

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 1.70	▲ \$ 0.02	▲ \$ 0.00

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 41.74	▼ \$ (0.16)	▲ \$ 0.7

	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 44.09	▼ \$ (0.20)	▲ \$ 0.6

Page Menu

- [Short-term Weather Model Outlooks](#)
- [Lower 48 Component Models](#)
- [Regional S/D Models Storage Projection](#)
- [Weather Model Storage Projection](#)
- [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	1.1	2.6	3.5	7.2
24 Hr Chg	-2.3	-1.1	1.4	-2.0

GFS Ensemble 00z	1-5 Day	6-10 Day	11-15 Day	Total
12 Hr Chg	-0.3	2.0	0.9	2.5
24 Hr Chg	-3.7	-0.8	1.5	-3.0

	Current	Δ from YD	Δ from 7D Avg
US Dry Production	85.3	▼ -0.79	▼ -0.92

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	43.3	▼ -1.63	▼ -1.77

	Current	Δ from YD	Δ from 7D Avg
US ResComm	7.6	▼ -0.13	▲ 0.10

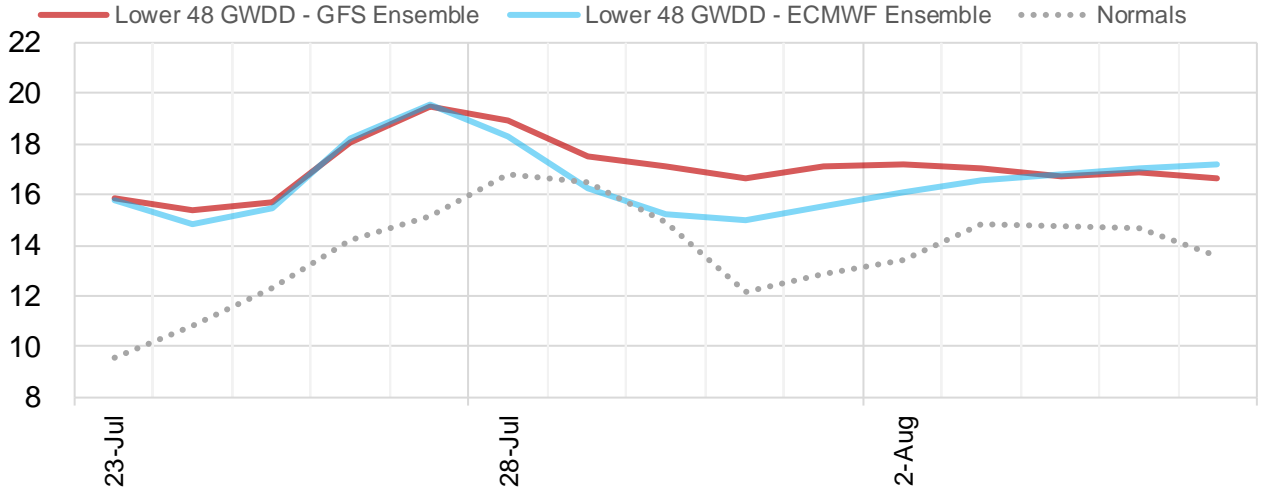
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	3.9	▼ -0.02	▼ -0.49

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	3.5	▼ -0.05	▼ -0.17

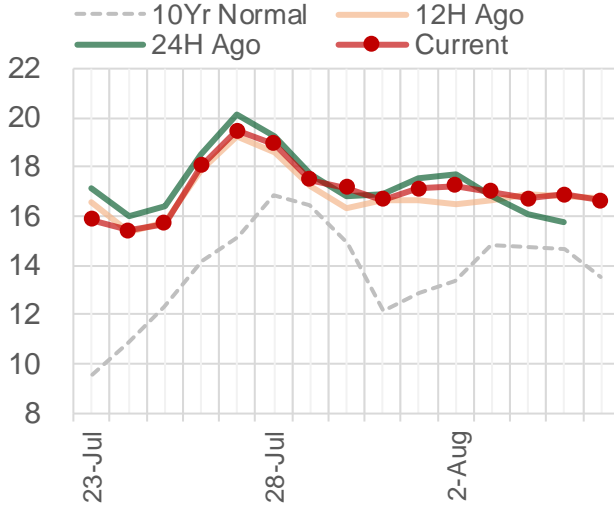
	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.5	▲ 0.16	▲ 0.09

Short-term Weather Model Outlooks (00z)

