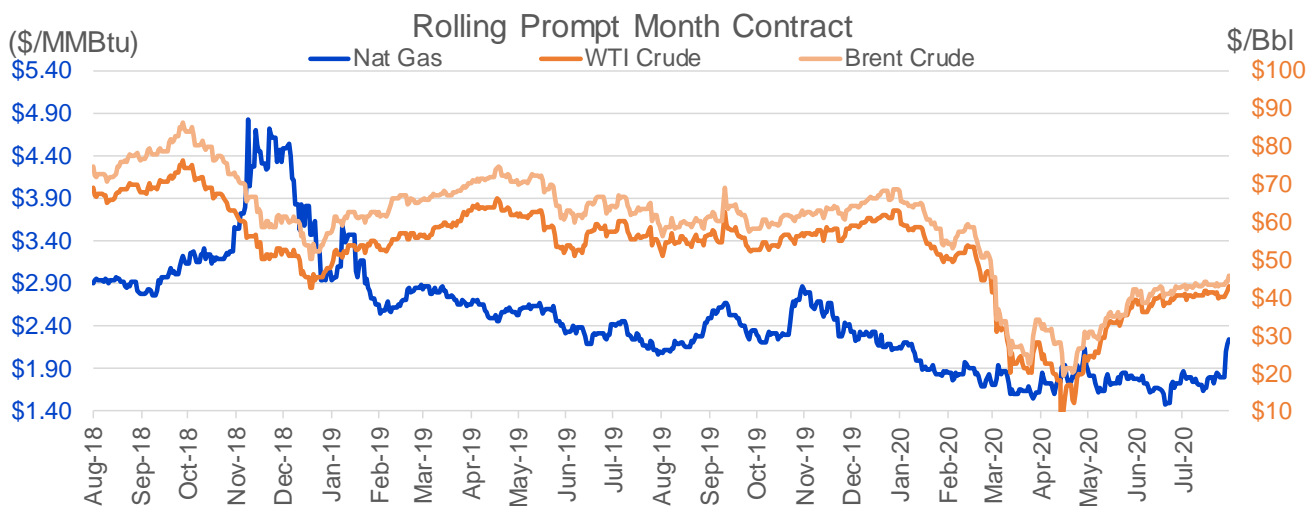
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
9	2020	C	2.50	18261	10	2020	C	2.75	50322
10	2020	C	2.50	13395	10	2020	P	1.50	49841
10	2020	P	1.75	11801	10	2020	C	2.50	44730
10	2020	P	2.00	7207	3	2021	P	2.00	35996
9	2020	P	1.75	5770	10	2020	P	1.60	35060
10	2020	C	3.00	4608	9	2020	C	2.50	34085
9	2020	P	2.00	4357	10	2020	P	2.00	31383
9	2020	P	1.90	4266	10	2020	C	3.00	31132
10	2020	C	2.75	4235	10	2020	P	1.25	28972
11	2020	C	3.00	3828	9	2020	P	1.50	28524
11	2020	C	2.75	3750	10	2020	P	1.75	25785
9	2020	C	3.00	3653	3	2021	C	6.00	25504
9	2020	P	1.80	3557	9	2020	P	1.75	25471
9	2020	C	2.25	3431	10	2020	P	1.00	24763
9	2020	C	2.30	3256	9	2020	C	3.00	24630
10	2020	P	1.85	2987	9	2020	P	1.00	24290
10	2020	P	1.50	2897	9	2020	C	2.00	23047
10	2020	P	1.90	2539	9	2020	P	1.20	22902
10	2020	P	2.10	2178	3	2021	C	3.00	22674
10	2020	C	2.60	2043	10	2020	C	2.10	22556
9	2020	C	2.40	1903	9	2020	P	1.25	20161
10	2020	P	1.80	1878	12	2020	P	1.50	20054
9	2020	P	1.50	1672	9	2020	P	1.30	19443
9	2020	C	3.50	1421	10	2020	P	1.30	19111
9	2020	P	2.10	1340	3	2021	C	3.50	19045
9	2020	P	1.60	1317	10	2020	C	2.00	18501
10	2020	P	1.25	1237	1	2021	C	3.50	18489
9	2020	C	2.15	1156	10	2020	P	2.10	18293
11	2020	P	1.75	1129	9	2020	C	2.75	18142
10	2020	P	1.60	1074	10	2020	C	3.25	17867
10	2020	P	2.20	1054	10	2020	C	2.25	17816
10	2020	C	2.55	1013	1	2021	C	3.00	17409
7	2021	C	4.00	1000	9	2020	C	2.25	17305
10	2020	P	1.95	982	12	2020	P	2.00	17040
10	2020	C	2.25	908	10	2020	C	2.40	16585
9	2020	C	2.20	823	11	2020	P	1.75	15829
9	2020	P	1.70	664	4	2021	C	3.00	15412
10	2020	P	2.15	656	9	2020	P	2.00	14944
9	2020	P	1.95	630	11	2020	C	3.50	14016
9	2020	C	2.75	623	1	2021	C	3.75	13927
10	2020	C	3.75	608	1	2021	C	4.50	13374
9	2020	C	2.45	607	10	2020	P	1.80	13140
4	2021	C	4.00	601	9	2020	C	3.25	12896
11	2020	C	3.10	500	10	2020	C	3.50	12851
12	2020	P	2.25	500	10	2020	C	2.20	12764
10	2021	C	4.00	500	11	2020	C	3.00	12749
12	2021	P	2.45	500	4	2021	P	2.00	12724
12	2021	P	2.75	500	9	2020	P	1.60	12640
9	2020	P	1.85	481	1	2021	P	2.50	12559
					10	2021	C	3	12550

