

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 2.55	▲ \$ 0.04	▲ \$ 0.12

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 42.90	▲ \$ 0.28	▲ \$ 0.3

	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 45.67	▲ \$ 0.54	▲ \$ 0.8

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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	0.7	2.3	1.6	4.6
24 Hr Chg	-1.2	-0.4	2.9	1.3

GFS Ensemble 00z	1-5 Day	6-10 Day	11-15 Day	Total
12 Hr Chg	2.0	0.4	1.3	3.8
24 Hr Chg	0.7	-3.7	3.3	0.3

	Current	Δ from YD	Δ from 7D Avg
US Dry Production	83.5	▼ -1.56	▼ -2.31

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	42.2	▼ -1.39	▲ 2.24

	Current	Δ from YD	Δ from 7D Avg
US ResComm	8.2	▼ -0.01	▲ 0.35

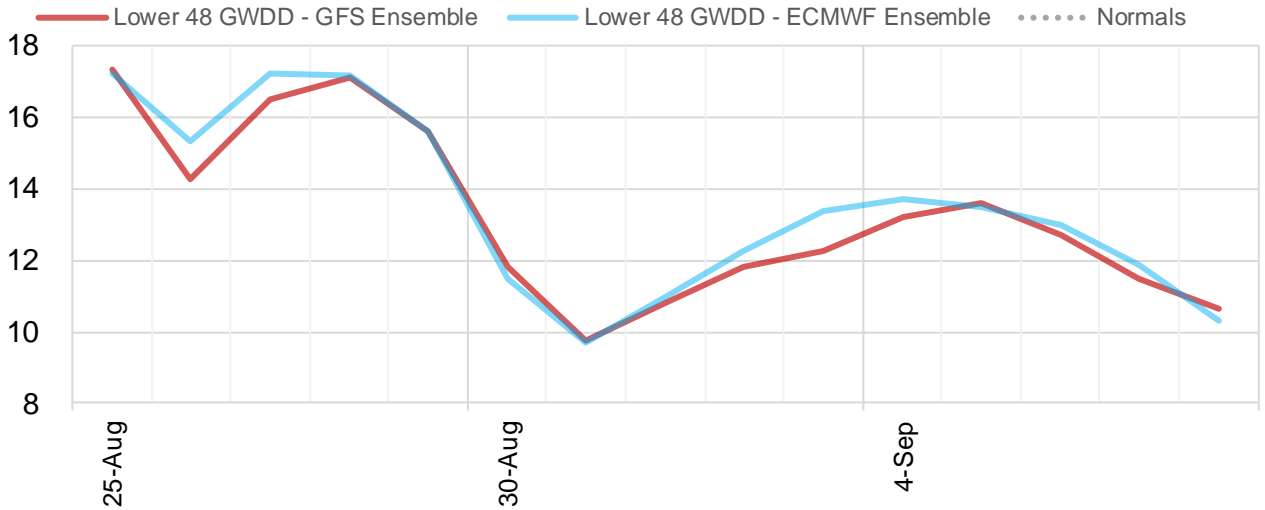
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	5.2	▼ -0.13	▲ 0.21

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	4.1	▼ -0.18	▼ -0.75

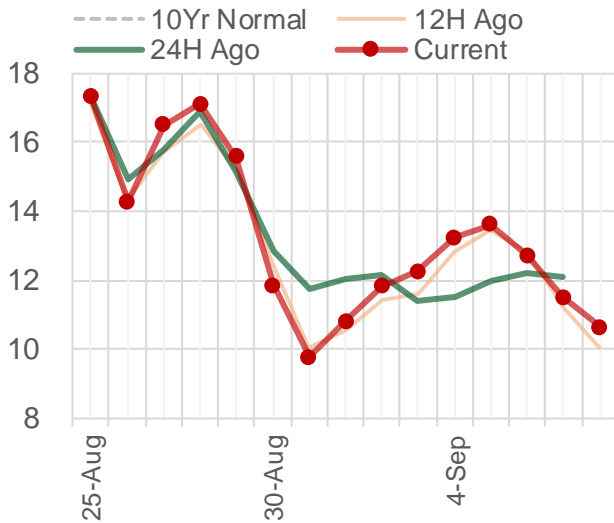
	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.5	▼ -0.36	▲ 0.03

Short-term Weather Model Outlooks (00z)