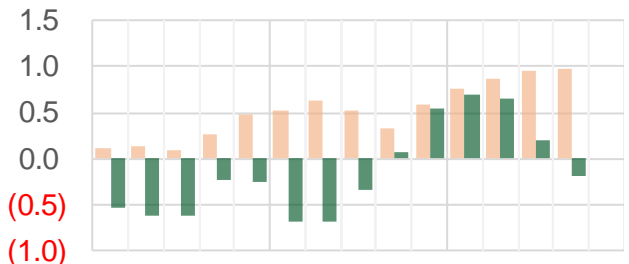
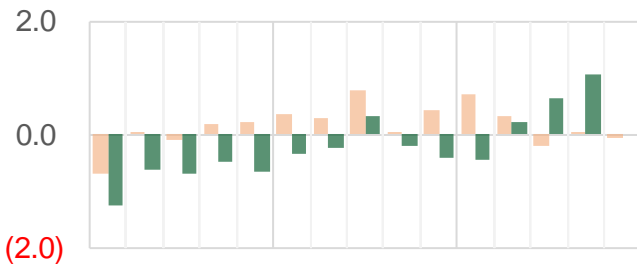
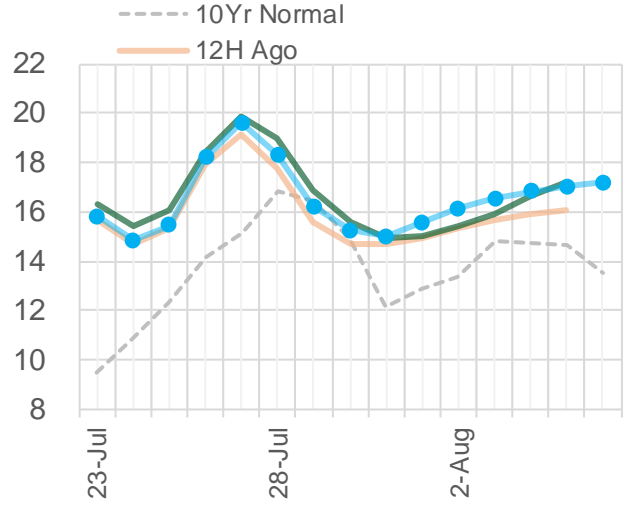
Lower 48 TDD Forecast



Lower 48 GWDD - GFS Ensemble



Lower 48 GWDD - ECMWF Ensemble



Source: WSI, Bloomberg

Lower 48 Component Models

Daily Balances

	17-Jul	18-Jul	19-Jul	20-Jul	21-Jul	22-Jul	23-Jul	DoD	vs. 7D
Lower 48 Dry Production	86.7	86.6	86.4	86.3	85.6	86.1	85.3	-0.8	-1.0
Canadian Imports	4.4	4.5	4.7	4.7	4.4	3.9	3.9	0.0	-0.5
L48 Power	43.3	43.2	45.0	48.9	47.6	44.9	43.3	-1.6	-2.2
L48 Residential & Commercial	7.3	7.2	7.4	7.9	7.7	7.8	7.6	-0.1	0.1
L48 Industrial	16.9	16.6	16.3	16.4	16.7	17.1	17.7	0.7	1.1
L48 Lease and Plant Fuel	4.8	4.8	4.8	4.8	4.8	4.8	4.8	0.0	-0.1
L48 Pipeline Distribution	2.3	2.3	2.4	2.6	2.5	2.4	2.3	-0.1	-0.1
L48 Regional Gas Consumption	74.6	74.1	76.0	80.6	79.2	77.0	75.8	-1.2	-1.1
Net LNG Exports	3.7	3.6	3.6	4.0	3.6	3.5	3.5	-0.1	-0.2
Total Mexican Exports	6.5	6.2	6.1	6.4	6.6	6.3	6.5	0.2	0.1
Implied Daily Storage Activity	6.3	7.3	5.4	0.0	0.7	3.2	3.5		
EIA Reported Daily Storage Activity									
Daily Model Error									

EIA Storage Week Balances

	12-Jun	19-Jun	26-Jun	3-Jul	10-Jul	17-Jul	WoW	vs. 4W
Lower 48 Dry Production	84.7	85.1	84.9	85.2	85.6	85.5	▼ -0.1	▲ 0.3
Canadian Imports	3.9	3.8	4.2	4.1	4.3	4.5	▲ 0.2	▲ 0.4
L48 Power	33.3	30.3	37.1	38.4	41.8	42.9	▲ 1.1	▲ 6.0
L48 Residential & Commercial	7.7	8.0	7.4	7.4	7.3	7.4	▲ 0.1	▼ -0.1
L48 Industrial	19.6	19.0	19.3	19.8	18.8	17.9	▼ -0.9	▼ -1.3
L48 Lease and Plant Fuel	4.8	4.8	4.8	4.8	4.8	4.8	▼ 0.0	▲ 0.0
L48 Pipeline Distribution	2.0	1.8	2.1	2.2	2.2	2.3	▲ 0.1	▲ 0.2
L48 Regional Gas Consumption	67.4	63.8	70.7	72.6	74.9	75.3	▲ 0.4	▲ 4.8
Net LNG Exports	3.9	3.8	4.0	4.0	3.0	3.3	▲ 0.3	▼ -0.4
Total Mexican Exports	5.7	5.6	5.9	5.8	5.9	6.2	▲ 0.3	▲ 0.4
Implied Daily Storage Activity	11.6	15.7	8.5	6.9	6.1	5.2	-0.8	
EIA Reported Daily Storage Activity	12.1	17.1	9.3	8.0	6.4			
Daily Model Error	-0.6	-1.5	-0.8	-1.1	-0.4			

