

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 3.00 ▲	\$ 0.04 ▲	\$ 0.08

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 67.27 ▲	\$ 0.42 ▲	\$ 2.1

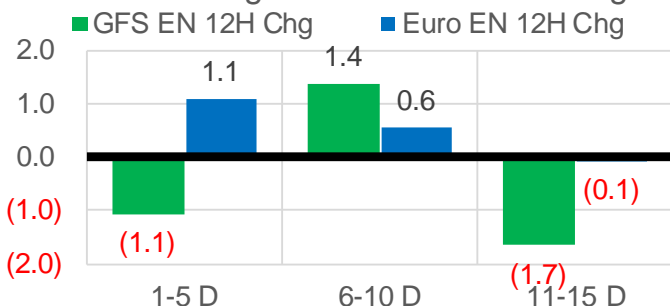
	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 69.78 ▲	\$ 0.32 ▲	\$ 2.0

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- [Supply – Demand Trends](#)
- [Nat Gas Options Volume and Open Interest](#)
- [Nat Gas Futures Open Interest](#)
- [Price Summary](#)

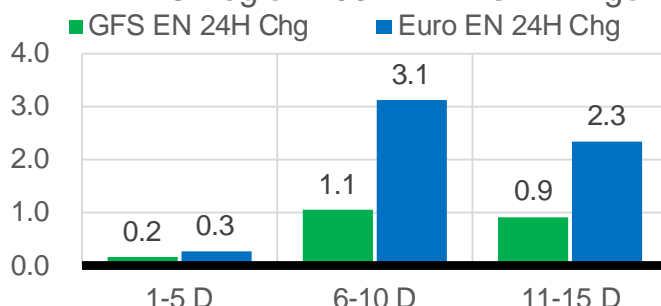
Vs. 12H Ago

L48 Region - 00z TDD vs 12H Ago



Vs. 24H Ago

L48 Region - 00z TDD vs 24H Ago



	Current	Δ from YD	Δ from 7D Avg
US Dry Production	90.3 ▼	-1.60 ▼	-1.96

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	27.2 ▼	-3.71 ▼	-2.59

	Current	Δ from YD	Δ from 7D Avg
US ResComm	11.6 ▲	0.43 ▲	2.37

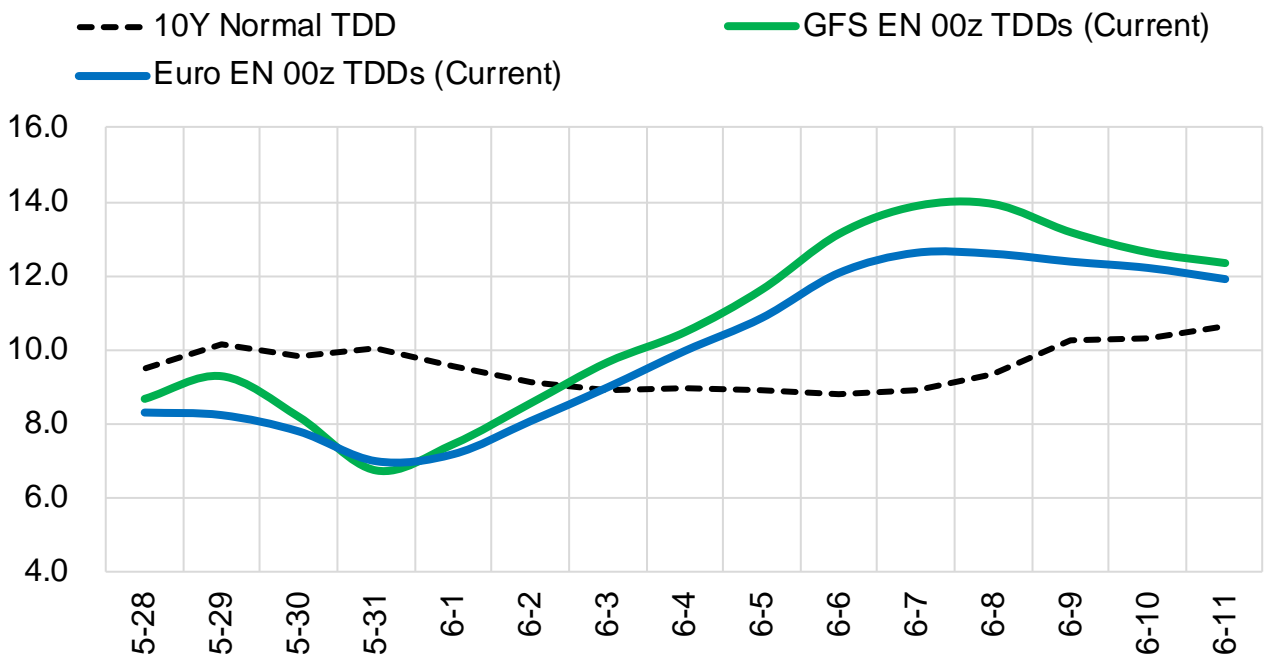
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	3.5 ▼	-0.89 ▼	-0.92

