

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 1.83 ▲	\$ - ▲	\$ 0.02

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 40.22 ▲	\$ 0.30 ▼	\$ (0.9)

	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 43.32 ▲	\$ 0.38 ▼	\$ (0.0)

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	1.8	0.3	0.1	2.2
24 Hr Chg	-0.4	-2.4	-1.4	-4.2

GFS Ensemble 00z	1-5 Day	6-10 Day	11-15 Day	Total
12 Hr Chg	1.3	0.2	2.0	3.5
24 Hr Chg	1.4	-4.1	1.2	-1.6

	Current	Δ from YD	Δ from 7D Avg
US Dry Production	85.6 ▼	-0.66 ▼	-0.50

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	45.4 ▲	0.09 ▲	0.04

	Current	Δ from YD	Δ from 7D Avg
US ResComm	8.0 ▲	0.02 ▲	0.28

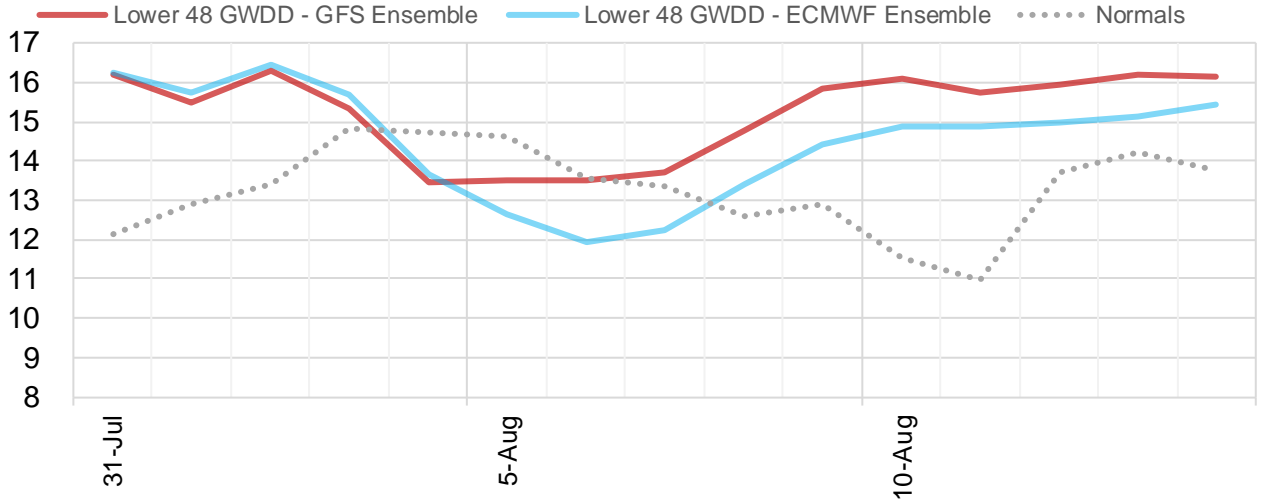
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	4.5 ▼	-0.42 ▲	0.01

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	3.3 ▼	-0.07 ▲	0.15

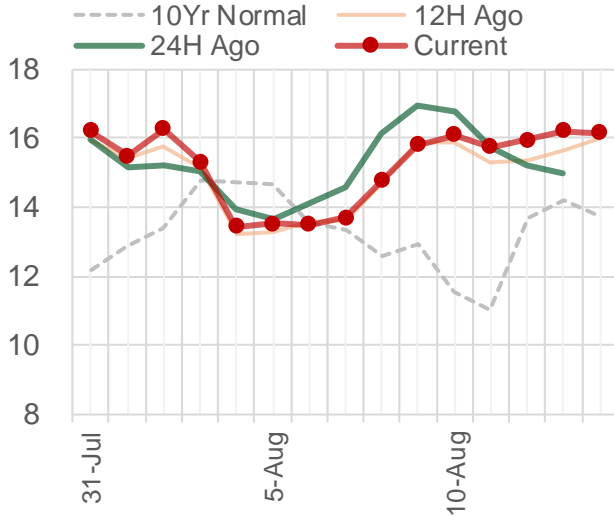
	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.5 ▲	0.06 ▲	0.31

Short-term Weather Model Outlooks (00z)