Monthly Balances

	2Yr Ago Jul-18	LY Jul-19	Mar-20	Apr-20	May-20	Jun-20	MTD Jul-20	MoM	vs. LY
Lower 48 Dry Production	81.8	90.1	93.3	91.8	86.0	84.9	85.7	▲ 0.8	▼ -4.3
Canadian Imports	5.6	5.0	4.1	4.0	3.9	4.0	4.4	▲ 0.4	▼ -0.6
L48 Power	39.1	40.9	28.3	25.3	26.3	34.3	43.0	▲ 8.7	▲ 2.1
L48 Residential & Commercial	7.8	8.1	27.5	20.9	12.3	7.7	7.4	▼ -0.3	▼ -0.7
L48 Industrial	20.7	20.3	22.8	20.7	20.3	19.5	18.0	▼ -1.5	▼ -2.3
L48 Lease and Plant Fuel	4.6	5.0	5.2	5.1	4.8	4.8	4.8	▲ 0.0	▼ -0.2
L48 Pipeline Distribution	2.2	2.2	2.5	2.1	1.9	2.0	2.3	▲ 0.3	▲ 0.1
L48 Regional Gas Consumption	74.3	76.6	86.4	74.2	65.6	68.3	75.5	▲ 7.2	▼ -1.1
Net LNG Exports	3.3	6.0	8.5	8.2	6.7	4.0	3.3	▼ -0.7	▼ -2.7
Total Mexican Exports	5.0	5.4	5.6	4.9	4.9	5.7	6.1	▲ 0.4	▲ 0.7
Implied Daily Storage Activity	4.8	7.1	-3.1	8.4	12.7	10.9	5.2		
EIA Reported Daily Storage Activity									
Daily Model Error									

Source: Bloomberg, analytix.ai

Regional S/D Models Storage Projection

Week Ending 17-Jul

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	5.0	0.9	5.9	39
East	1.0	1.8	2.7	18
Midwest	3.6	-0.6	3.0	20
Mountain	3.1	-2.5	0.6	4
South Central	-2.8	2.6	-0.2	-1
Pacific	0.1	-0.4	-0.3	-2

*Adjustment Factor is calculated based on historical regional deltas

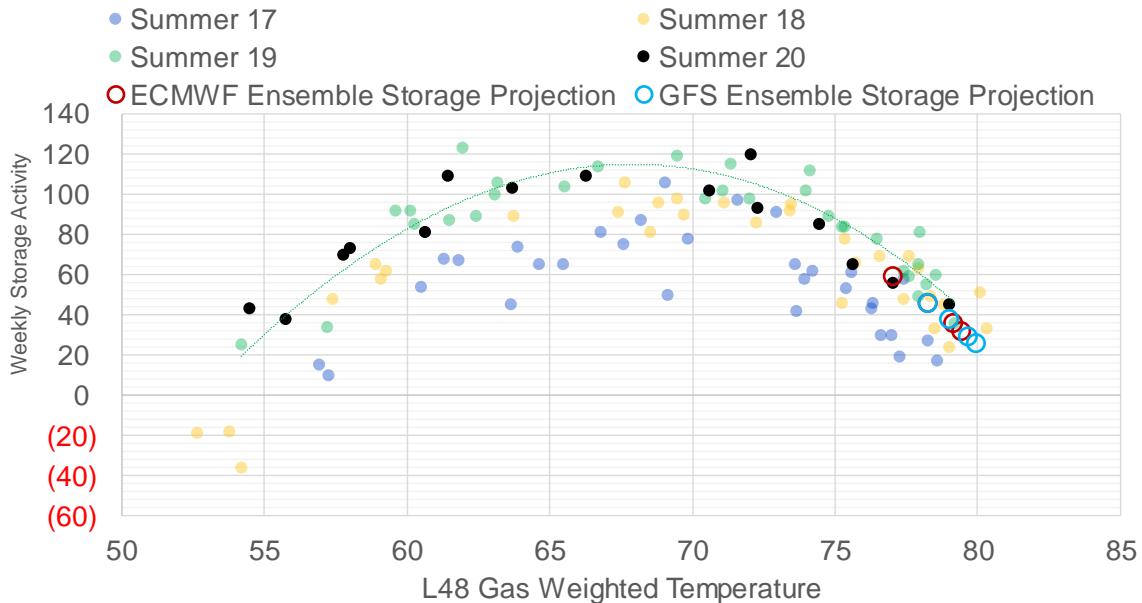
U.S. underground natural gas storage facilities by type (July 2015)