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	11.1 ▲	0.80 ▲	0.60

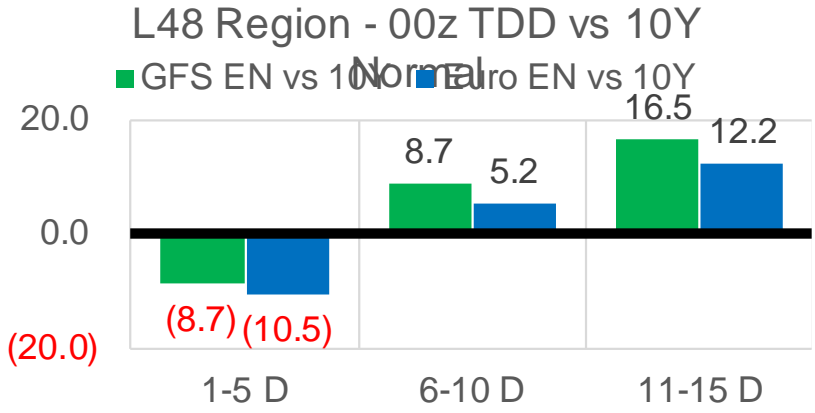
	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.7 ▼	-0.37 ▼	-0.11

Short-term Weather Model Outlooks (00z)

L48 Region



Vs. 10Y Normal



Source: WSI , Bloomberg

Lower 48 Component Models

Daily Balances

	22-May	23-May	24-May	25-May	26-May	27-May	28-May	DoD	vs. 7D
Lower 48 Dry Production	92.6	92.6	92.8	91.9	91.8	91.9	90.3	▼ -1.6	▼ -2.0
Canadian Imports	4.3	4.3	4.3	4.7	4.7	4.4	3.5	▼ -0.9	▼ -0.9
L48 Power	27.8	28.7	29.9	31.1	32.1	30.9	27.2	▼ -3.7	▼ -2.9
L48 Residential & Commercial	8.9	8.8	9.1	8.5	9.0	11.2	11.6	▲ 0.4	▲ 2.4
L48 Industrial	20.2	20.3	20.5	20.5	20.2	20.3	19.8	▼ -0.5	▼ -0.6
L48 Lease and Plant Fuel	5.1	5.1	5.1	5.0	5.0	5.0	4.9	▼ -0.1	▼ -0.1
L48 Pipeline Distribution	1.9	1.9	2.0	2.0	2.1	2.2	2.0	▼ -0.2	▼ 0.0
L48 Regional Gas Consumption	63.9	64.9	66.6	67.2	68.4	69.6	65.6	▼ -4.1	▼ -1.2
Net LNG Delivered	11.12	11.18	10.70	9.89	9.58	10.30	11.10	▲ 0.8	▲ 0.6
Total Mexican Exports	6.5	6.3	6.9	7.0	6.9	7.1	6.7	▼ -0.4	▼ -0.1
Implied Daily Storage Activity	15.3	14.5	13.0	12.4	11.6	9.3	10.5		
EIA Reported Daily Storage Activity									
Daily Model Error									