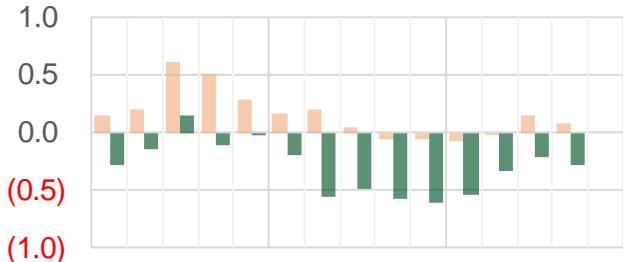
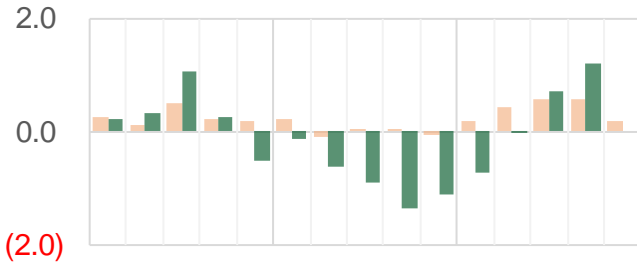
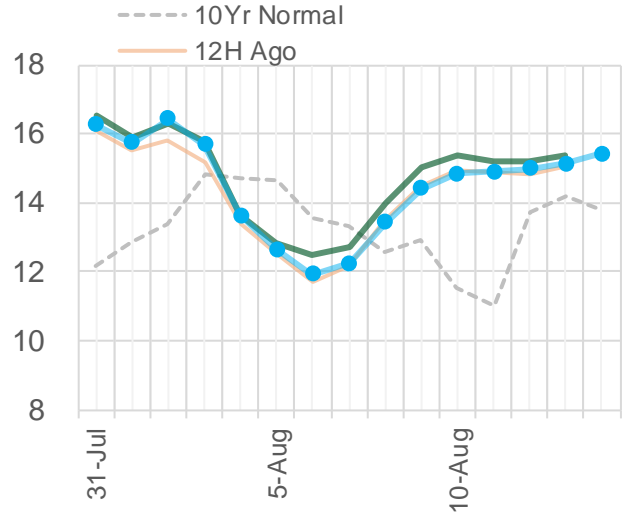
Lower 48 TDD Forecast



Lower 48 GWDD - GFS Ensemble



Lower 48 GWDD - ECMWF Ensemble



Source: WSI, Bloomberg

Lower 48 Component Models

Daily Balances

	25-Jul	26-Jul	27-Jul	28-Jul	29-Jul	30-Jul	31-Jul	DoD	vs. 7D
Lower 48 Dry Production	86.1	86.6	86.5	85.8	85.7	86.3	85.6	▼ -0.7	▼ -0.5
Canadian Imports	4.1	4.2	4.6	5.0	4.8	5.0	4.5	▼ -0.4	▼ -0.1
L48 Power	42.4	44.1	48.8	49.0	45.0	45.3	45.4	▲ 0.1	▼ -0.3
L48 Residential & Commercial	7.2	7.4	7.9	8.0	8.0	7.9	8.0	▲ 0.0	▲ 0.2
L48 Industrial	16.9	16.9	17.1	17.4	17.8	18.9	18.9	▲ 0.0	▲ 1.4
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	2.3	2.3	2.6	2.6	2.4	2.4	2.4	▲ 0.0	▼ 0.0
L48 Regional Gas Consumption	73.6	75.6	81.2	81.7	77.9	79.4	79.6	▲ 0.2	▲ 1.3
Net LNG Exports	3.1	3.1	3.0	3.1	3.2	3.3	3.3	▼ -0.1	▲ 0.1
Total Mexican Exports	6.1	5.9	5.7	6.2	6.1	6.4	6.5	▲ 0.1	▲ 0.4
Implied Daily Storage Activity	7.4	6.1	1.2	-0.3	3.2	2.1	0.9		
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	84.9	85.2	85.6	85.5	86.2	86.2	▼ 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	43.0	45.7	45.4	▼ -0.3	▲ 3.1
L48 Residential & Commercial	7.4	7.4	7.3	7.4	7.6	7.7	▲ 0.1	▲ 0.3
L48 Industrial	19.3	19.8	18.8	18.3	17.4	17.4	▲ 0.0	▼ -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	2.1	2.2	2.2	2.3	2.4	2.4	▼ 0.0	▲ 0.1
L48 Regional Gas Consumption	70.7	72.6	74.9	75.7	77.9	77.7	▼ -0.2	▲ 2.4
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	6.1	▼ -0.2	▲ 0.1
Implied Daily Storage Activity	8.5	6.9	6.0	4.8	2.7	3.7	1.0	
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	-1.1			