Weather Model Storage Projection

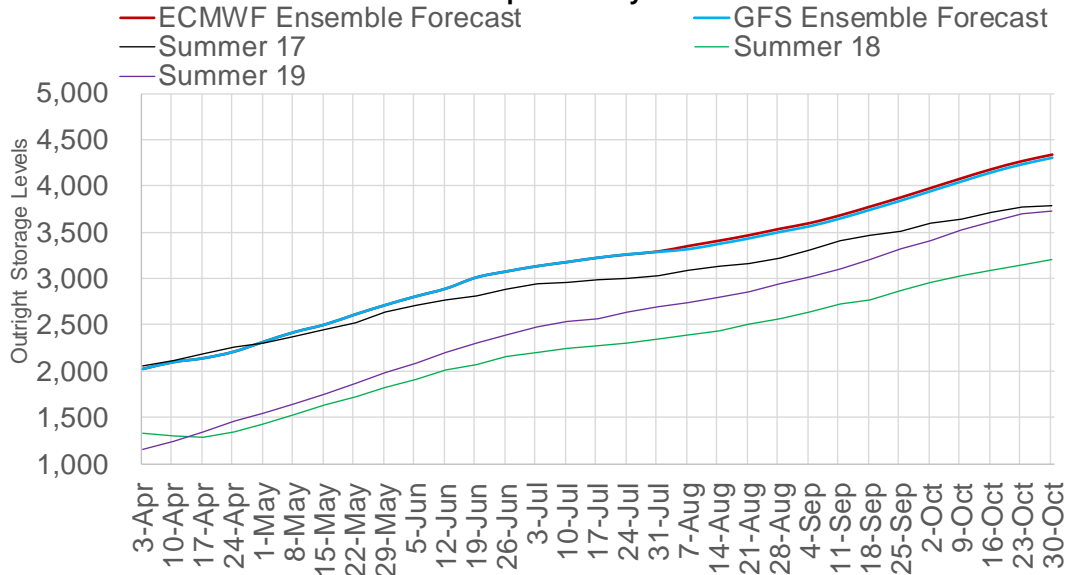
Next report and beyond	
Week Ending	Week Storage Projection
24-Jul	38
31-Jul	30
7-Aug	41

Weather Storage Model - Next 4 Week Forecast



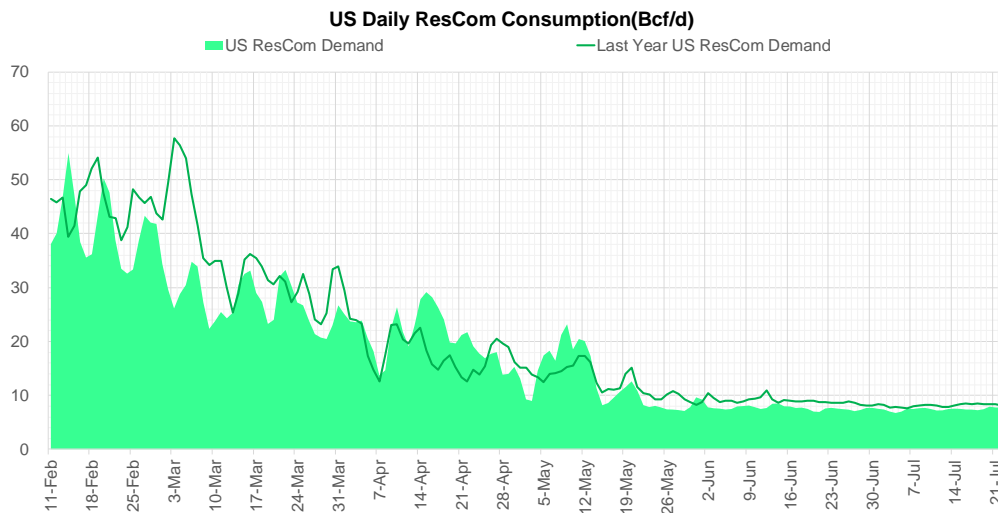
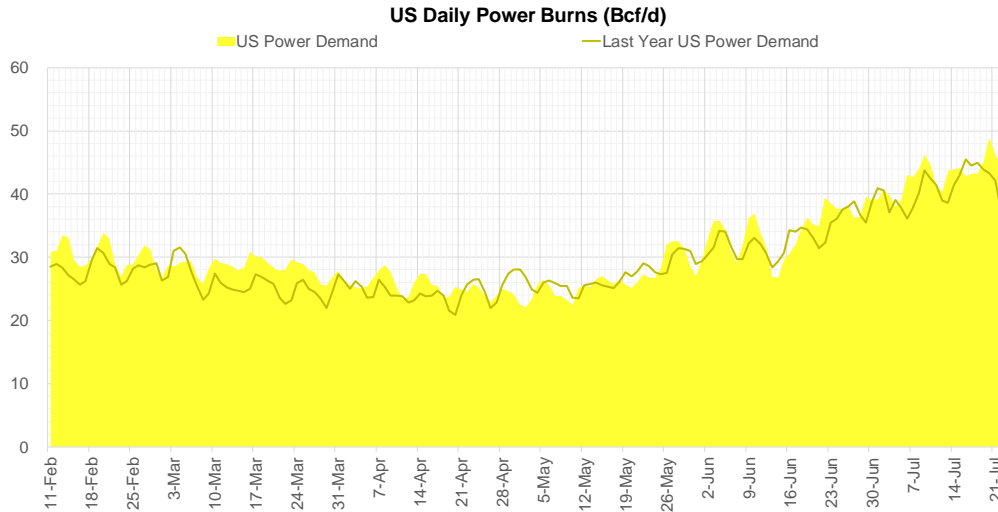
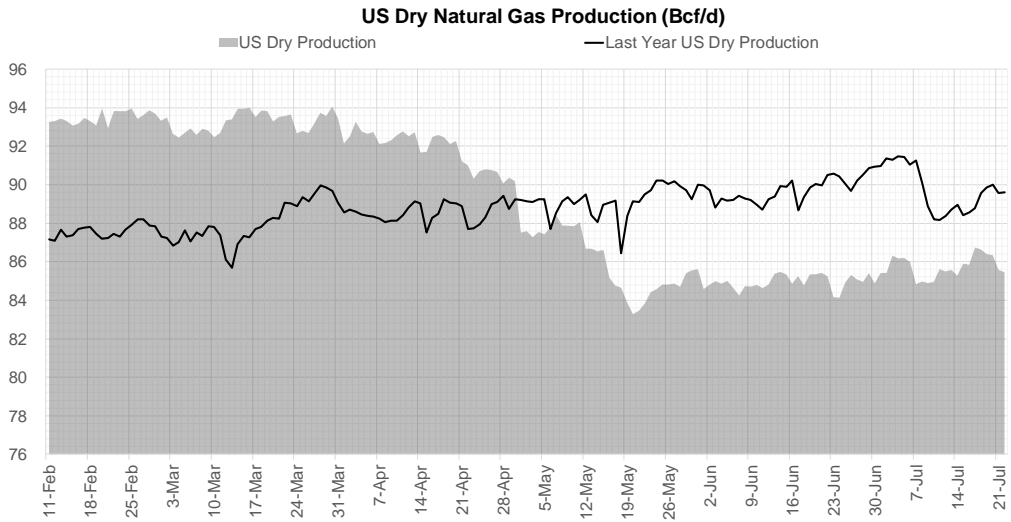
Weather Based End of Winter Projection (Bcf)