EIA Storage Week Balances

	23-Apr	30-Apr	7-May	14-May	21-May	28-May	WoW	vs. 4W
Lower 48 Dry Production	90.9	91.5	91.6	91.7	91.6	92.2	▲ 0.6	▲ 0.6
Canadian Imports	5.3	4.6	4.6	4.8	4.6	4.5	▼ -0.1	▼ -0.2
L48 Power	25.8	26.5	26.5	25.9	26.6	29.8	▲ 3.2	▲ 3.5
L48 Residential & Commercial	24.0	16.5	13.7	18.0	10.3	9.3	▼ -1.1	▼ -5.4
L48 Industrial	19.8	20.1	20.4	18.6	20.5	20.3	▼ -0.1	▲ 0.4
L48 Lease and Plant Fuel	5.0	5.0	5.0	5.0	5.0	5.1	▲ 0.0	▲ 0.0
L48 Pipeline Distribution	2.5	2.1	2.0	2.2	1.9	2.0	▲ 0.1	▼ -0.1
L48 Regional Gas Consumption	77.0	70.2	67.6	69.8	64.3	66.5	▲ 2.2	▼ -1.5
Net LNG Exports	11.6	11.4	11.3	11.0	10.4	10.5	▲ 0.1	▼ -0.5
Total Mexican Exports	6.8	6.7	6.7	6.8	6.8	6.8	▲ 0.1	▲ 0.1
Implied Daily Storage Activity	0.9	7.9	10.6	8.9	14.7	12.9	-1.8	
EIA Reported Daily Storage Activity	2.1	8.6	10.1	10.1	16.4			
Daily Model Error	-1.2	-0.7	0.4	-1.2	-1.7			

Monthly Balances

	2Yr Ago May-19	LY May-20	Jan-21	Feb-21	Mar-21	Apr-21	MTD May-21	MoM	vs. LY
Lower 48 Dry Production	90.6	87.3	91.6	84.7	91.7	91.7	91.7	▲ 0.1	▲ 7.1
Canadian Imports	4.7	3.9	6.3	6.4	4.8	4.7	4.6	▼ -0.1	▼ -1.8
L48 Power	26.9	26.9	28.2	27.9	25.1	25.1	27.3	▲ 2.1	▼ -0.6
L48 Residential & Commercial	12.8	12.7	43.9	47.9	28.4	19.7	12.7	▼ -7.0	▼ -35.2
L48 Industrial	23.1	19.7	24.3	21.6	19.7	20.7	19.9	▼ -0.7	▼ -1.7
L48 Lease and Plant Fuel	5.0	4.8	5.0	4.7	5.0	5.0	5.0	▲ 0.0	▲ 0.4
L48 Pipeline Distribution	2.1	2.0	3.2	3.3	2.5	2.2	2.0	▼ -0.2	▼ -1.2
L48 Regional Gas Consumption	69.9	66.2	104.7	105.4	80.7	72.7	67.0	▼ -5.8	▼ -38.4
Net LNG Exports	5.6	6.7	10.5	8.4	11.1	11.5	10.8	▼ -0.7	▲ 2.4
Total Mexican Exports	5.0	4.8	6.2	5.7	6.5	6.7	6.7	▲ 0.0	▲ 1.0
Implied Daily Storage Activity	14.8	13.6	-23.5	-28.5	-1.9	5.4	11.8		
EIA Reported Daily Storage Activity									
Daily Model Error									

Source: Bloomberg, analytix.ai

Regional S/D Models Storage Projection

Week Ending 28-May

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	12.6	1.4	14.0	98
East	3.1	0.9	4.0	28
Midwest	4.8	-0.4	4.4	30
Mountain	4.1	-3.1	1.0	7
South Central	-1.0	4.3	3.3	23
Pacific	1.7	-0.3	1.4	10

*Adjustment Factor is calculated based on historical regional deltas

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

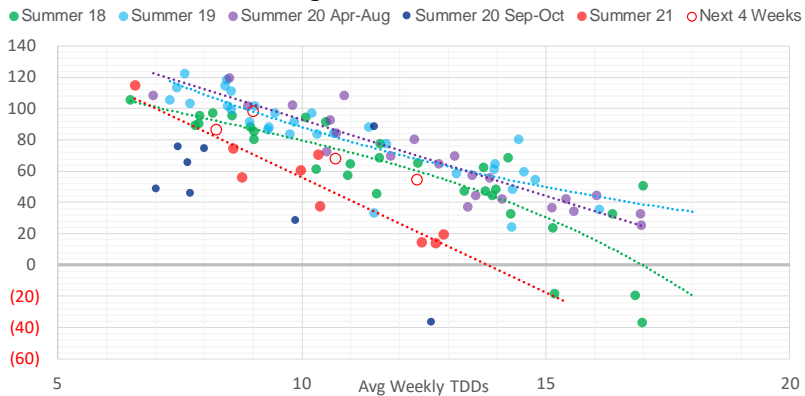


Weather Model Storage Projection

Next report
and beyond

Week Ending	GWDDs	Week Storage Projection
28-May	9.0	98
04-Jun	8.3	86
11-Jun	12.4	54
18-Jun	10.7	68