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	85.8	▲ 0.9	▼ -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	43.8	▲ 9.5	▲ 2.9
L48 Residential & Commercial	7.8	8.1	27.5	20.9	12.3	7.7	7.5	▼ -0.2	▼ -0.6
L48 Industrial	20.7	20.3	22.8	20.7	20.3	19.6	18.1	▼ -1.5	▼ -2.2
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	76.5	▲ 8.2	▼ -0.1
Net LNG Exports	3.3	6.0	8.5	8.2	6.7	4.0	3.3	▼ -0.8	▼ -2.7
Total Mexican Exports	5.0	5.4	5.6	4.9	4.9	5.7	6.1	▲ 0.4	▲ 0.8
Implied Daily Storage Activity	4.8	7.1	-3.1	8.4	12.7	10.9	4.3		
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	3.4	1.1	4.5	32
East	-0.9	2.2	1.4	10
Midwest	2.4	-0.5	1.9	13
Mountain	2.9	-2.2	0.7	5
South Central	-1.6	1.9	0.4	3
Pacific	0.5	-0.3	0.2	1

*Adjustment Factor is calculated based on historical regional deltas

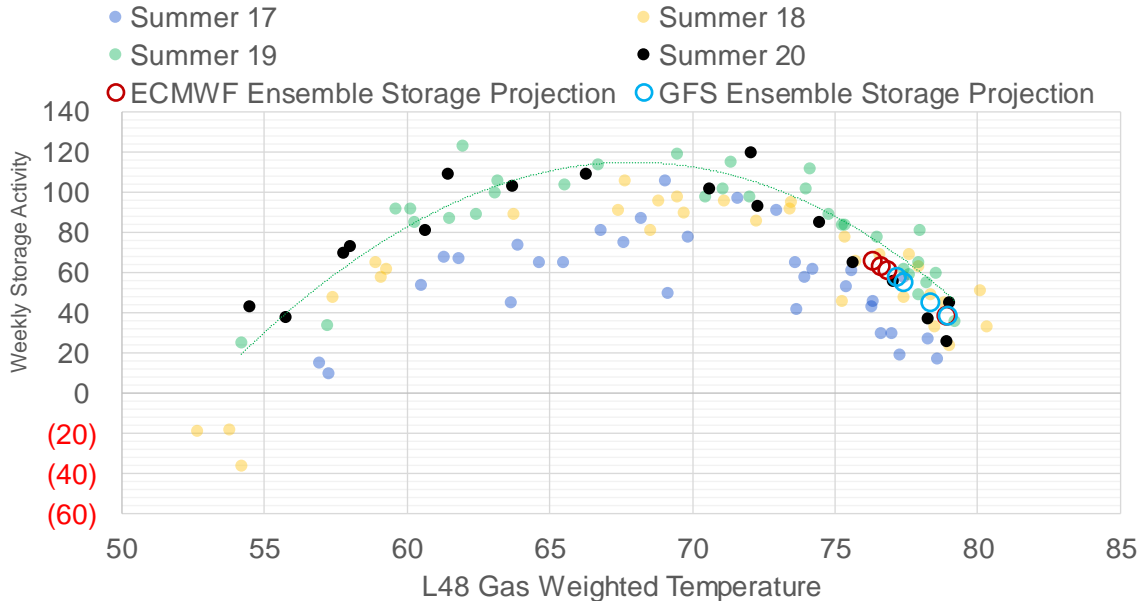
U.S. underground natural gas storage facilities by type (July 2015)



Weather Model Storage Projection

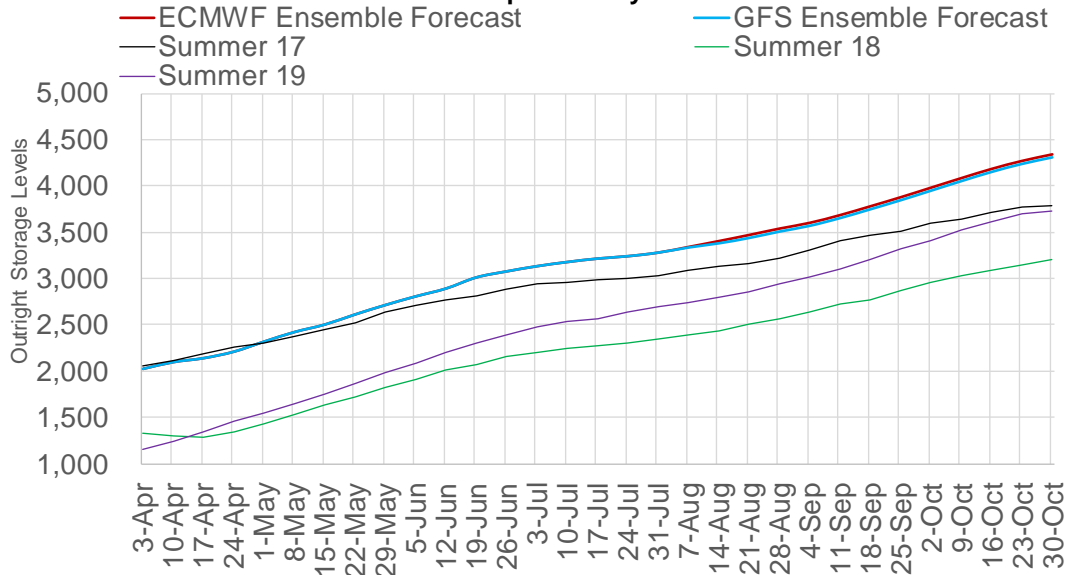
Next report and beyond	
Week Ending	Week Storage Projection
7-Aug	58
14-Aug	54
21-Aug	62