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.

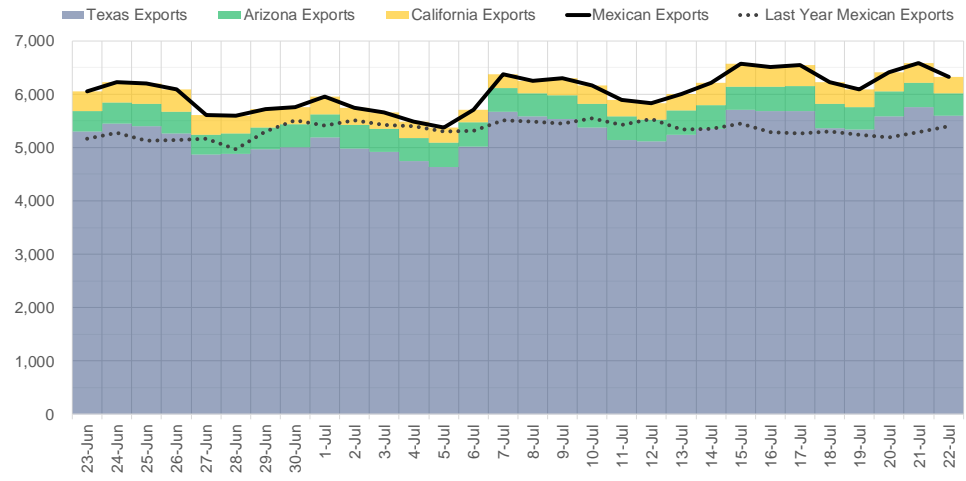
Supply – Demand Trends



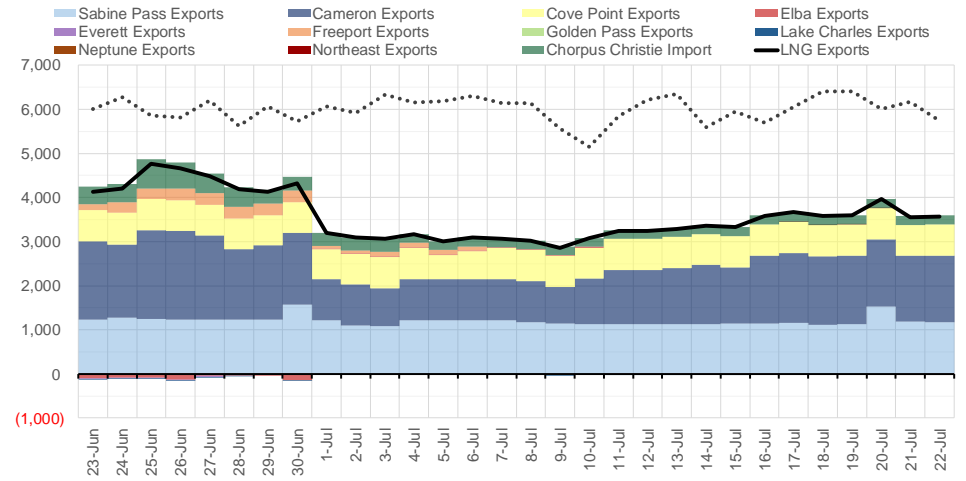
Source: Bloomberg

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.

