

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 2.19	▲ \$ 0.03	▲ \$ 0.18

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 41.43	▼ \$ (0.52)	▲ \$ 0.3

	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 44.60	▼ \$ (0.49)	▲ \$ 0.5

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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	2.1	-1.3	-0.5	0.4
24 Hr Chg	0.1	-2.8	-1.7	-4.4

GFS Ensemble 00z	1-5 Day	6-10 Day	11-15 Day	Total
12 Hr Chg	-1.4	3.1	4.7	6.5
24 Hr Chg	0.4	3.0	5.9	9.3

	Current	Δ from YD	Δ from 7D Avg
US Dry Production	85.5	▼ -0.58	▼ -0.39

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	38.5	▲ 0.65	▼ -2.30

	Current	Δ from YD	Δ from 7D Avg
US ResComm	7.5	▼ -0.06	▼ -0.19

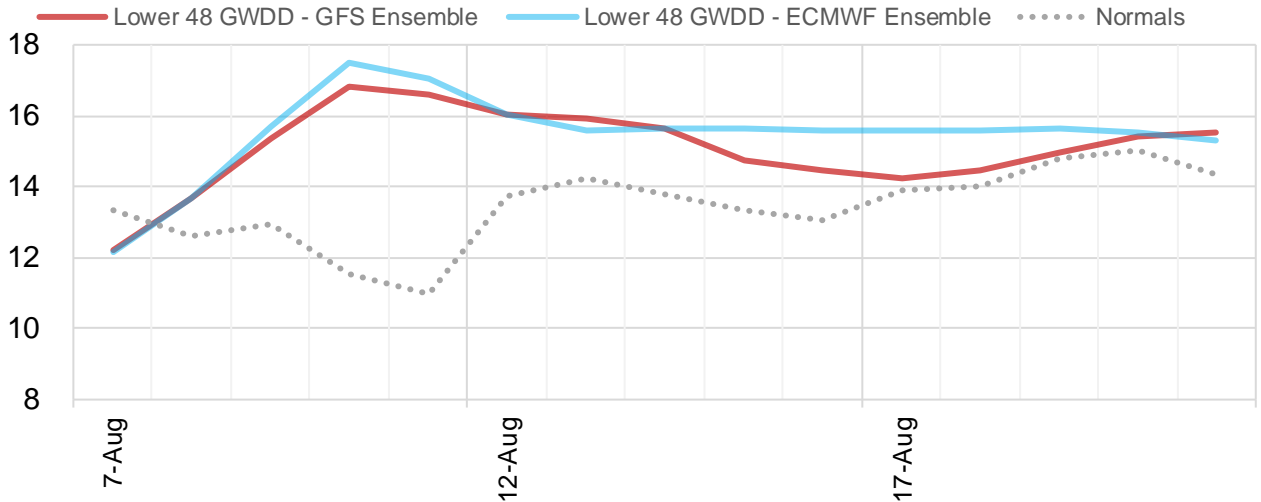
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	4.0	▼ -0.27	▼ -0.68

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	4.0	▼ -0.02	▲ 0.14

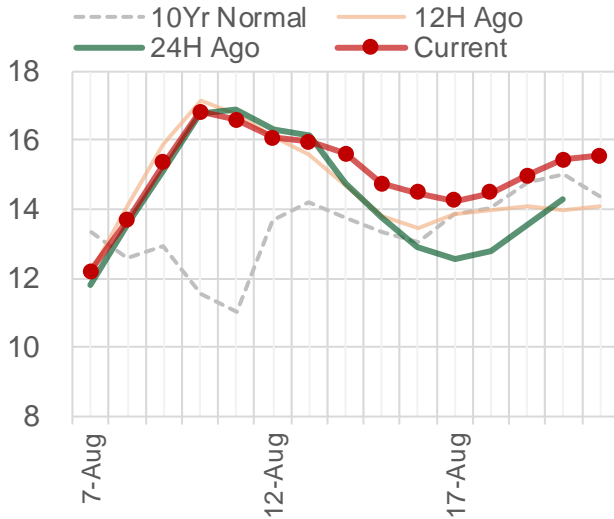
	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.3	▲ 0.08	▲ 0.10

Short-term Weather Model Outlooks (00z)