Weather Storage Model - Next 4 Week Forecast



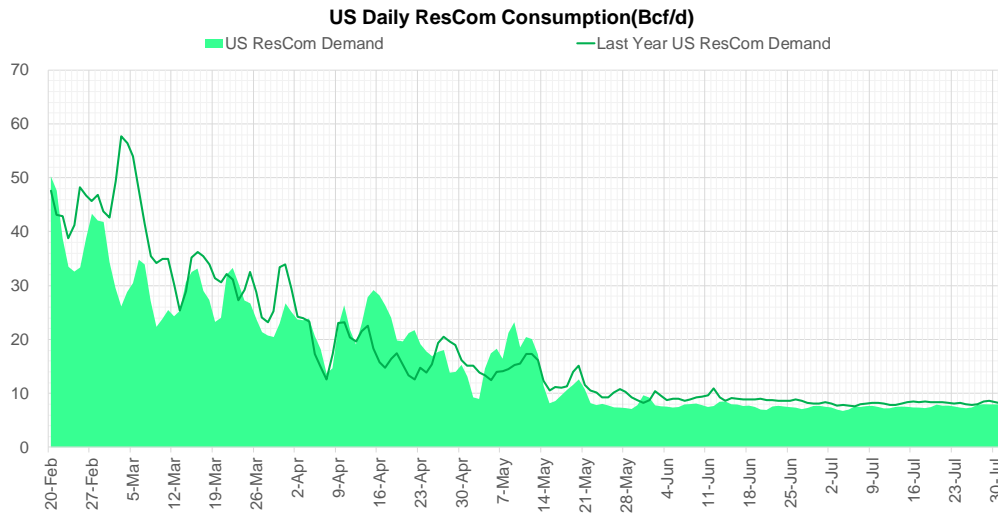
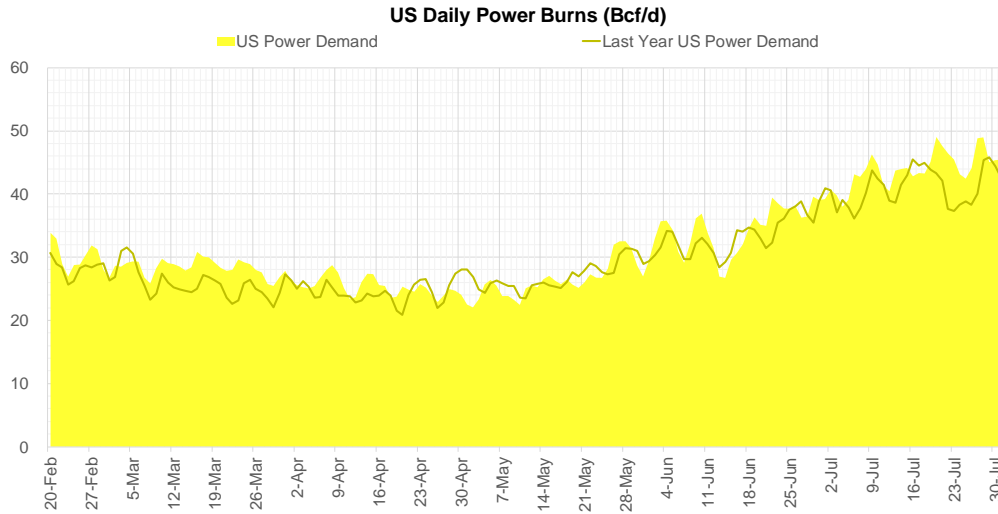
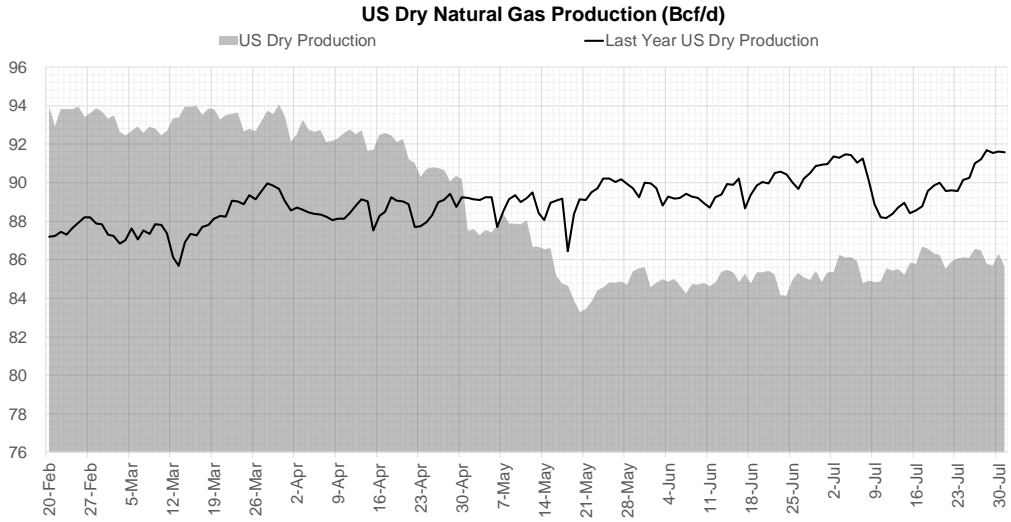
Weather Based End of Winter Projection (Bcf)