Mexican Exports - Last 30 days (MMcf/d)



Net LNG Exports - Last 30 days (MMcf/d)



Source: Bloomberg

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.

Nat Gas Options Volume and Open Interest CME, ICE and Nasdaq Combined

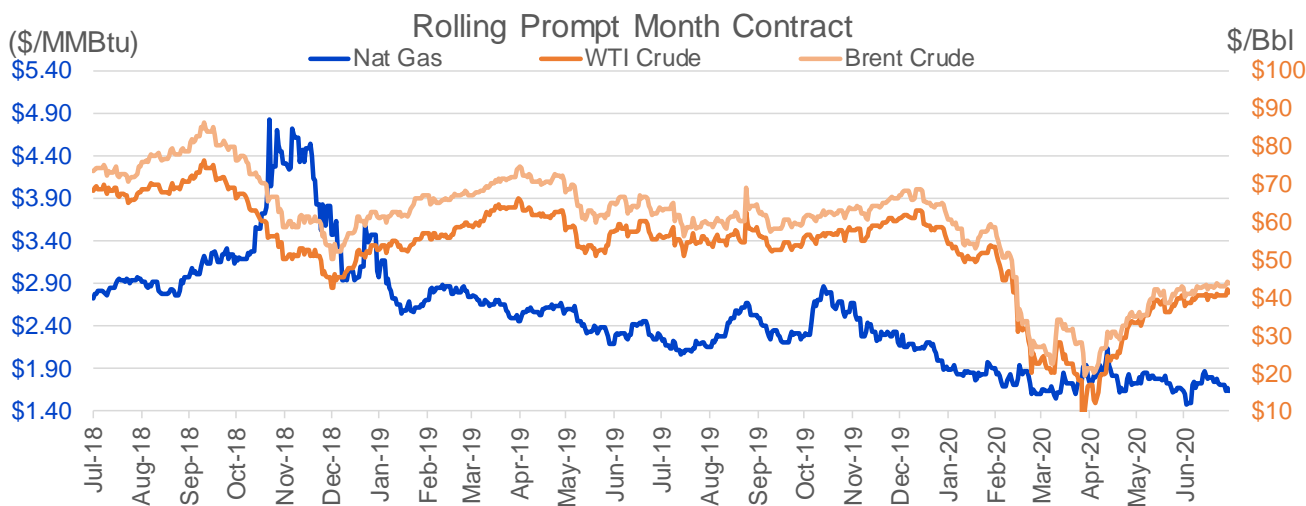
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
10	2020	C	2.75	9606	10	2020	C	2.75	49373
10	2020	C	2.50	7414	10	2020	P	1.50	48520
10	2020	C	2.40	5868	10	2020	C	2.50	36324
8	2020	P	1.60	4890	8	2020	C	2.00	35937
9	2020	C	2.00	4724	3	2021	P	2.00	35681
8	2020	P	1.50	3581	9	2020	P	1.50	33551
9	2020	C	2.25	2816	10	2020	P	1.60	32074
10	2020	P	1.50	2625	8	2020	P	1.50	31974
9	2020	P	1.50	2364	10	2020	C	3.00	31928
8	2020	C	1.70	2342	10	2020	P	2.00	30701
8	2020	C	1.75	2262	9	2020	C	2.50	30135
9	2020	P	1.40	2107	10	2020	P	1.75	28184
9	2020	P	1.60	1968	10	2020	P	1.25	27695
9	2020	C	1.85	1931	9	2020	C	3.00	24661
8	2020	C	1.90	1911	8	2020	C	2.50	23901
8	2020	P	1.55	1909	9	2020	P	1.00	23550
9	2020	C	1.70	1774	9	2020	P	1.20	23185
9	2020	P	1.55	1711	3	2021	C	3.00	21804
8	2020	C	1.80	1696	9	2020	C	2.00	21506
10	2020	C	2.00	1693	9	2020	P	1.75	19325
9	2020	C	1.90	1615	9	2020	P	1.25	19148
9	2020	C	2.20	1589	8	2020	C	2.25	18980
9	2020	P	1.70	1582	8	2020	P	1.30	18837
8	2020	P	1.45	1516	9	2020	C	2.75	18588
10	2020	C	2.10	1500	10	2020	C	2.10	18389
3	2021	C	6.00	1350	1	2021	C	3.50	18259
10	2020	P	1.25	1119	10	2020	C	3.25	18190
10	2020	P	1.75	1106	10	2020	P	2.10	18133
10	2020	C	2.60	1101	8	2020	P	1.60	17994
10	2020	C	2.20	1100	3	2021	C	3.50	17908
10	2020	P	1.25	1084	10	2020	P	1.00	17626
10	2020	P	1.00	1050	1	2021	C	3.00	17288
3	2021	C	7.00	1000	3	2021	C	6.00	17226
5	2021	P	1.75	1000	8	2020	P	1.75	17194
9	2020	C	2.10	943	10	2020	C	2.25	16905
9	2020	C	2.40	932	8	2020	P	1.00	16762
8	2020	P	1.65	857	9	2020	C	2.25	16514
3	2021	P	2.00	850	8	2020	P	1.20	15639
8	2020	P	1.40	796	10	2020	C	2.00	15529
10	2020	C	1.95	773	4	2021	C	3.00	15501
11	2020	C	3.00	761	10	2020	C	2.40	15490
9	2020	C	3.00	734	8	2020	P	1.25	15377
9	2020	P	1.35	646	12	2020	P	1.50	15255
9	2020	C	1.80	619	10	2020	P	1.30	15237
9	2020	P	1.00	609	8	2020	P	1.65	15189
9	2020	C	3.70	600	9	2020	P	1.30	15043
10	2020	P	1.35	587	8	2020	C	3.00	14670
10	2020	P	1.60	569	8	2020	P	1.40	14592
9	2020	P	1.30	529	9	2020	P	2.00	13946
					11	2020	C	3.5	13869