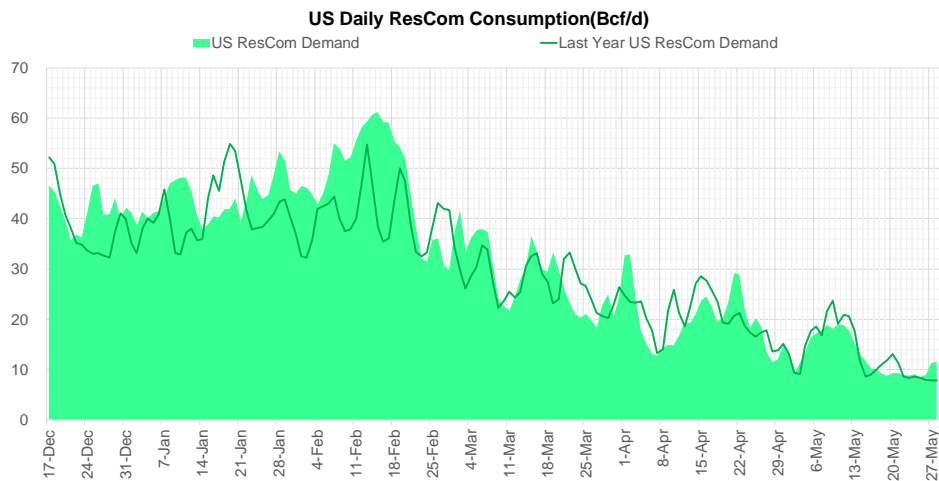
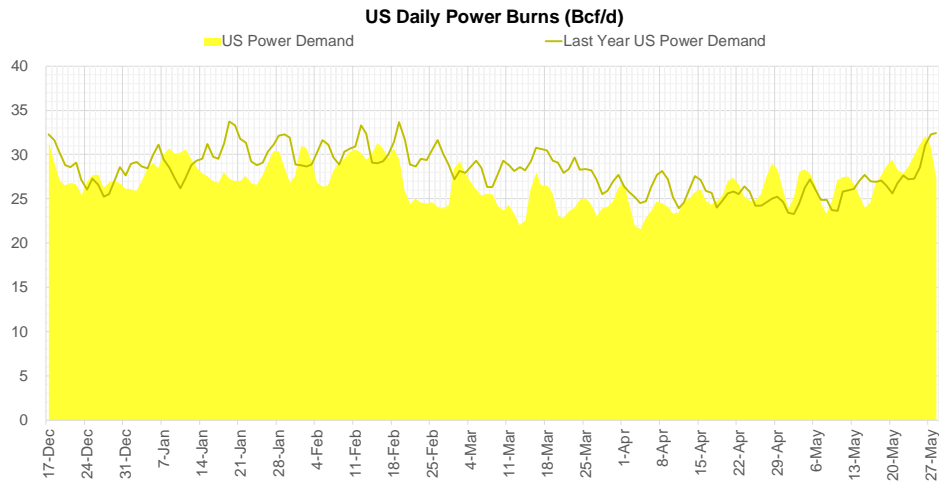
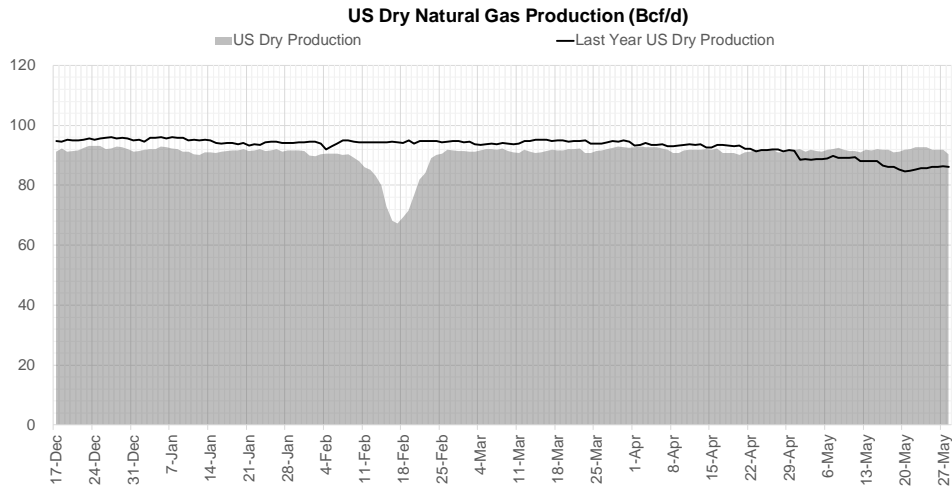
Weather Storage Model - Next 4 Week Forecast