Source: CME, Nasdaq, ICE

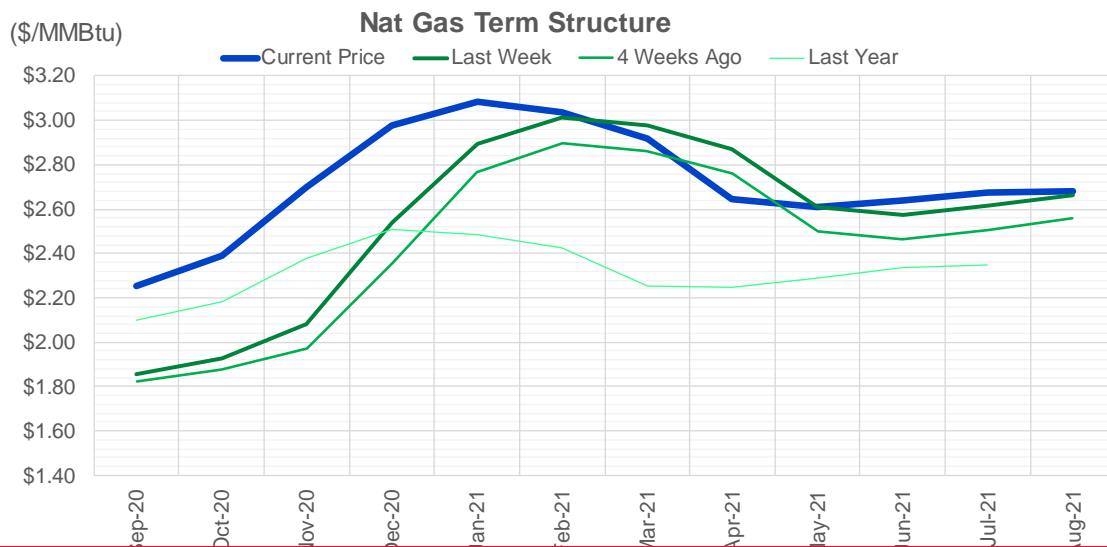
Nat Gas Futures Open Interest CME, and ICE Combined

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
SEP 20	336092	347613	-11521	SEP 20	73063	74622	-1559
OCT 20	140555	146444	-5889	OCT 20	81535	87452	-5917.25
NOV 20	104925	106317	-1392	NOV 20	66288	66341	-53
DEC 20	86937	85080	1857	DEC 20	66555	64636	1919.25
JAN 21	129503	130934	-1431	JAN 21	86445	86231	214.5
FEB 21	39735	40506	-771	FEB 21	52404	52175	229.25
MAR 21	82001	80541	1460	MAR 21	69049	69171	-121.5
APR 21	78694	78873	-179	APR 21	58355	57868	487
MAY 21	40105	37665	2440	MAY 21	48279	48017	261.75
JUN 21	22706	22392	314	JUN 21	47502	46789	713.25
JUL 21	18165	18440	-275	JUL 21	48719	48215	503.5
AUG 21	15373	15461	-88	AUG 21	48689	48434	255.5
SEP 21	17801	17734	67	SEP 21	45788	45571	217.25
OCT 21	46959	45995	964	OCT 21	67479	67489	-9.75
NOV 21	23472	23727	-255	NOV 21	39352	39365	-13
DEC 21	16060	16186	-126	DEC 21	41041	40909	131.5
JAN 22	17850	17701	149	JAN 22	33547	33467	80.25
FEB 22	10413	9439	974	FEB 22	29053	28983	70.5
MAR 22	15229	14245	984	MAR 22	31349	31260	89
APR 22	15902	14136	1766	APR 22	30263	29519	744
MAY 22	5419	5419	0	MAY 22	23381	23251	130.5
JUN 22	2741	2706	35	JUN 22	23273	23110	163
JUL 22	2105	2050	55	JUL 22	23122	22936	186
AUG 22	1718	1659	59	AUG 22	23018	22861	156.75
SEP 22	2246	2199	47	SEP 22	22510	22358	151.5
OCT 22	2546	2455	91	OCT 22	24295	24189	106
NOV 22	1982	1927	55	NOV 22	21528	21459	69
DEC 22	1935	1861	74	DEC 22	22187	22115	71.5
JAN 23	2635	2648	-13	JAN 23	11914	11891	22.75
FEB 23	666	656	10	FEB 23	10870	10813	57