Source: CME, Nasdaq, ICE

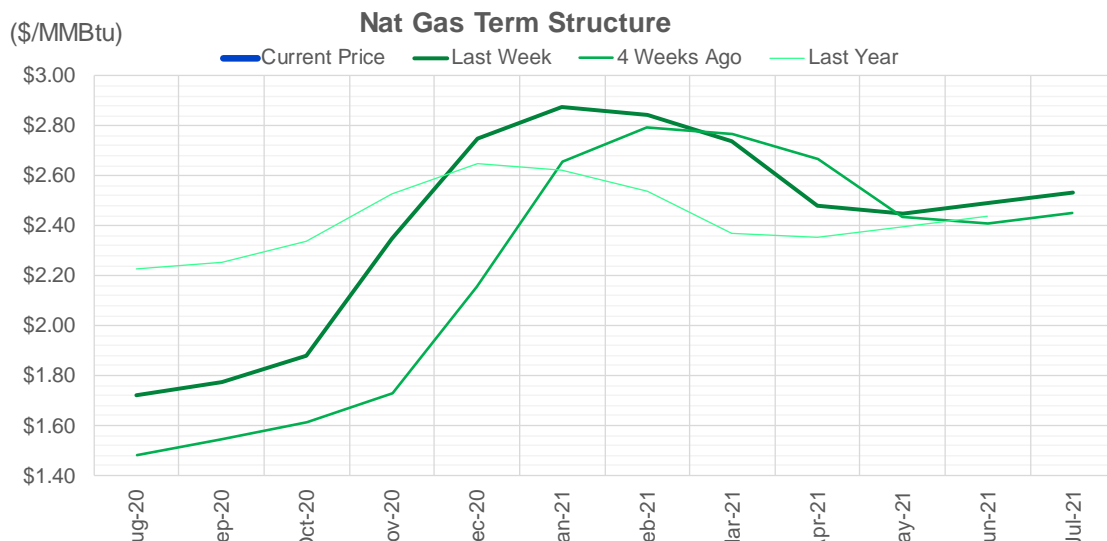
Nat Gas Futures Open Interest CME, and ICE Combined

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
AUG 20	52197	76182	-23985	AUG 20	71352	72950	-1598
SEP 20	341018	321340	19678	SEP 20	77676	78746	-1069.75
OCT 20	142267	139278	2989	OCT 20	84267	83835	432
NOV 20	97495	95962	1533	NOV 20	67463	67333	130.25
DEC 20	85606	85403	203	DEC 20	62956	62954	2.25
JAN 21	126364	125646	718	JAN 21	80348	80335	12.25
FEB 21	41831	41528	303	FEB 21	48716	48456	259.75
MAR 21	79667	78945	722	MAR 21	66444	66136	308.75
APR 21	76856	76500	356	APR 21	53316	52833	482.5
MAY 21	34323	34198	125	MAY 21	46630	46530	99.25
JUN 21	20199	20070	129	JUN 21	45698	45448	250
JUL 21	17122	17014	108	JUL 21	46172	46143	29.5
AUG 21	14074	13927	147	AUG 21	46567	46522	45
SEP 21	16310	16309	1	SEP 21	44542	44460	82.25
OCT 21	41963	41429	534	OCT 21	66164	66032	131.75
NOV 21	22225	22209	16	NOV 21	37986	37937	49.25
DEC 21	15449	15339	110	DEC 21	39549	39511	38.25
JAN 22	14313	14292	21	JAN 22	31222	31190	32
FEB 22	8833	8764	69	FEB 22	27917	27902	15.25
MAR 22	13602	13589	13	MAR 22	29813	29796	16.5
APR 22	13385	13340	45	APR 22	29062	29200	-137.5
MAY 22	5286	5287	-1	MAY 22	22849	22866	-16.75
JUN 22	2550	2554	-4	JUN 22	22518	22543	-25.5
JUL 22	1923	1925	-2	JUL 22	22487	22475	12.25
AUG 22	1350	1346	4	AUG 22	22321	22332	-11
SEP 22	1860	1868	-8	SEP 22	21965	21983	-18
OCT 22	2304	2304	0	OCT 22	23523	23533	-10.25
NOV 22	1648	1547	101	NOV 22	20726	20759	-33
DEC 22	1324	1412	-88	DEC 22	21203	21237	-34.25
JAN 23	2608	2608	0	JAN 23	11210	11202	8.75