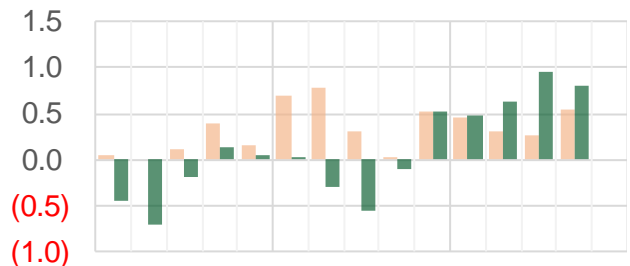
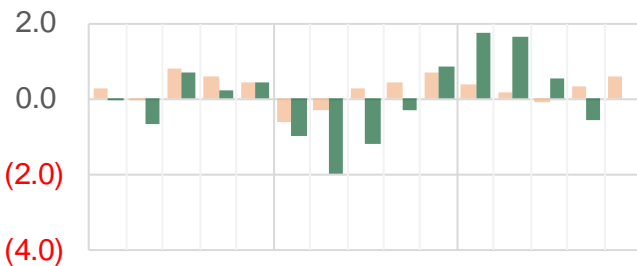
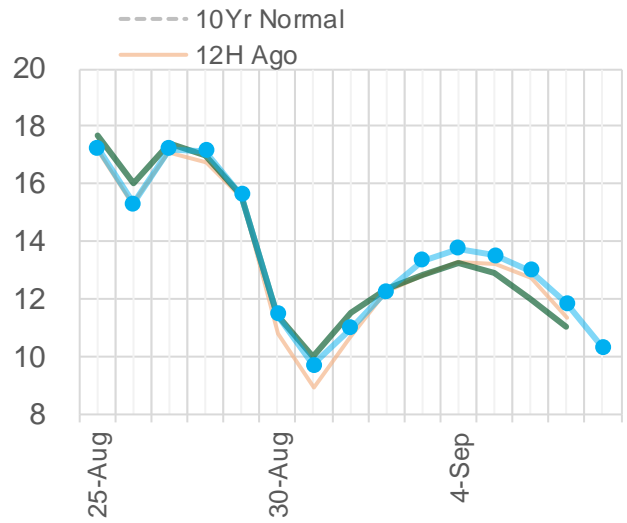
Lower 48 TDD Forecast



Lower 48 GWDD - GFS Ensemble



Lower 48 GWDD - ECMWF Ensemble



Source: WSI, Bloomberg

Lower 48 Component Models

Daily Balances

	19-Aug	20-Aug	21-Aug	22-Aug	23-Aug	24-Aug	25-Aug	DoD	vs. 7D
Lower 48 Dry Production	86.1	86.4	86.5	85.5	84.8	85.1	83.5	▼ -1.6	▼ -2.2
Canadian Imports	4.7	5.0	5.0	5.1	5.2	5.4	5.2	▼ -0.1	▲ 0.1
L48 Power	38.9	38.2	39.0	39.0	40.3	43.6	42.2	▼ -1.4	▲ 2.3
L48 Residential & Commercial	8.0	7.9	7.7	7.6	7.7	8.2	8.2	▼ 0.0	▲ 0.4
L48 Industrial	19.2	19.3	19.6	19.5	19.5	19.9	20.0	▲ 0.1	▲ 0.5
L48 Lease and Plant Fuel	4.8	4.8	4.8	4.8	4.7	4.7	4.6	▼ -0.1	▼ -0.1
L48 Pipeline Distribution	2.2	2.1	2.2	2.1	2.2	2.4	2.3	▼ -0.1	▲ 0.1
L48 Regional Gas Consumption	73.0	72.4	73.2	73.0	74.5	78.8	77.3	▼ -1.4	▲ 3.2
Net LNG Exports	4.8	5.0	5.1	5.1	5.0	4.3	4.1	▼ -0.2	▼ -0.8
Total Mexican Exports	6.3	6.5	6.6	6.4	6.3	6.8	6.5	▼ -0.4	▼ 0.0
Implied Daily Storage Activity	6.7	7.5	6.6	6.2	4.3	0.6	0.9		
EIA Reported Daily Storage Activity									
Daily Model Error									

EIA Storage Week Balances

	17-Jul	24-Jul	31-Jul	7-Aug	14-Aug	21-Aug	WoW	vs. 4W
Lower 48 Dry Production	85.8	86.6	86.5	86.6	86.7	86.5	▼ -0.2	▼ -0.1
Canadian Imports	4.5	4.4	4.5	4.6	5.0	4.7	▼ -0.3	▲ 0.1
L48 Power	42.9	45.4	45.5	40.8	43.0	40.2	▼ -2.8	▼ -3.5
L48 Residential & Commercial	7.9	8.1	8.1	7.7	7.8	7.8	▲ 0.1	▼ -0.1
L48 Industrial	18.1	17.4	17.2	18.4	18.5	19.0	▲ 0.5	▲ 1.1
L48 Lease and Plant Fuel	4.8	4.8	4.8	4.8	4.8	4.8	▼ 0.0	▼ 0.0
L48 Pipeline Distribution	2.3	2.4	2.4	2.2	2.3	2.2	▼ -0.1	▼ -0.1
L48 Regional Gas Consumption	76.1	78.2	78.2	74.0	76.5	74.0	▼ -2.4	▼ -2.7
Net LNG Exports	3.3	3.6	3.1	3.9	4.4	4.7	▲ 0.4	▲ 1.0
Total Mexican Exports	6.2	6.4	6.2	6.1	6.0	6.2	▲ 0.2	▲ 0.0
Implied Daily Storage Activity	4.8	2.7	3.5	7.2	4.8	6.2	1.4	
EIA Reported Daily Storage Activity	5.3	3.7	4.7	8.3	6.1			
Daily Model Error	-0.5	-1.0	-1.2	-1.0	-1.3			