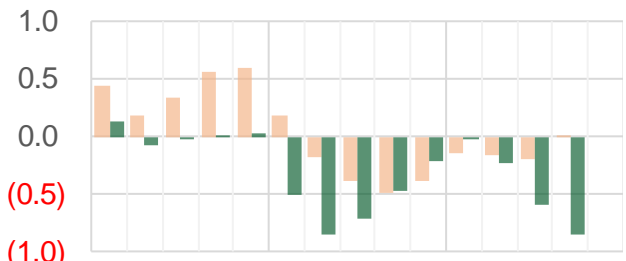
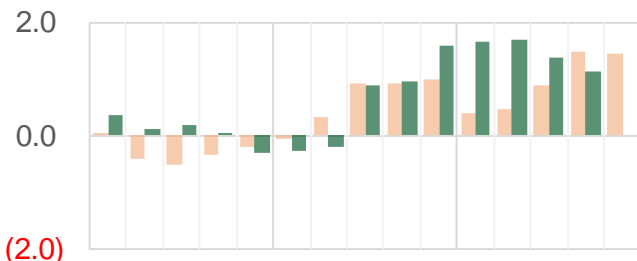
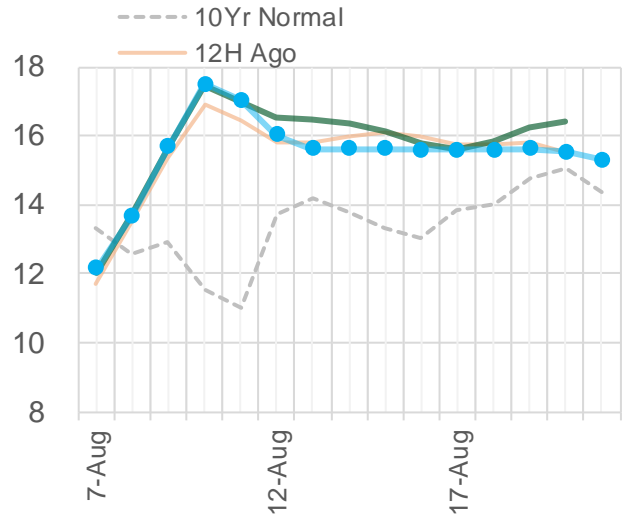
Lower 48 TDD Forecast



Lower 48 GWDD - GFS Ensemble



Lower 48 GWDD - ECMWF Ensemble



Source: WSI, Bloomberg

Lower 48 Component Models

Daily Balances

	1-Aug	2-Aug	3-Aug	4-Aug	5-Aug	6-Aug	7-Aug	DoD	vs. 7D
Lower 48 Dry Production	85.8	86.1	85.9	85.7	85.6	86.1	85.5	▼ -0.6	▼ -0.4
Canadian Imports	4.6	4.6	4.8	4.9	4.9	4.2	4.0	▼ -0.3	▼ -0.7
L48 Power	40.8	40.5	43.0	40.2	38.9	37.9	38.5	▲ 0.7	▼ -1.7
L48 Residential & Commercial	7.4	7.5	7.9	7.7	7.6	7.5	7.5	▼ -0.1	▼ -0.2
L48 Industrial	17.2	17.4	17.7	17.9	18.2	18.7	19.0	▲ 0.3	▲ 1.1
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	2.2	2.4	2.2	2.1	2.1	2.1	▲ 0.0	▼ -0.1
L48 Regional Gas Consumption	72.4	72.4	75.8	72.8	71.7	71.0	71.8	▲ 0.9	▼ -0.8
Net LNG Exports	4.1	3.9	3.9	3.9	3.8	4.0	4.0	▼ 0.0	▲ 0.1
Total Mexican Exports	6.0	5.9	6.5	6.3	6.2	6.3	6.3	▲ 0.1	▲ 0.1
Implied Daily Storage Activity	7.9	8.5	4.4	7.6	8.8	9.1	7.3		
EIA Reported Daily Storage Activity									
Daily Model Error									

EIA Storage Week Balances

	3-Jul	10-Jul	17-Jul	24-Jul	31-Jul	7-Aug	WoW	vs. 4W
Lower 48 Dry Production	84.9	85.3	85.2	85.9	85.9	85.9	▼ 0.0	▲ 0.3
Canadian Imports	4.1	4.3	4.5	4.4	4.5	4.7	▲ 0.1	▲ 0.2
L48 Power	38.5	41.8	42.9	45.5	45.6	40.8	▼ -4.8	▼ -3.1
L48 Residential & Commercial	8.2	7.9	7.9	8.1	8.1	7.7	▼ -0.5	▼ -0.3
L48 Industrial	18.7	17.9	17.5	16.8	16.6	17.7	▲ 1.1	▲ 0.5
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	2.3	2.3	2.4	2.4	2.2	▼ -0.2	▼ -0.1
L48 Regional Gas Consumption	72.3	74.6	75.4	77.6	77.6	73.2	▼ -4.4	▼ -3.1
Net LNG Exports	4.0	3.0	3.3	3.6	3.1	3.9	▲ 0.7	▲ 0.6
Total Mexican Exports	5.8	5.9	6.2	6.4	6.2	6.2	▲ 0.0	▲ 0.1
Implied Daily Storage Activity	6.9	6.0	4.8	2.7	3.5	7.2	3.7	
EIA Reported Daily Storage Activity	8.0	6.4	5.3	3.7	4.7			
Daily Model Error	-1.1	-0.4	-0.5	-1.0	-1.2			