Go to larger image



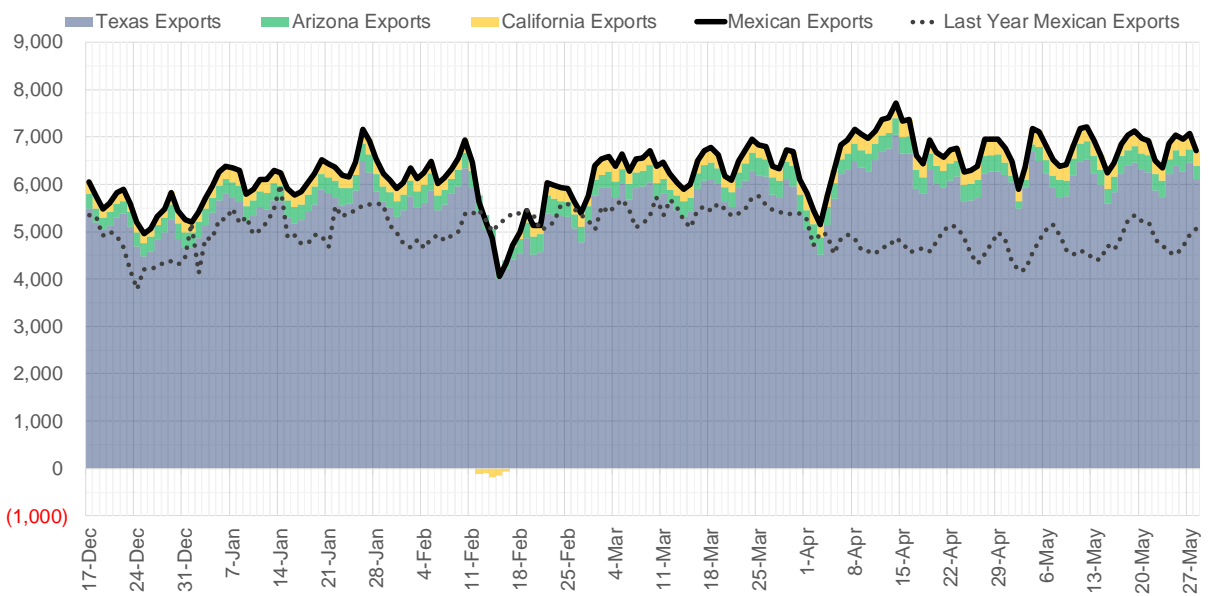
Supply – Demand Trends



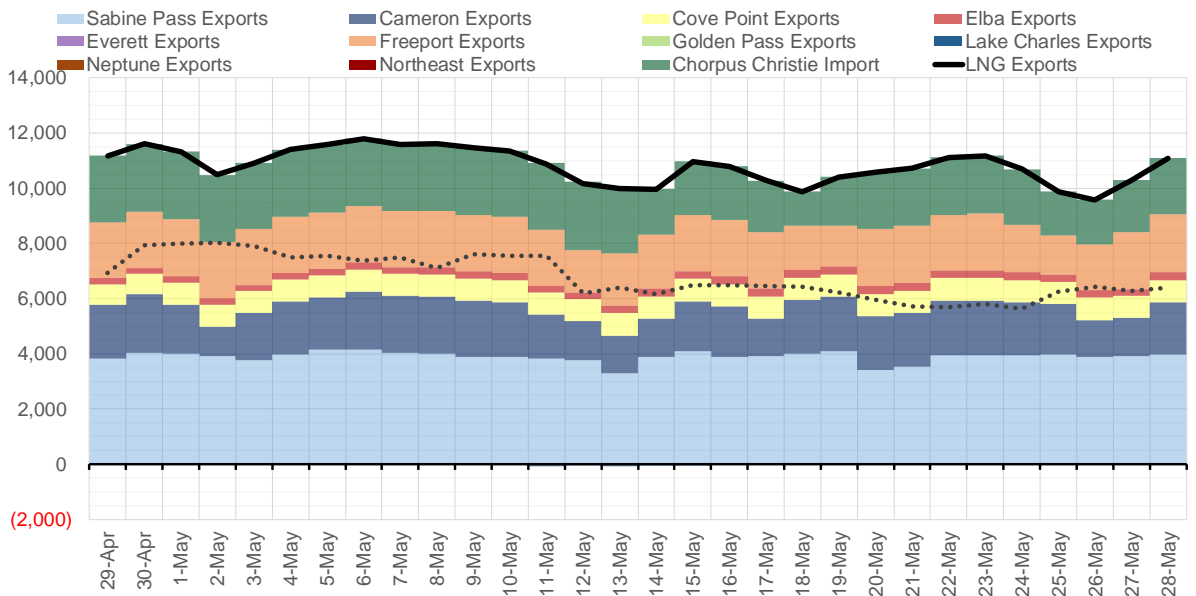
Source: Bloomberg

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 (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.

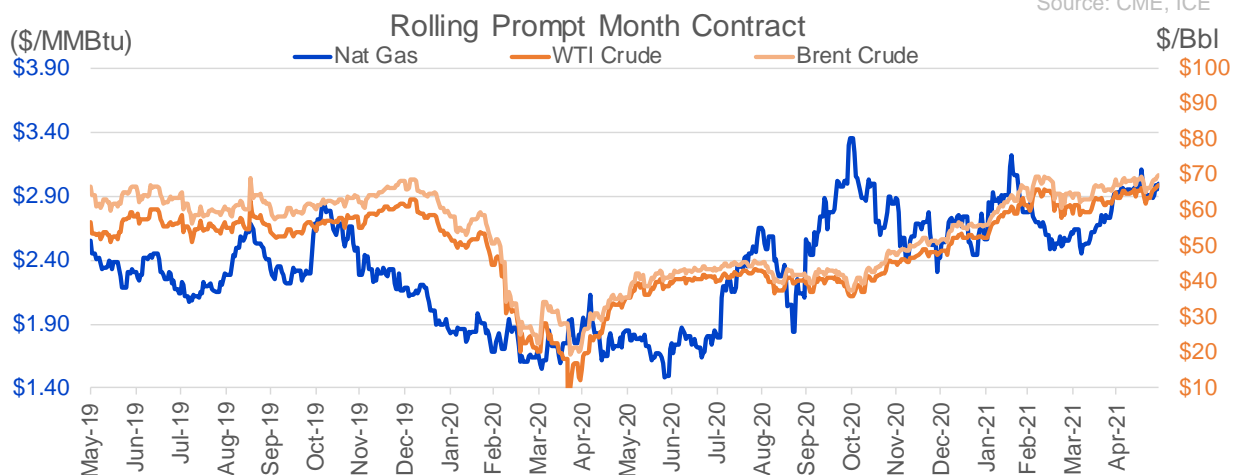
Nat Gas Options Volume and Open Interest CME, ICE and Nasdaq Combined