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	83.2	92.5	91.6	85.8	85.1	86.2	86.3	▲ 0.1	▼ -6.2
Canadian Imports	5.0	4.4	3.9	3.9	4.0	4.4	4.9	▲ 0.5	▲ 0.5
L48 Power	38.2	41.1	25.5	26.9	34.5	43.7	41.1	▼ -2.6	▲ 0.1
L48 Residential & Commercial	7.8	7.8	20.4	13.0	8.6	8.0	7.8	▼ -0.2	▼ 0.0
L48 Industrial	20.2	22.0	20.6	18.8	18.5	17.9	18.9	▲ 1.0	▼ -3.1
L48 Lease and Plant Fuel	4.7	5.1	5.1	4.8	4.8	4.8	4.8	▼ 0.0	▼ -0.3
L48 Pipeline Distribution	2.1	2.3	2.1	1.9	2.1	2.4	2.3	▼ -0.1	▲ 0.0
L48 Regional Gas Consumption	73.0	78.2	73.7	65.4	68.4	76.8	74.8	▼ -1.9	▼ -3.4
Net LNG Exports	3.3	5.2	8.2	6.7	4.0	3.3	4.4	▲ 1.2	▼ -0.7
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	8.0	8.7	12.7	10.9	4.4	5.7		
EIA Reported Daily Storage Activity									
Daily Model Error									

Source: Bloomberg, analytix.ai

Regional S/D Models Storage Projection

Week Ending 21-Aug

	Daily Raw Storage	Daily Adjustment Factor	Daily Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	5.9	1.4	7.3	51
East	2.1	2.0	4.1	28
Midwest	3.3	0.6	3.9	27
Mountain	3.0	-2.5	0.5	3
South Central	-2.0	2.0	0.0	0
Pacific	-0.3	-0.7	-1.1	-7

*Adjustment Factor is calculated based on historical regional deltas

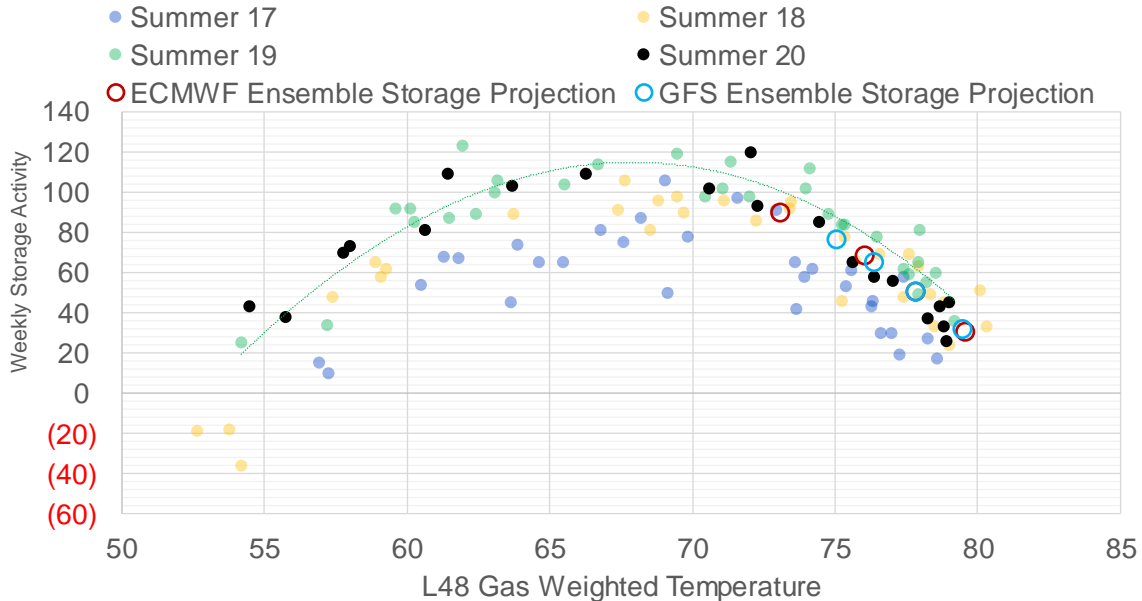
U.S. underground natural gas storage facilities by type (July 2015)