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	85.8	▲ 0.2	▼ -6.6
Canadian Imports	5.0	4.4	3.9	3.9	4.0	4.4	4.6	▲ 0.2	▲ 0.2
L48 Power	38.2	41.0	25.5	26.9	34.4	43.7	40.0	▼ -3.7	▼ -1.1
L48 Residential & Commercial	7.8	7.8	20.4	13.0	8.6	8.0	7.6	▼ -0.4	▼ -0.2
L48 Industrial	20.3	21.9	20.7	18.7	18.2	17.3	18.0	▲ 0.7	▼ -3.9
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	▼ -0.2	▼ -0.1
L48 Regional Gas Consumption	73.1	78.1	73.8	65.4	68.0	76.1	72.6	▼ -3.6	▼ -5.6
Net LNG Exports	3.3	5.2	8.2	6.7	4.0	3.3	3.9	▲ 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	7.7		
EIA Reported Daily Storage Activity									
Daily Model Error									

Source: Bloomberg, analytix.ai

Regional S/D Models Storage Projection

Week Ending 7-Aug

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	7.0	1.3	8.3	58
East	0.6	2.7	3.3	23
Midwest	3.4	-0.4	3.0	21
Mountain	3.1	-2.2	0.9	7
South Central	-1.2	1.9	0.8	5
Pacific	1.0	-0.7	0.3	2

*Adjustment Factor is calculated based on historical regional deltas

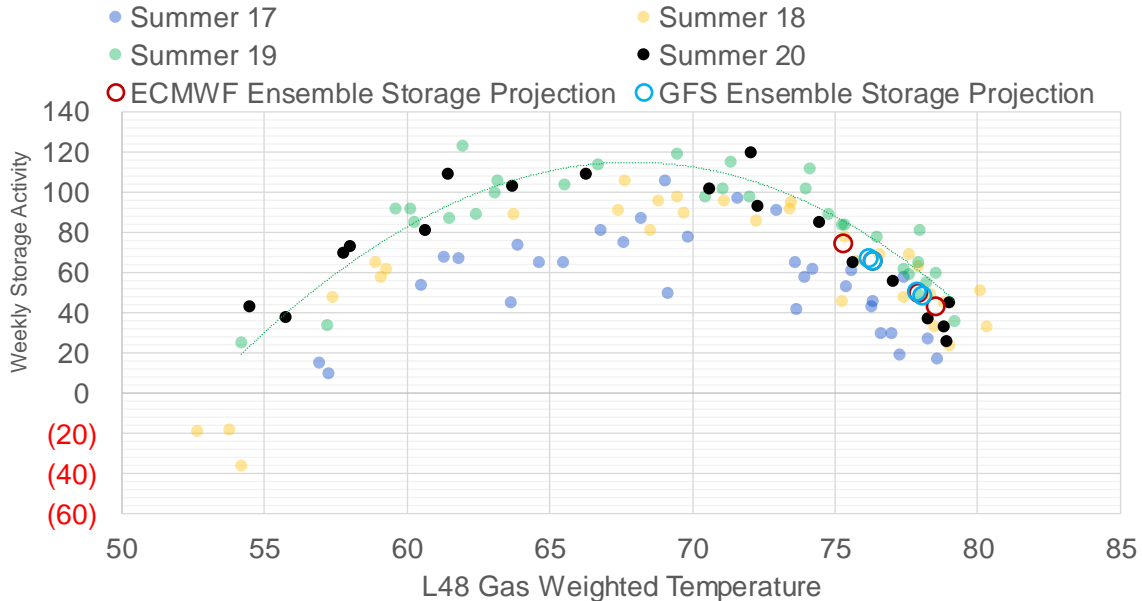
U.S. underground natural gas storage facilities by type (July 2015)