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.

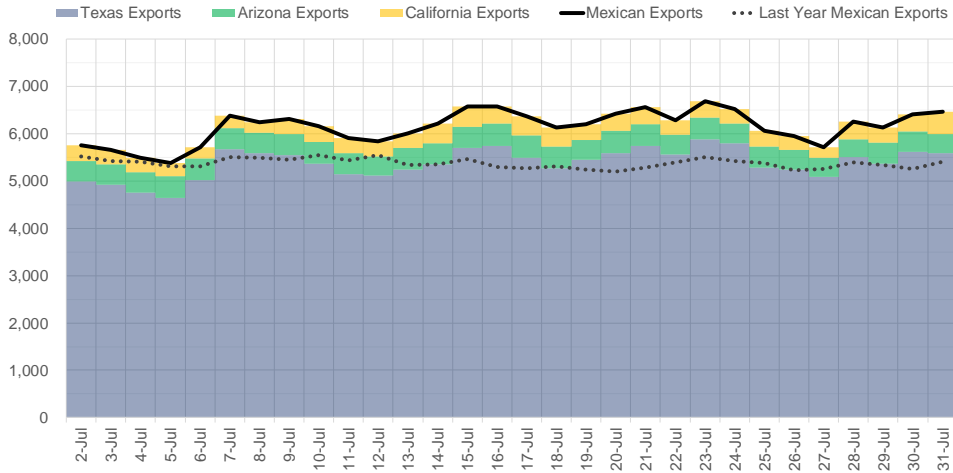
Supply – Demand Trends



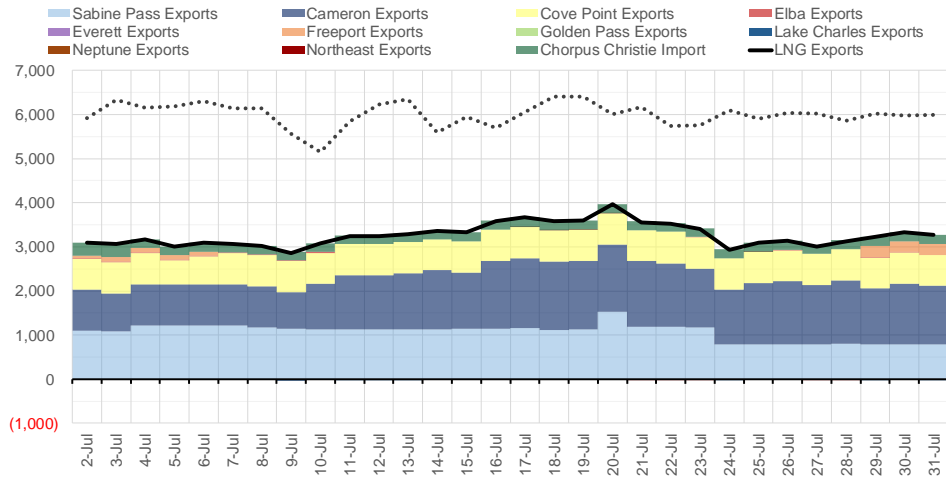
Source: Bloomberg

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

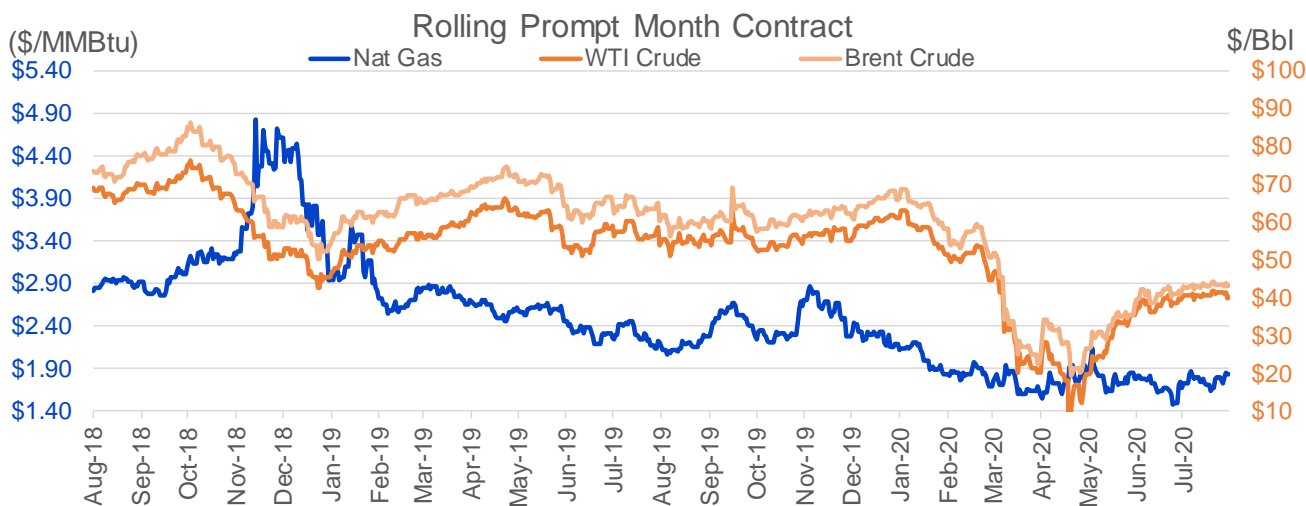
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
10	2020	C	2.50	4708	10	2020	C	2.75	50608
9	2020	P	1.75	4297	10	2020	P	1.50	49284
9	2020	P	1.65	3366	10	2020	C	2.50	39130
12	2020	P	2.75	3350	3	2021	P	2.00	35531
9	2020	C	2.25	3258	10	2020	P	1.60	33272
10	2020	C	2.10	3164	10	2020	C	3.00	31603
9	2020	P	1.50	2975	10	2020	P	2.00	30683
9	2020	C	2.00	2813	9	2020	C	2.50	30681
12	2020	C	5.00	2530	9	2020	P	1.50	30176
10	2020	P	1.40	2207	10	2020	P	1.25	28194
9	2020	C	2.05	2156	10	2020	P	1.75	26392
9	2020	C	2.50	2133	9	2020	P	1.75	26185
9	2020	C	1.90	1917	9	2020	C	3.00	24615
10	2020	P	1.00	1834	10	2020	P	1.00	24239
10	2020	P	1.80	1555	9	2020	P	1.00	24078
9	2020	P	1.80	1424	9	2020	P	1.20	22733
9	2020	C	2.10	1319	3	2021	C	3.00	21629
10	2020	P	1.75	1309	9	2020	C	2.00	20744
11	2022	C	3.00	1175	3	2021	C	6.00	20454
12	2022	C	3.00	1175	10	2020	C	2.10	19804