Weather Model Storage Projection

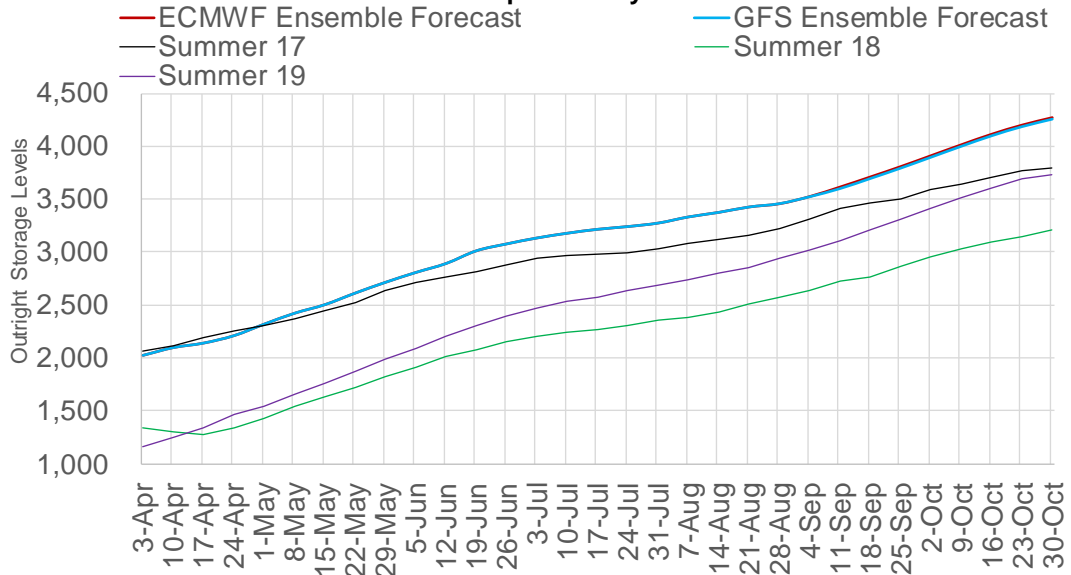
Next report and beyond	
Week Ending	Week Storage Projection
28-Aug	31
4-Sep	67
11-Sep	83

Weather Storage Model - Next 4 Week Forecast



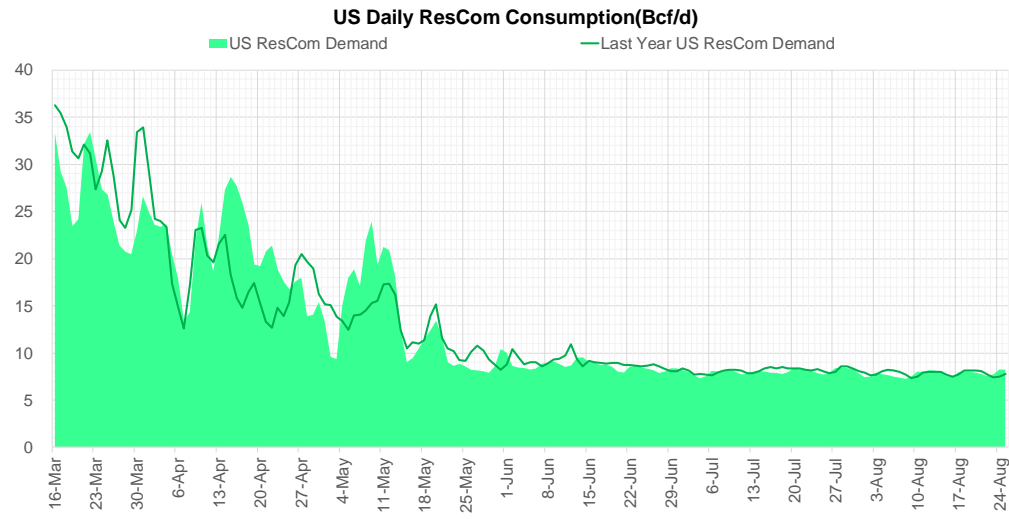
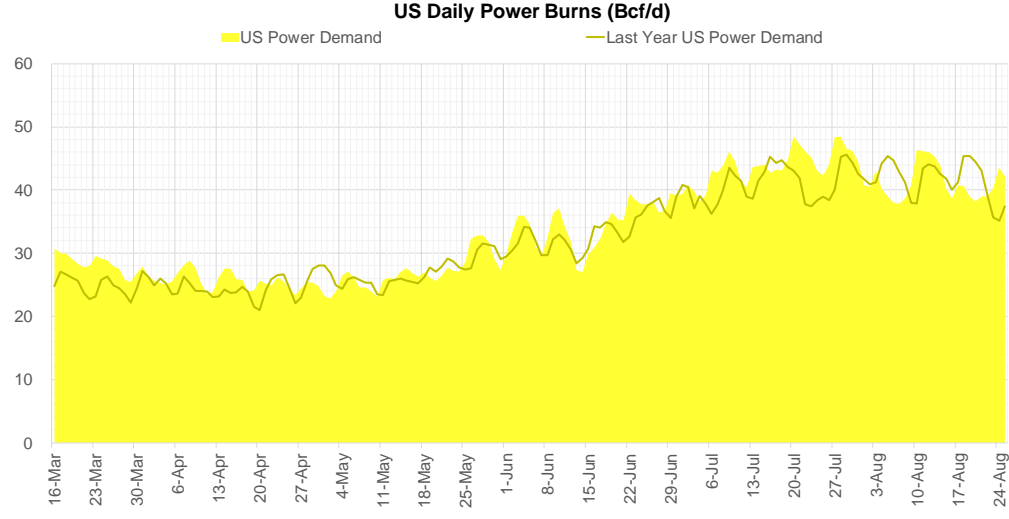
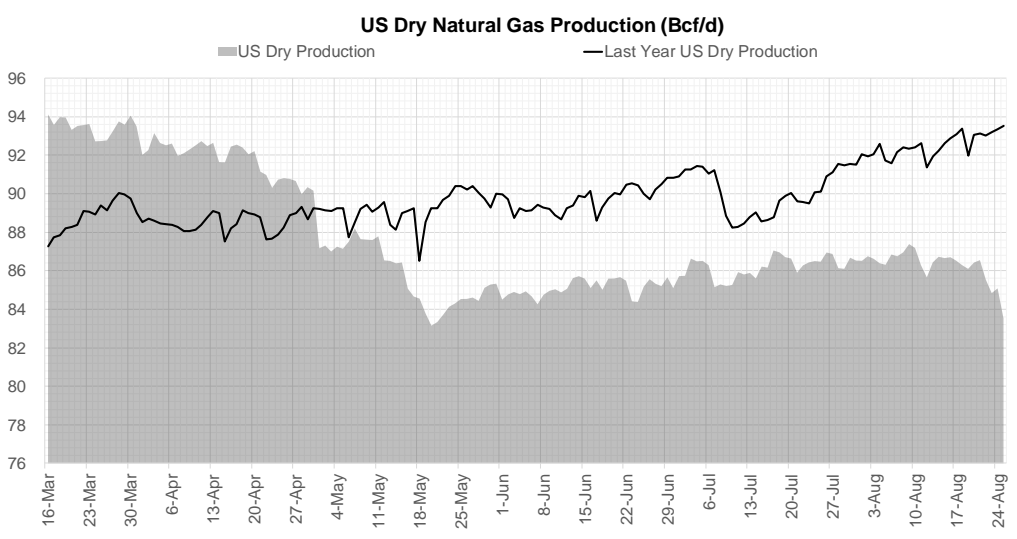
Weather Based End of Winter Projection (Bcf)