Weather Model Storage Projection

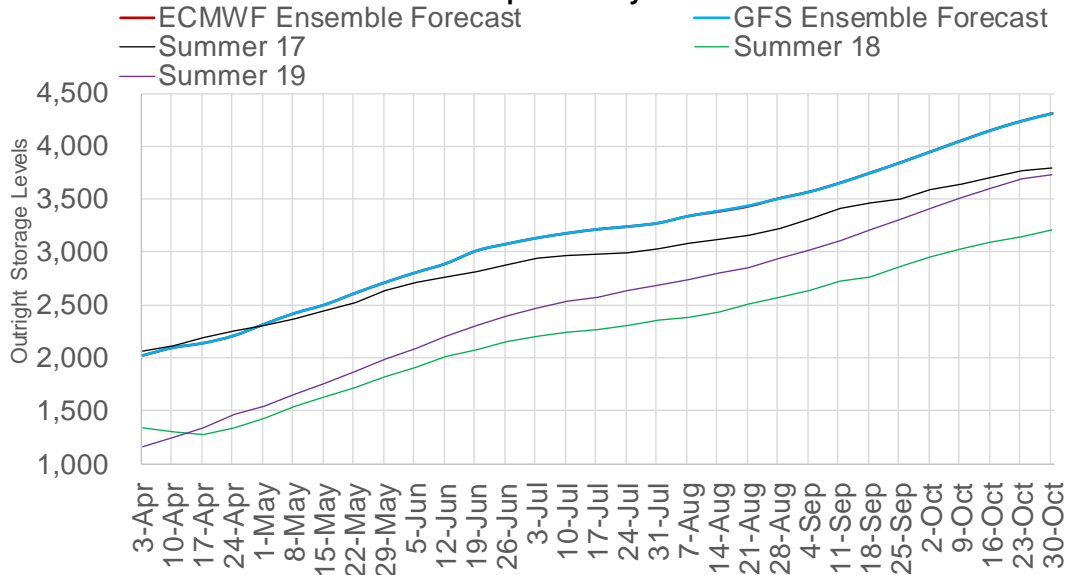
Next report and beyond	
Week Ending	Week Storage Projection
14-Aug	46
21-Aug	50
28-Aug	71

Weather Storage Model - Next 4 Week Forecast



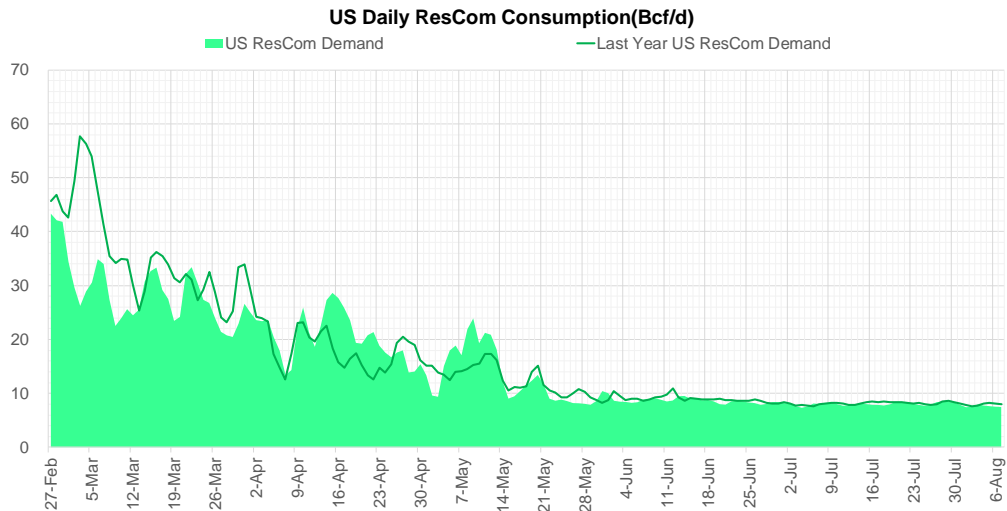
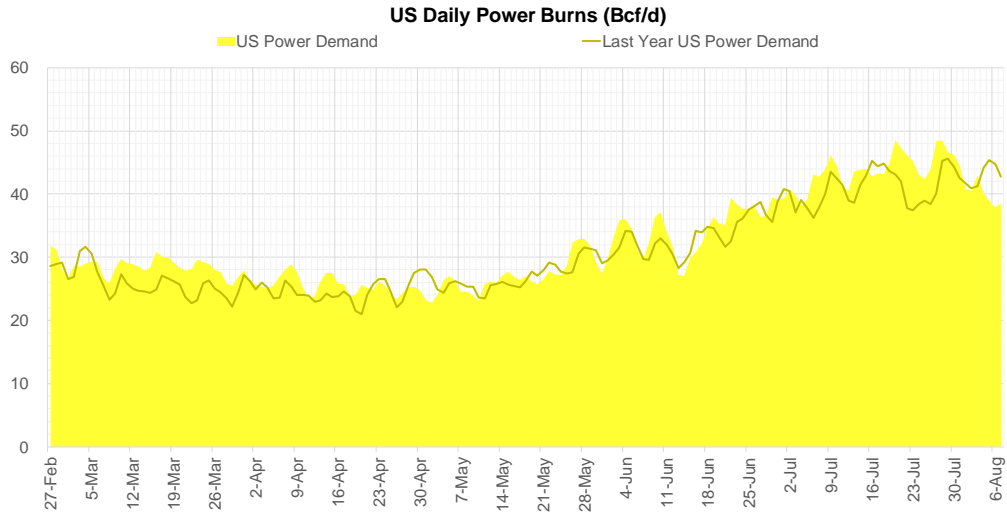
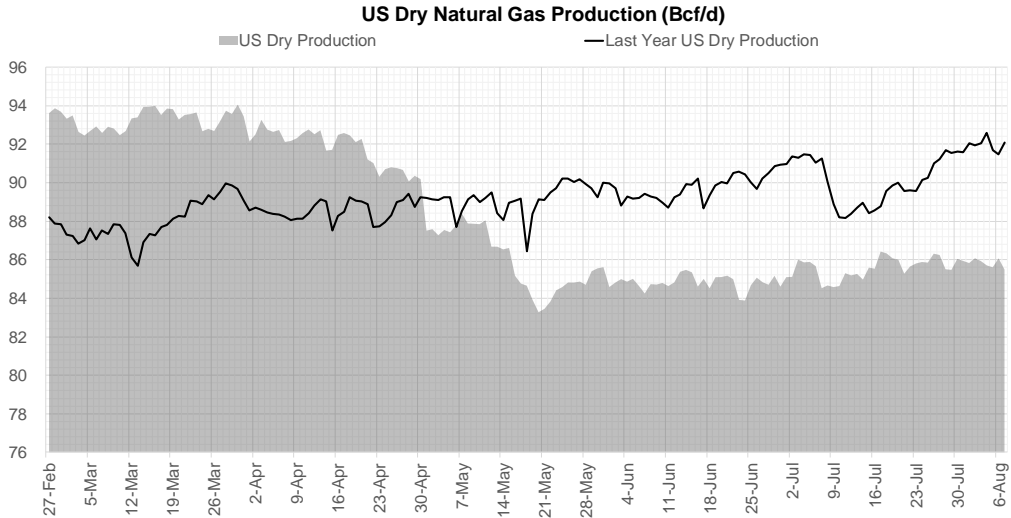
Weather Based End of Winter Projection (Bcf)