8	2021	C	4.00	1125	9	2020	P	1.25	19769
10	2020	P	1.50	934	10	2020	P	1.30	19057
9	2020	C	1.95	917	9	2020	P	1.30	19039
11	2020	C	2.50	902	9	2020	C	2.25	18856
9	2020	C	1.80	837	9	2020	C	2.75	18770
9	2020	C	2.35	822	1	2021	C	3.50	18489
9	2020	P	1.70	785	10	2020	P	2.10	18284
10	2020	P	0.75	750	10	2020	C	3.25	18191
9	2020	C	2.15	723	3	2021	C	3.50	18120
9	2020	P	1.60	683	10	2020	C	2.25	17717
10	2020	P	2.00	680	12	2020	P	2.00	17492
10	2020	P	1.25	657	1	2021	C	3.00	17410
12	2020	P	2.00	651	11	2020	P	1.75	16827
10	2020	C	2.00	635	10	2020	C	2.40	16181
10	2020	C	2.25	601	10	2020	C	2.00	16023
3	2021	C	4.50	600	12	2020	P	1.50	15756
10	2020	C	2.35	597	4	2021	C	3.00	15512
10	2020	C	2.05	593	11	2020	C	3.50	14012
9	2020	P	1.90	569	9	2020	P	2.00	13926
11	2020	P	1.50	561	9	2020	C	2.10	13779
2	2021	P	2.50	550	1	2021	C	3.75	13718
10	2020	C	2.20	542	9	2020	C	3.25	12912
9	2020	C	2.65	504	1	2021	C	4.50	12907
10	2020	C	2.45	502	10	2020	P	1.40	12839
9	2020	C	1.50	501	10	2020	C	2.20	12744
11	2020	P	2.05	500	4	2021	P	2.00	12724
11	2020	C	3.00	473	10	2021	C	3.00	12550
3	2021	C	3.50	425	1	2021	P	2.50	12509
2	2021	P	2.75	400	5	2021	C	3.00	12411
					10	2020	P	1.2	12393