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.

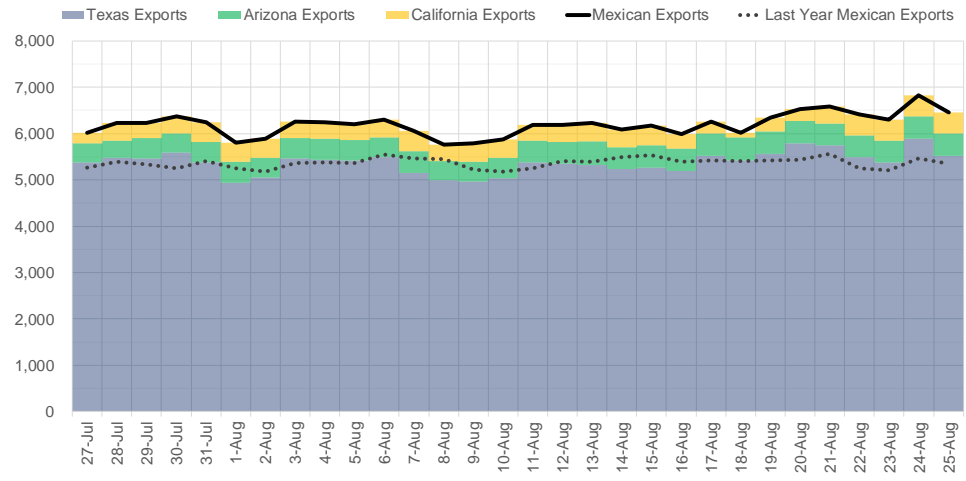
Supply – Demand Trends



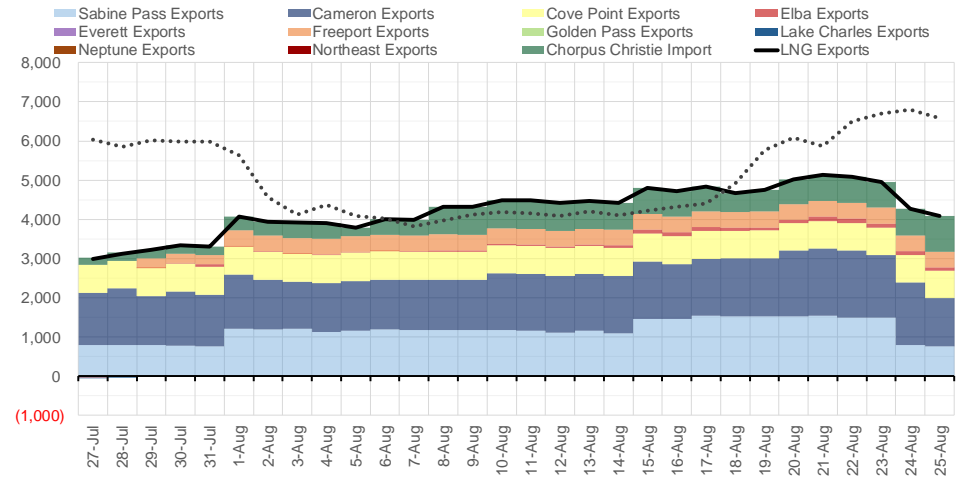
Source: Bloomberg

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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