10Y normals past 15 day forecast window



The risk of trading futures and options and other derivatives involves a substantial risk of loss and is not suitable for all persons. Each person must consider whether a particular trade, combination of trades, or strategy is suitable for that person's financial means and objectives. Past results are not necessarily indicative of future results. This communication may contain links to third party websites which are not under the control of and are not maintained by ION Energy Group, and ION Energy Group is not responsible for their content.

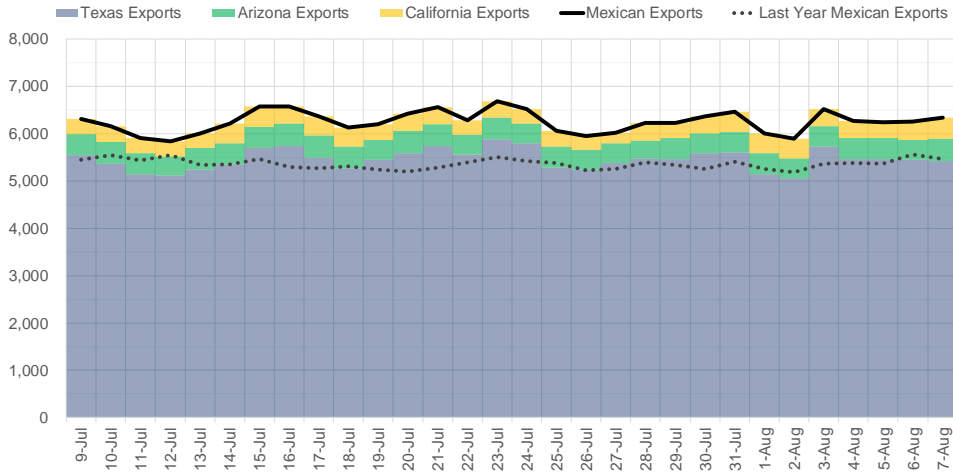
Supply – Demand Trends



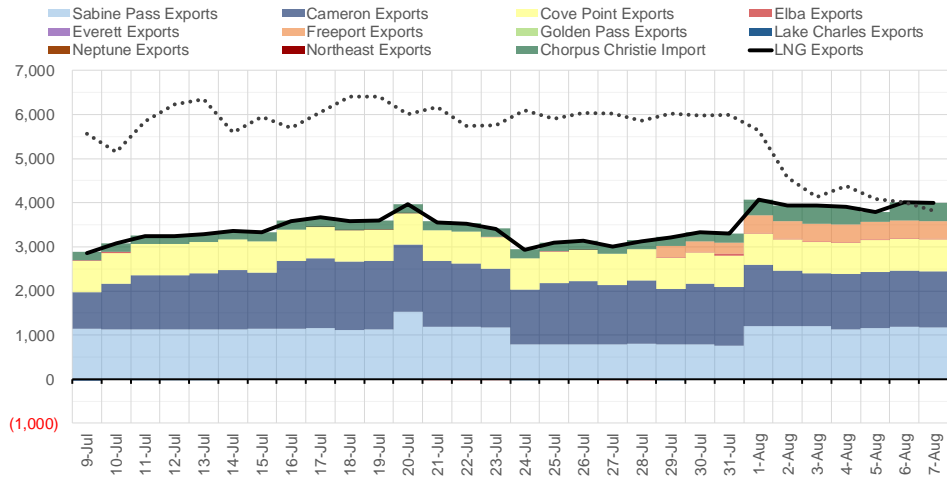
Source: Bloomberg

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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