Source: CME, Nasdaq, ICE

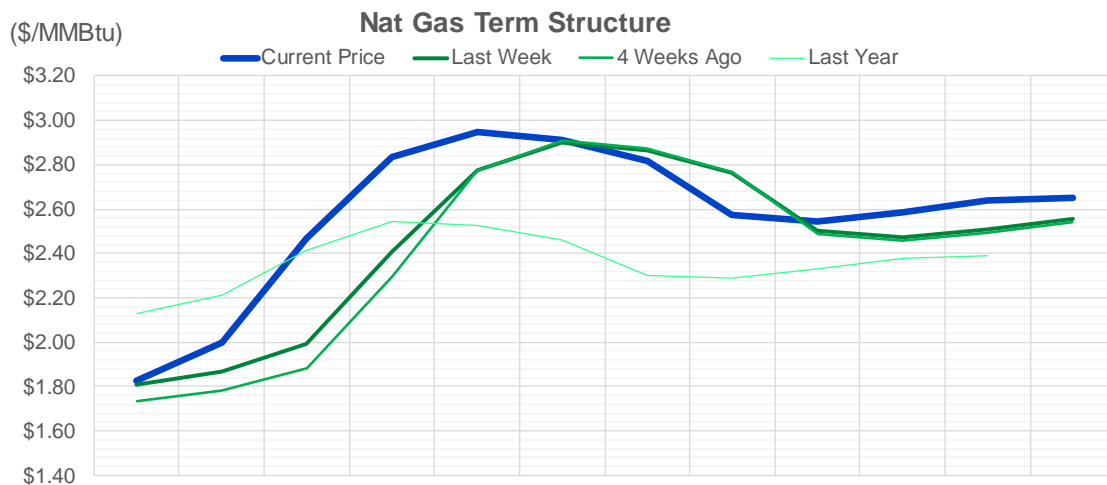
Nat Gas Futures Open Interest CME, and ICE Combined

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	345505	10	345495	SEP 20	80037	69641	10395.5
OCT 20	145945	348866	-202921	OCT 20	81464	80520	943.5
NOV 20	106089	154303	-48214	NOV 20	66409	81780	-15370.25
DEC 20	86322	102630	-16308	DEC 20	64617	66341	-1724.25
JAN 21	130125	89282	40843	JAN 21	85030	64658	20372.25
FEB 21	41231	131933	-90702	FEB 21	51065	84879	-33813.5
MAR 21	78591	41670	36921	MAR 21	69093	50783	18310
APR 21	78103	78187	-84	APR 21	57023	68761	-11738.25
MAY 21	37421	78436	-41015	MAY 21	47808	56966	-9158.25
JUN 21	21405	37028	-15623	JUN 21	46667	47817	-1150.75
JUL 21	18276	21368	-3092	JUL 21	47305	46429	876
AUG 21	15336	18125	-2789	AUG 21	47530	47374	156
SEP 21	17546	15329	2217	SEP 21	45069	47638	-2569
OCT 21	44222	17537	26685	OCT 21	66953	44919	22033.5
NOV 21	23523	43469	-19946	NOV 21	38999	66738	-27738.25
DEC 21	15799	23212	-7413	DEC 21	40521	38764	1757.25
JAN 22	16766	16093	673	JAN 22	33295	40481	-7186.25
FEB 22	9503	15857	-6354	FEB 22	28786	31931	-3144.75
MAR 22	13920	9072	4848	MAR 22	31018	28560	2458
APR 22	13885	13852	33	APR 22	29352	30707	-1354.5
MAY 22	5456	13823	-8367	MAY 22	23134	28999	-5865.25
JUN 22	2710	5496	-2786	JUN 22	22877	22964	-87
JUL 22	2168	2706	-538	JUL 22	22722	22697	25
AUG 22	1659	2148	-489	AUG 22	22639	22582	57
SEP 22	2202	1631	571	SEP 22	22156	22453	-297
OCT 22	2485	2193	292	OCT 22	23986	21976	2009.5
NOV 22	1911	2418	-507	NOV 22	21241	23811	-2570.25
DEC 22	1871	1878	-7	DEC 22	21734	21060	673.75
JAN 23	2643	1829	814	JAN 23	11768	21562	-9793.5
FEB 23	651	2596	-1945	FEB 23	10701	11669	-968