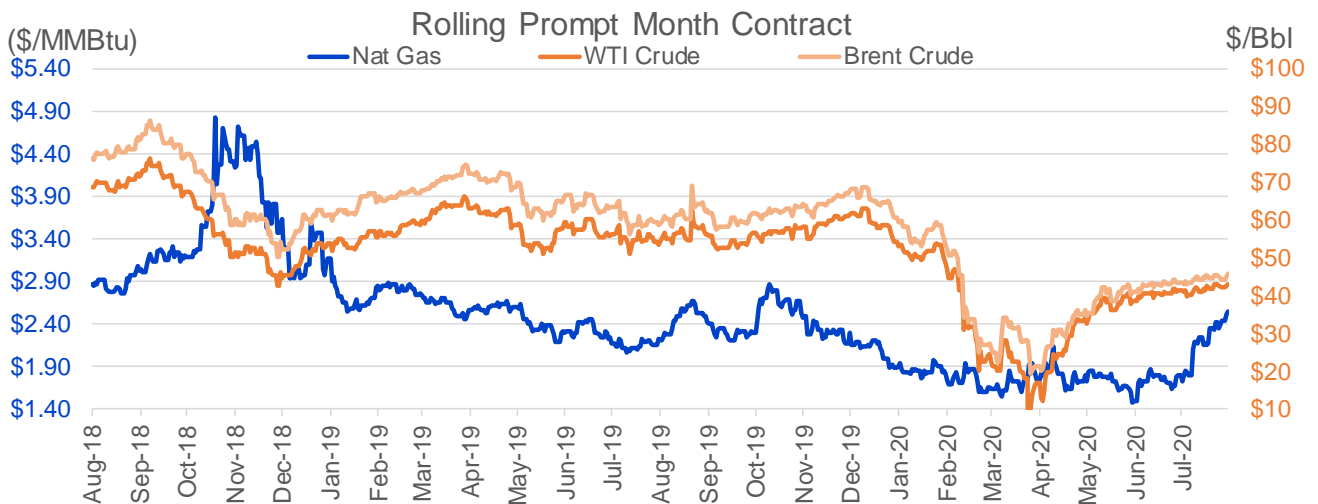
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
10	2020	C	2.75	10803	9	2020	C	2.50	49743
10	2020	C	3.00	6526	10	2020	P	1.50	47283
10	2020	P	2.00	4860	10	2020	C	2.75	45248
1	2021	P	2.00	4100	10	2020	C	3.00	39321
3	2021	P	2.00	4100	10	2020	C	2.50	37430
9	2020	C	2.50	3965	3	2021	P	2.00	35392
9	2020	C	2.60	3639	10	2020	P	2.00	33821
9	2020	P	2.40	3205	10	2020	P	1.60	33760
10	2020	C	3.50	3194	10	2020	P	1.75	30015
9	2020	C	2.90	3027	10	2020	P	1.25	28753
10	2020	C	3.25	2919	9	2020	C	2.75	25534
9	2020	C	2.75	2716	9	2020	P	1.00	24289
10	2020	C	2.50	2573	11	2020	C	3.50	24171
9	2020	C	2.65	2367	10	2020	P	1.00	24016
12	2020	P	1.50	2250	10	2020	C	3.50	23374
10	2020	P	2.30	2024	9	2020	P	1.50	23369
11	2020	C	3.15	2000	9	2020	C	3.00	23274
10	2020	P	2.10	1809	9	2020	P	1.20	22867
9	2020	P	2.30	1728	9	2020	P	2.00	22739
9	2020	P	2.50	1552	9	2020	C	2.00	22531
10	2020	C	2.65	1349	3	2021	C	3.00	22164
10	2020	C	4.25	1329	10	2020	C	2.10	21985
1	2021	C	4.50	1325	1	2021	C	4.50	21966
9	2020	P	2.45	1271	9	2020	P	1.75	21682
10	2020	P	2.25	1171	12	2020	P	2.00	21373
9	2020	P	2.25	1151	10	2020	P	2.10	20650
11	2020	C	3.00	1118	1	2021	C	3.50	20596
1	2021	C	4.25	1100	3	2021	C	6.00	19905
10	2020	P	2.65	1074	9	2020	C	2.25	19721
11	2020	P	2.25	1067	9	2020	P	1.30	19362
9	2020	P	2.15	1004	9	2020	P	1.25	19214
1	2021	C	5.00	1002	10	2020	P	1.30	19116
9	2020	C	2.40	927	3	2021	C	3.50	18900
12	2020	C	3.50	875	10	2020	C	2.00	18664
9	2020	P	2.35	843	11	2020	C	3.00	18161
11	2020	P	2.00	829	10	2020	P	2.25	17735
10	2020	P	2.50	823	10	2020	C	2.25	17311
12	2020	P	2.00	762	10	2020	C	3.25	17280
10	2020	P	1.70	760	4	2021	C	5.00	16831
12	2020	C	4.25	750	1	2021	C	3.00	16668
10	2020	P	2.20	673	2	2021	C	5.00	16569
10	2020	P	1.80	651	10	2020	P	1.80	16483
11	2020	C	2.75	625	9	2020	P	2.25	16377
10	2020	P	2.40	601	11	2020	C	2.75	15535
1	2021	C	6.00	600	11	2020	C	3.25	14930
9	2020	C	2.55	589	1	2021	C	5.00	14820
11	2020	C	4.00	588	4	2021	C	3.00	14747
11	2020	C	3.30	551	1	2021	C	3.75	14327
10	2020	C	3.15	527	1	2021	P	2.25	14304
					10	2020	C	2.4	14048