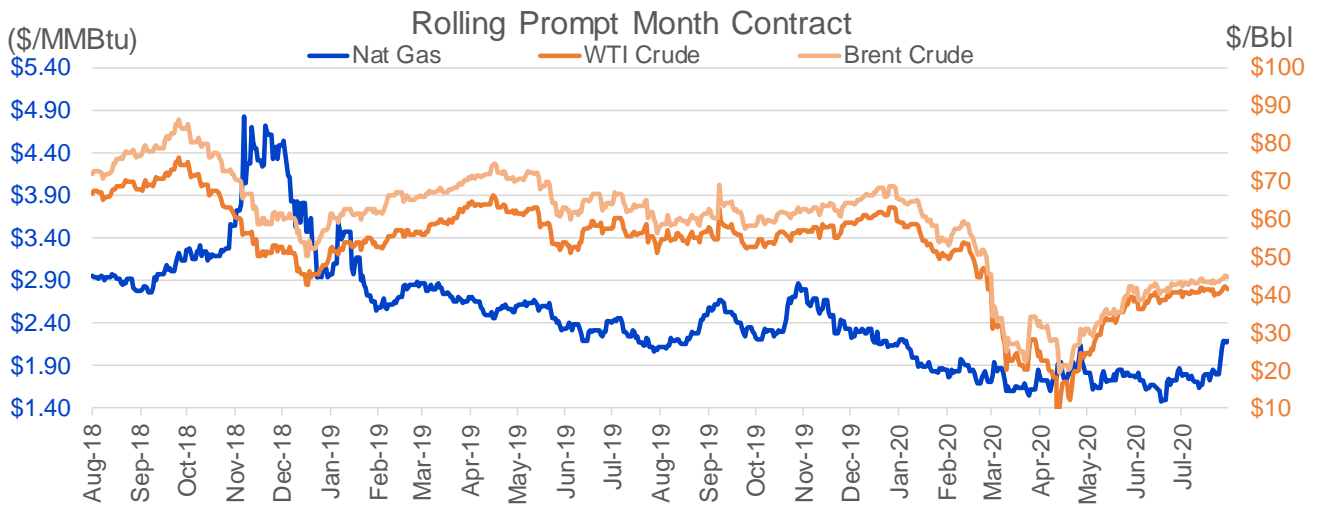
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
9	2020	C	2.50	8270	10	2020	P	1.50	48727
9	2020	P	2.00	8035	10	2020	C	2.75	47815
10	2020	P	2.00	7583	9	2020	C	2.50	45422
1	2021	P	2.25	4515	10	2020	C	2.50	39008
10	2020	P	1.50	4309	3	2021	P	2.00	36646
9	2020	P	1.90	3982	10	2020	P	2.00	34570
10	2020	P	1.80	3360	10	2020	P	1.60	34318
9	2020	P	2.10	3116	10	2020	C	3.00	31002
2	2021	C	4.00	3060	10	2020	P	1.25	28790
10	2020	C	2.75	3016	9	2020	P	1.50	27172
9	2020	C	2.75	2955	10	2020	P	1.75	25769
10	2020	P	2.20	2852	10	2020	P	1.00	24752
9	2020	P	1.75	2726	3	2021	C	6.00	24504
9	2020	P	1.85	2619	9	2020	P	1.75	24326
10	2020	C	3.00	2588	9	2020	P	1.00	24289
10	2020	P	1.70	2456	9	2020	C	3.00	23286
1	2021	P	2.75	2359	9	2020	C	2.00	22956
9	2020	C	2.40	2293	9	2020	P	1.20	22887
9	2020	C	2.25	2175	3	2021	C	3.00	22674
9	2020	P	1.95	2170	10	2020	C	2.10	21909
10	2020	C	2.40	2097	9	2020	P	1.30	19459
9	2020	C	2.30	2032	9	2020	P	1.25	19236
10	2020	C	2.50	1828	3	2021	C	3.50	19121
11	2020	C	3.50	1801	10	2020	P	1.30	19107
11	2020	C	3.00	1757	10	2020	P	2.10	19004
12	2020	C	3.50	1750	10	2020	C	2.00	18587
10	2020	C	3.25	1715	12	2020	P	2.00	18544
10	2020	P	1.75	1691	9	2020	P	2.00	18504
9	2020	C	3.00	1652	1	2021	C	3.50	18504
1	2021	C	7.00	1300	9	2020	C	2.25	18460
11	2020	C	2.75	1255	1	2021	C	4.50	18324
12	2020	P	1.50	1202	12	2020	P	1.50	17854
9	2020	P	1.60	1098	1	2021	C	3.00	17405
11	2020	C	3.20	1084	10	2020	C	2.40	17369
9	2020	C	2.85	1076	9	2020	C	2.75	16991
10	2020	C	2.10	1028	10	2020	C	2.25	16861
2	2021	C	3.25	1002	10	2020	C	3.25	16494
2	2021	C	3.00	1001	11	2020	P	1.75	15950
11	2020	C	3.05	1000	11	2020	C	3.00	15790
2	2021	C	5.00	1000	10	2020	P	1.80	15771
3	2021	C	6.00	1000	4	2021	C	3.00	15012
9	2020	P	2.05	986	11	2020	C	3.50	14801
9	2020	P	2.15	917	11	2020	C	2.75	14147
3	2021	P	2.00	880	1	2021	C	3.75	13927
1	2021	C	3.50	836	10	2020	C	3.50	13663
9	2020	C	2.60	806	9	2020	C	3.25	12896
11	2020	P	2.30	756	4	2021	P	2.00	12824
12	2020	C	3.75	756	10	2020	C	2.20	12763
11	2020	P	2.25	742	10	2021	C	3.00	12700
					1	2021	P	2.5	12593