Source: CME, ICE



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.



	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21
Current Price	\$1.698	\$1.735	\$1.852	\$2.296	\$2.686	\$2.819	\$2.790	\$2.697	\$2.460	\$2.426	\$2.477	\$2.521
Last Week	\$1.723	\$1.776	\$1.879	\$2.350	\$2.747	\$2.875	\$2.842	\$2.740	\$2.480	\$2.449	\$2.488	\$2.535
vs. Last Week	-\$0.025	-\$0.041	-\$0.027	-\$0.054	-\$0.061	-\$0.056	-\$0.052	-\$0.043	-\$0.020	-\$0.023	-\$0.011	-\$0.014
4 Weeks Ago	\$1.482	\$1.546	\$1.612	\$1.730	\$2.154	\$2.654	\$2.794	\$2.765	\$2.668	\$2.434	\$2.409	\$2.451
vs. 4 Weeks Ago	\$0.216	\$0.189	\$0.240	\$0.566	\$0.532	\$0.165	-\$0.004	-\$0.068	-\$0.208	-\$0.008	\$0.068	\$0.070
Last Year	\$2.244	\$2.227	\$2.253	\$2.339	\$2.528	\$2.650	\$2.621	\$2.539	\$2.368	\$2.351	\$2.394	\$2.440
vs. Last Year	-\$0.546	-\$0.492	-\$0.401	-\$0.043	\$0.158	\$0.169	\$0.169	\$0.158	\$0.092	\$0.075	\$0.083	\$0.081

	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	1.62	1.65	0.03
TETCO M3	\$/MMBtu	1.76	1.75	-0.01
FGT Zone 3	\$/MMBtu	1.75	1.82	0.07
Zone 6 NY	\$/MMBtu	1.75	1.63	-0.12
Chicago Citygate	\$/MMBtu	1.58	1.67	0.09
Michcon	\$/MMBtu	1.61	1.62	0.01
Columbia TCO Pool	\$/MMBtu	1.46	1.51	0.05
Ventura	\$/MMBtu	1.55	1.60	0.05
Rockies/Opal	\$/MMBtu	1.50	1.55	0.05
El Paso Permian Basin	\$/MMBtu	1.25	1.48	0.23
Socal Citygate	\$/MMBtu	1.74	1.90	0.16
Malin	\$/MMBtu	1.53	1.65	0.12
Houston Ship Channel	\$/MMBtu	1.62	1.72	0.10
Henry Hub Cash	\$/MMBtu	1.63	1.63	0.00
AECO Cash	C\$/GJ	1.47	1.43	-0.04
Station2 Cash	C\$/GJ	1.51	1.64	0.13
Dawn Cash	C\$/GJ	1.59	1.69	0.10

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks	
				Ago	vs. Last Year
NatGas Jan/Apr	\$/MMBtu	-0.36	0.036	0.001	0.026
NatGas Mar/Apr	\$/MMBtu	-0.237	0.023	-0.471	-0.488
NatGas Oct/Nov	\$/MMBtu	0.44	-0.027	0.020	0.377
NatGas Oct/Jan	\$/MMBtu	0.97	-0.029	-0.097	0.631
WTI Crude	\$/Bbl	41.74	0.990	3.020	-14.280
Brent Crude	\$/Bbl	44.09	0.720	3.040	-19.300
Fuel Oil, NY Harbour 1%	\$/Bbl	98.03	0.000	0.000	0.000
Heating Oil	cents/Gallon	127.15	4.360	11.590	-64.280
Propane, Mt. Bel	cents/Gallon	0.50	0.015	-0.004	0.006
Ethane, Mt. Bel	cents/Gallon	0.21	-0.005	-0.006	0.063
Coal, PRB	\$/MTon	12.30	0.000	0.000	0.000
Coal, ILB	\$/MTon	31.05	0.000	0.000	-7.500