Source: CME, Nasdaq, ICE

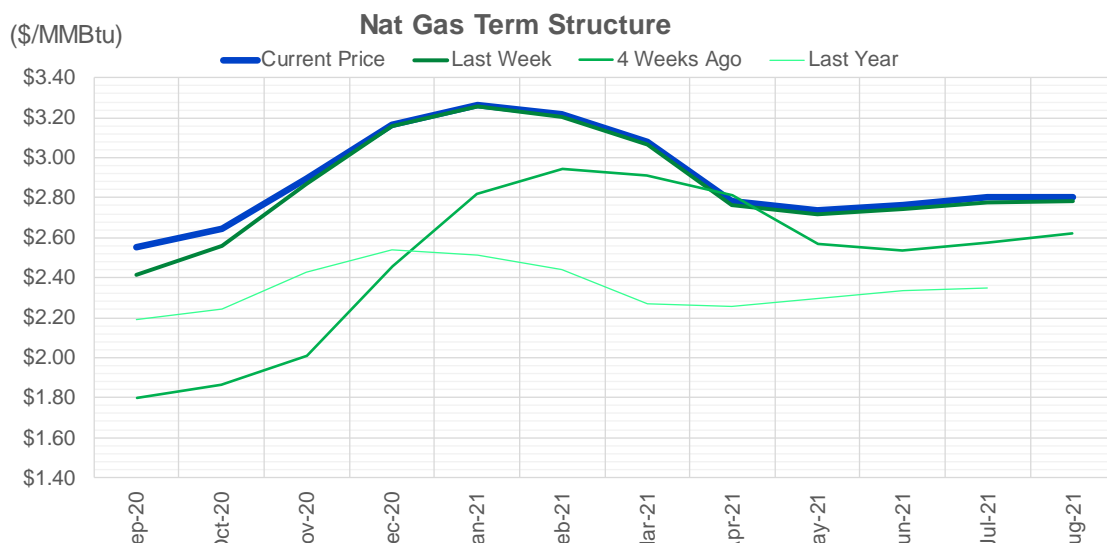
Nat Gas Futures Open Interest CME, and ICE Combined

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	23862	44376	-20514	SEP 20	66716	70627	-3911
OCT 20	235935	225088	10847	OCT 20	84781	84110	671.25
NOV 20	194013	196520	-2507	NOV 20	76944	76074	869.25
DEC 20	101831	102498	-667	DEC 20	72265	71783	482.75
JAN 21	130616	129814	802	JAN 21	87627	88259	-631.25
FEB 21	44993	44209	784	FEB 21	54507	54300	207
MAR 21	85489	85014	475	MAR 21	73690	73112	578.75
APR 21	79847	78328	1519	APR 21	63409	62799	610
MAY 21	46052	46638	-586	MAY 21	51300	51236	63.75
JUN 21	24593	25314	-721	JUN 21	48550	48639	-89
JUL 21	18468	18643	-175	JUL 21	50467	50528	-60.75
AUG 21	18508	18488	20	AUG 21	49729	49594	135
SEP 21	24755	24511	244	SEP 21	46799	46828	-28.75
OCT 21	59129	58640	489	OCT 21	68879	68695	184.5
NOV 21	26754	26722	32	NOV 21	41421	41346	75.5
DEC 21	20837	20927	-90	DEC 21	41668	41608	60
JAN 22	19818	19837	-19	JAN 22	35167	35149	18
FEB 22	11251	11209	42	FEB 22	29814	29724	90
MAR 22	16318	16291	27	MAR 22	32765	32681	83.5
APR 22	18261	18244	17	APR 22	32566	32491	75.25
MAY 22	5678	5625	53	MAY 22	23798	23728	70.25
JUN 22	3018	3019	-1	JUN 22	23101	23026	75
JUL 22	2513	2507	6	JUL 22	23490	23444	46.75
AUG 22	1983	1981	2	AUG 22	23410	23332	77.75
SEP 22	2107	2068	39	SEP 22	22551	22476	75
OCT 22	2900	2887	13	OCT 22	24069	23991	77.75
NOV 22	1994	1992	2	NOV 22	21736	21661	75
DEC 22	1972	1969	3	DEC 22	22460	22382	77.75
JAN 23	2815	2815	0	JAN 23	12321	12290	31
FEB 23	827	827	0	FEB 23	11242	11214	28.25