Source: CME, Nasdaq, ICE

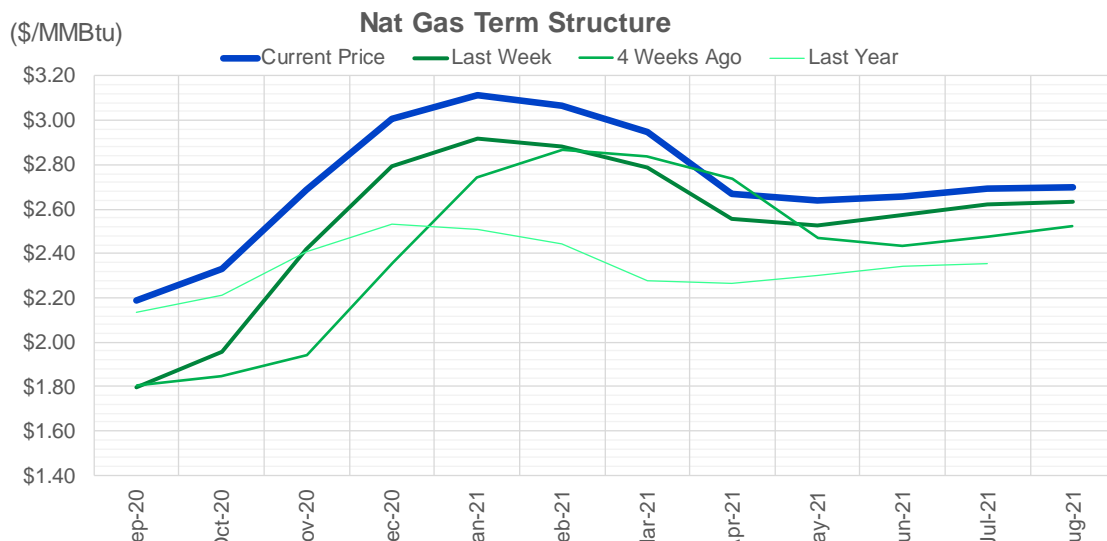
Nat Gas Futures Open Interest CME, and ICE Combined

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
SEP 20	318551	322933	-4382	SEP 20	74640	72471	2169.25
OCT 20	142573	139554	3019	OCT 20	80524	80654	-129.75
NOV 20	105899	106921	-1022	NOV 20	67835	67819	16
DEC 20	90336	87848	2488	DEC 20	69082	67862	1220.5
JAN 21	126428	127528	-1100	JAN 21	87078	87038	40.5
FEB 21	39956	39826	130	FEB 21	53336	53013	323.75
MAR 21	83523	83698	-175	MAR 21	68536	68467	69
APR 21	79033	78784	249	APR 21	58455	58541	-85.75
MAY 21	41416	39930	1486	MAY 21	49019	48813	206
JUN 21	23037	22941	96	JUN 21	47819	47892	-72.5
JUL 21	18542	18314	228	JUL 21	48970	48986	-15.5
AUG 21	16378	15747	631	AUG 21	47466	48018	-552
SEP 21	19046	18352	694	SEP 21	46222	46083	139
OCT 21	50252	48672	1580	OCT 21	67927	67721	206
NOV 21	23607	23714	-107	NOV 21	39607	39427	180.75
DEC 21	16466	16473	-7	DEC 21	41437	41280	157.25
JAN 22	18436	18032	404	JAN 22	34155	33836	319.25
FEB 22	10570	10621	-51	FEB 22	29414	29173	240.5
MAR 22	15453	15210	243	MAR 22	31624	31443	180.75
APR 22	16104	16014	90	APR 22	30640	30452	187.5
MAY 22	5455	5406	49	MAY 22	23413	23426	-13
JUN 22	2820	2823	-3	JUN 22	23490	23415	75
JUL 22	2120	2119	1	JUL 22	23214	23145	68.75
AUG 22	1743	1723	20	AUG 22	23217	23141	76.5
SEP 22	2240	2246	-6	SEP 22	22703	22628	75
OCT 22	2645	2562	83	OCT 22	24321	24252	68.75
NOV 22	1944	1989	-45	NOV 22	21716	21633	82.5
DEC 22	1947	1941	6	DEC 22	22501	22417	84.25
JAN 23	2628	2635	-7	JAN 23	11932	11899	33
FEB 23	676	666	10	FEB 23	10826	10812	14