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	\$1.829	\$1.997	\$2.468	\$2.832	\$2.949	\$2.914	\$2.815	\$2.574	\$2.544	\$2.588	\$2.639	\$2.652
Last Week	\$1.808	\$1.867	\$1.994	\$2.410	\$2.773	\$2.898	\$2.865	\$2.764	\$2.505	\$2.472	\$2.511	\$2.557
vs. Last Week	\$0.021	\$0.130	\$0.474	\$0.422	\$0.176	\$0.016	-\$0.050	-\$0.190	\$0.039	\$0.116	\$0.128	\$0.095
4 Weeks Ago	\$1.734	\$1.785	\$1.884	\$2.297	\$2.773	\$2.907	\$2.873	\$2.768	\$2.490	\$2.457	\$2.495	\$2.540
vs. 4 Weeks Ago	\$0.095	\$0.212	\$0.584	\$0.535	\$0.176	\$0.007	-\$0.058	-\$0.194	\$0.054	\$0.131	\$0.144	\$0.112
Last Year	\$2.121	\$2.130	\$2.213	\$2.413	\$2.546	\$2.525	\$2.460	\$2.298	\$2.287	\$2.329	\$2.376	\$2.388
vs. Last Year	-\$0.292	-\$0.133	\$0.255	\$0.419	\$0.403	\$0.389	\$0.355	\$0.276	\$0.257	\$0.259	\$0.263	\$0.264

	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	1.59	1.66	0.07
TETCO M3	\$/MMBtu	1.67	1.74	0.07
FGT Zone 3	\$/MMBtu	1.52	1.87	0.35
Zone 6 NY	\$/MMBtu	1.52	1.66	0.14
Chicago Citygate	\$/MMBtu	1.75	1.73	-0.02
Michcon	\$/MMBtu	1.72	1.68	-0.04
Columbia TCO Pool	\$/MMBtu	1.56	1.56	0.00
Ventura	\$/MMBtu	1.70	1.74	0.04
Rockies/Opal	\$/MMBtu	1.66	1.61	-0.05
El Paso Permian Basin	\$/MMBtu	1.06	1.50	0.44
Socal Citygate	\$/MMBtu	2.61	1.91	-0.70
Malin	\$/MMBtu	1.78	1.73	-0.05
Houston Ship Channel	\$/MMBtu	1.79	1.78	-0.01
Henry Hub Cash	\$/MMBtu	1.75	1.70	-0.05
AECO Cash	C\$/GJ	1.60	1.55	-0.06
Station2 Cash	C\$/GJ	1.56	1.70	0.14
Dawn Cash	C\$/GJ	1.71	1.71	0.00

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks		vs. Last Year
				Ago		
NatGas Jan/Apr	\$/MMBtu	-0.38	▲ 0.018	▲ 0.042	▲ 0.000	
NatGas Mar/Apr	\$/MMBtu	-0.241	▲ 0.018	▼ -0.519	▼ -0.485	
NatGas Oct/Nov	\$/MMBtu	0.47	▲ 0.055	▲ 0.058	▲ 0.399	
NatGas Oct/Jan	\$/MMBtu	0.95	▲ 0.048	▼ -0.071	▲ 0.597	
WTI Crude	\$/Bbl	40.22	▼ -1.070	▼ -0.430	▼ -15.440	
Brent Crude	\$/Bbl	43.32	▼ -0.020	▲ 0.520	▼ -18.570	
Fuel Oil, NY Harbour 1%	\$/Bbl	98.03	▲ 0.000	▲ 0.000	▲ 0.000	
Heating Oil	cents/Gallon	122.25	▼ -3.380	▼ -0.860	▼ -66.770	
Propane, Mt. Bel	cents/Gallon	0.49	▼ -0.005	▲ 0.025	▲ 0.043	
Ethane, Mt. Bel	cents/Gallon	0.22	▼ 0.000	▲ 0.015	▲ 0.090	
Coal, PRB	\$/MTon	12.30	▲ 0.000	▲ 0.000	▲ 0.000	
Coal, ILB	\$/MTon	31.05	▲ 0.000	▲ 0.000	▼ -7.500	