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	\$2.551	\$2.645	\$2.892	\$3.164	\$3.267	\$3.220	\$3.078	\$2.783	\$2.740	\$2.762	\$2.802	\$2.806
Last Week	\$2.417	\$2.556	\$2.870	\$3.157	\$3.257	\$3.203	\$3.064	\$2.766	\$2.718	\$2.743	\$2.776	\$2.784
vs. Last Week	\$0.134	\$0.089	\$0.022	\$0.007	\$0.010	\$0.017	\$0.014	\$0.017	\$0.022	\$0.019	\$0.026	\$0.022
4 Weeks Ago	\$1.800	\$1.864	\$2.012	\$2.458	\$2.822	\$2.944	\$2.911	\$2.812	\$2.566	\$2.534	\$2.575	\$2.624
vs. 4 Weeks Ago	\$0.751	\$0.781	\$0.880	\$0.706	\$0.445	\$0.276	\$0.167	-\$0.029	\$0.174	\$0.228	\$0.227	\$0.182
Last Year	\$2.202	\$2.192	\$2.245	\$2.426	\$2.538	\$2.512	\$2.438	\$2.271	\$2.259	\$2.297	\$2.338	\$2.347
vs. Last Year	\$0.349	\$0.453	\$0.647	\$0.738	\$0.729	\$0.708	\$0.640	\$0.512	\$0.481	\$0.465	\$0.464	\$0.459

	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	1.81	1.69	-0.12
TETCO M3	\$/MMBtu	1.57	1.49	-0.08
FGT Zone 3	\$/MMBtu	1.88	2.48	0.60
Zone 6 NY	\$/MMBtu	1.88	1.47	-0.41
Chicago Citygate	\$/MMBtu	2.39	2.20	-0.19
Michcon	\$/MMBtu	2.27	2.13	-0.14
Columbia TCO Pool	\$/MMBtu	2.00	1.74	-0.26
Ventura	\$/MMBtu	2.36	2.14	-0.22
Rockies/Opal	\$/MMBtu	2.48	2.09	-0.39
El Paso Permian Basin	\$/MMBtu	1.42	1.66	0.24
Socal Citygate	\$/MMBtu	4.35	3.34	-1.01
Malin	\$/MMBtu	2.55	2.34	-0.21
Houston Ship Channel	\$/MMBtu	2.56	2.39	-0.17
Henry Hub Cash	\$/MMBtu	2.52	2.23	-0.29
AECO Cash	C\$/GJ	2.05	1.91	-0.14
Station2 Cash	C\$/GJ	2.05	2.39	0.34
Dawn Cash	C\$/GJ	2.28	2.15	-0.13

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks		vs. Last Year
				Ago		
NatGas Jan/Apr	\$/MMBtu	-0.48	▲ 0.007	▼ -0.106	▼ -0.095	
NatGas Mar/Apr	\$/MMBtu	-0.294	▲ 0.004	▼ -0.540	▼ -0.538	
NatGas Oct/Nov	\$/MMBtu	0.24	▼ -0.070	▼ -0.202	▲ 0.182	
NatGas Oct/Jan	\$/MMBtu	0.62	▼ -0.081	▼ -0.312	▲ 0.282	
WTI Crude	\$/Bbl	42.90	▲ 0.010	▲ 1.860	▼ -12.030	
Brent Crude	\$/Bbl	45.67	▲ 0.210	▲ 2.450	▼ -13.840	
Fuel Oil, NY Harbour 1%	\$/Bbl	98.03	▲ 0.000	▲ 0.000	▲ 0.000	
Heating Oil	cents/Gallon	126.48	▲ 0.440	▲ 2.270	▼ -55.110	
Propane, Mt. Bel	cents/Gallon	0.51	▲ 0.003	▲ 0.014	▲ 0.103	
Ethane, Mt. Bel	cents/Gallon	0.25	▲ 0.002	▲ 0.030	▲ 0.089	
Coal, PRB	\$/MTon	12.30	▲ 0.000	▲ 0.000	▲ 0.150	
Coal, ILB	\$/MTon	31.05	▲ 0.000	▲ 0.000	▼ -5.000	