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	\$2.191	\$2.333	\$2.685	\$3.004	\$3.113	\$3.066	\$2.948	\$2.667	\$2.636	\$2.658	\$2.695	\$2.697
Last Week	\$1.799	\$1.957	\$2.418	\$2.793	\$2.915	\$2.884	\$2.788	\$2.556	\$2.529	\$2.572	\$2.622	\$2.634
vs. Last Week	\$0.392	\$0.376	\$0.267	\$0.211	\$0.198	\$0.182	\$0.160	\$0.111	\$0.107	\$0.086	\$0.073	\$0.063
4 Weeks Ago	\$1.805	\$1.847	\$1.943	\$2.355	\$2.741	\$2.869	\$2.836	\$2.737	\$2.470	\$2.437	\$2.475	\$2.522
vs. 4 Weeks Ago	\$0.386	\$0.486	\$0.742	\$0.649	\$0.372	\$0.197	\$0.112	-\$0.070	\$0.166	\$0.221	\$0.220	\$0.175
Last Year	\$2.119	\$2.133	\$2.214	\$2.406	\$2.530	\$2.506	\$2.445	\$2.277	\$2.263	\$2.301	\$2.343	\$2.354
vs. Last Year	\$0.072	\$0.200	\$0.471	\$0.598	\$0.583	\$0.560	\$0.503	\$0.390	\$0.373	\$0.357	\$0.352	\$0.343

	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	1.45	1.53	0.08
TETCO M3	\$/MMBtu	1.39	1.37	-0.02
FGT Zone 3	\$/MMBtu	1.35	1.87	0.52
Zone 6 NY	\$/MMBtu	1.35	1.39	0.04
Chicago Citygate	\$/MMBtu	1.92	1.66	-0.26
Michcon	\$/MMBtu	1.97	1.61	-0.36
Columbia TCO Pool	\$/MMBtu	1.66	1.43	-0.23
Ventura	\$/MMBtu	1.91	1.66	-0.25
Rockies/Opal	\$/MMBtu	1.83	1.56	-0.27
El Paso Permian Basin	\$/MMBtu	1.00	1.34	0.34
Socal Citygate	\$/MMBtu	1.99	1.86	-0.14
Malin	\$/MMBtu	1.88	1.67	-0.21
Houston Ship Channel	\$/MMBtu	2.20	1.81	-0.39
Henry Hub Cash	\$/MMBtu	2.17	1.69	-0.48
AECO Cash	C\$/GJ	1.78	1.44	-0.34
Station2 Cash	C\$/GJ	1.74	1.66	-0.08
Dawn Cash	C\$/GJ	1.86	1.60	-0.27

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks		vs. Last Year
				Ago		
NatGas Jan/Apr	\$/MMBtu	-0.45	▼ -0.087	▼ -0.047	▼ -0.068	
NatGas Mar/Apr	\$/MMBtu	-0.281	▼ -0.049	▼ -0.548	▼ -0.528	
NatGas Oct/Nov	\$/MMBtu	0.35	▼ -0.109	▼ -0.060	▲ 0.287	
NatGas Oct/Jan	\$/MMBtu	0.78	▼ -0.178	▼ -0.146	▲ 0.435	
WTI Crude	\$/Bbl	41.43	▲ 1.160	▲ 0.880	▼ -13.070	
Brent Crude	\$/Bbl	44.60	▲ 1.300	▲ 1.360	▼ -13.930	
Fuel Oil, NY Harbour 1%	\$/Bbl	98.03	▲ 0.000	▲ 0.000	▲ 0.000	
Heating Oil	cents/Gallon	123.85	▲ 2.140	▼ -0.270	▼ -56.950	
Propane, Mt. Bel	cents/Gallon	0.51	▲ 0.013	▲ 0.025	▲ 0.090	
Ethane, Mt. Bel	cents/Gallon	0.23	▲ 0.013	▲ 0.010	▲ 0.078	
Coal, PRB	\$/MTon	12.30	▲ 0.000	▲ 0.000	▲ 0.100	
Coal, ILB	\$/MTon	31.05	▲ 0.000	▲ 0.000	▼ -7.500	