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
Current Price	\$2.251	\$2.388	\$2.698	\$2.979	\$3.083	\$3.038	\$2.917	\$2.646	\$2.611	\$2.641	\$2.677	\$2.679
Last Week	\$1.854	\$1.930	\$2.079	\$2.538	\$2.896	\$3.010	\$2.975	\$2.871	\$2.609	\$2.576	\$2.615	\$2.662
vs. Last Week	\$0.397	\$0.458	\$0.619	\$0.441	\$0.187	\$0.028	-\$0.058	-\$0.225	\$0.002	\$0.065	\$0.062	\$0.017
4 Weeks Ago	\$1.824	\$1.876	\$1.970	\$2.355	\$2.767	\$2.895	\$2.863	\$2.760	\$2.497	\$2.465	\$2.508	\$2.559
vs. 4 Weeks Ago	\$0.427	\$0.512	\$0.728	\$0.624	\$0.316	\$0.143	\$0.054	-\$0.114	\$0.114	\$0.176	\$0.169	\$0.120
Last Year	\$2.083	\$2.099	\$2.184	\$2.378	\$2.508	\$2.486	\$2.425	\$2.256	\$2.247	\$2.291	\$2.338	\$2.350
vs. Last Year	\$0.168	\$0.289	\$0.514	\$0.601	\$0.575	\$0.552	\$0.492	\$0.390	\$0.364	\$0.350	\$0.339	\$0.329

	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	1.85	1.64	-0.22
TETCO M3	\$/MMBtu	1.78	1.75	-0.03
FGT Zone 3	\$/MMBtu	1.79	1.94	0.15
Zone 6 NY	\$/MMBtu	1.79	1.69	-0.10
Chicago Citygate	\$/MMBtu	1.92	1.75	-0.18
Michcon	\$/MMBtu	1.84	1.70	-0.15
Columbia TCO Pool	\$/MMBtu	1.73	1.61	-0.12
Ventura	\$/MMBtu	1.64	1.71	0.07
Rockies/Opal	\$/MMBtu	1.83	1.60	-0.23
El Paso Permian Basin	\$/MMBtu	1.73	1.42	-0.31
Socal Citygate	\$/MMBtu	2.15	1.90	-0.25
Malin	\$/MMBtu	1.85	1.73	-0.12
Houston Ship Channel	\$/MMBtu	2.03	1.83	-0.20
Henry Hub Cash	\$/MMBtu	1.80	1.74	-0.06
AECO Cash	C\$/GJ	1.69	1.56	-0.13
Station2 Cash	C\$/GJ	1.36	1.70	0.34
Dawn Cash	C\$/GJ	1.85	1.73	-0.12

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks		vs. Last Year
				Ago		
NatGas Jan/Apr	\$/MMBtu	-0.44	▼ -0.034	▼ -0.037	▼ -0.064	
NatGas Mar/Apr	\$/MMBtu	-0.270	▼ -0.008	▼ -0.533	▼ -0.512	
NatGas Oct/Nov	\$/MMBtu	0.31	▼ -0.149	▼ -0.075	▲ 0.241	
NatGas Oct/Jan	\$/MMBtu	0.69	▼ -0.237	▼ -0.231	▲ 0.343	
WTI Crude	\$/Bbl	43.16	▲ 1.890	▲ 2.260	▼ -7.930	
Brent Crude	\$/Bbl	45.90	▲ 2.150	▲ 2.610	▼ -10.330	
Fuel Oil, NY Harbour 1%	\$/Bbl	98.03	▲ 0.000	▲ 0.000	▲ 0.000	
Heating Oil	cents/Gallon	129.34	▲ 4.010	▲ 5.900	▼ -45.980	
Propane, Mt. Bel	cents/Gallon	0.50	▲ 0.010	▲ 0.013	▲ 0.105	
Ethane, Mt. Bel	cents/Gallon	0.22	▲ 0.004	▲ 0.005	▲ 0.067	
Coal, PRB	\$/MTon	12.30	▲ 0.000	▲ 0.000	▲ 0.000	
Coal, ILB	\$/MTon	31.05	▲ 0.000	▲ 0.000	▼ -7.500	