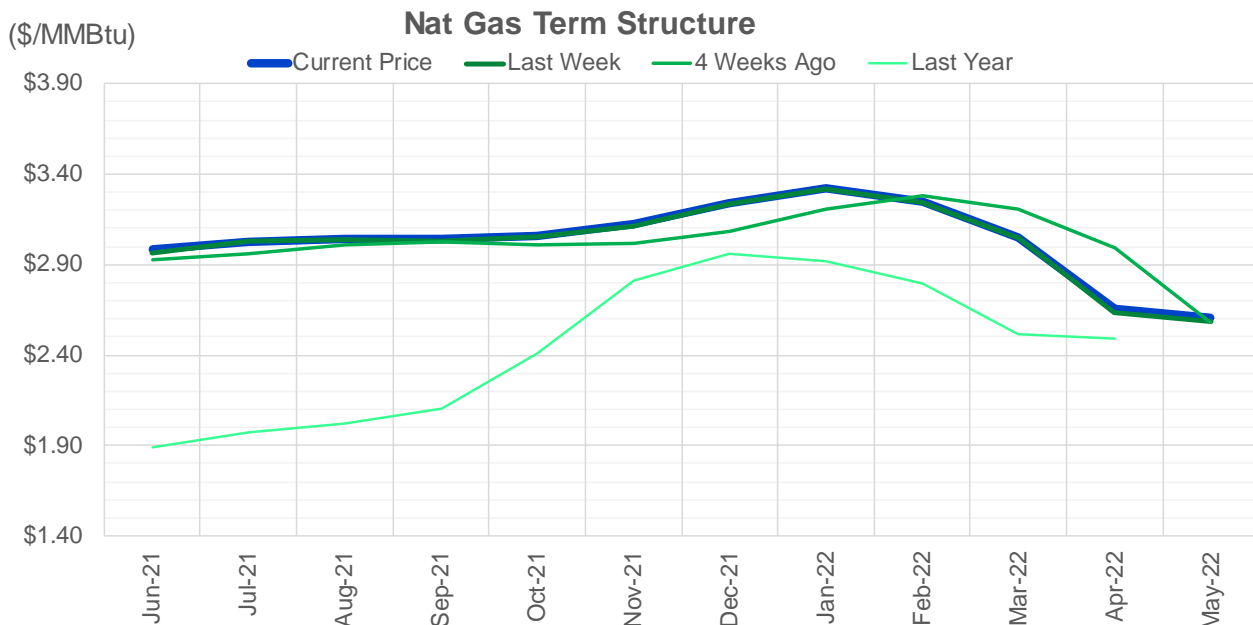
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
8	2021	C	3.50	8437	10	2021	C	4.00	40561
7	2021	P	2.70	7515	8	2021	C	3.50	35068
7	2021	C	3.25	6637	9	2021	C	4.00	33043
7	2021	C	3.50	6179	7	2021	C	3.50	33025
8	2021	P	2.50	5642	8	2021	C	3.25	32934
12	2021	P	2.50	4450	10	2021	C	3.25	30371
8	2021	C	3.25	4260	10	2021	P	2.50	29377
11	2021	P	2.50	3980	10	2021	C	5.00	27284
7	2021	C	3.30	3933	7	2021	C	4.00	26676
7	2021	P	2.60	3510	7	2021	P	2.50	26223
8	2021	C	3.30	3311	7	2021	C	3.25	26081
7	2021	P	2.75	2720	10	2021	C	3.50	25561
7	2021	P	2.80	2470	7	2021	P	2.80	25380
7	2021	C	3.00	2388	8	2021	C	4.00	24427
9	2021	P	2.50	2352	7	2021	P	2.75	23815
7	2021	P	2.95	2307	8	2021	P	2.50	21689
1	2022	P	2.50	2000	9	2021	C	3.50	21414
8	2022	C	4.00	2000	12	2021	C	4.00	20853
8	2022	C	6.00	2000	8	2021	P	2.00	20589
9	2021	C	4.00	1950	9	2021	P	2.00	20412
9	2021	C	3.30	1719	7	2021	C	3.00	20186
10	2021	C	3.50	1676	9	2021	P	2.50	20155
9	2021	C	3.25	1473	9	2021	C	3.25	20034
7	2021	C	3.15	1460	4	2022	C	3.00	19685
9	2021	P	2.75	1370	8	2021	P	2.25	19386
11	2021	P	3.00	1240	10	2021	C	3.00	19240
7	2021	C	3.20	1073	11	2021	C	4.00	18162
7	2021	C	3.35	1008	10	2021	P	2.00	18063
7	2021	C	2.90	1006	10	2021	P	2.25	17652
10	2021	C	4.00	1000	8	2021	C	3.75	16871
4	2022	P	2.25	1000	7	2021	P	2.70	16797
7	2021	C	3.10	964	3	2022	C	4.00	16695
7	2021	P	2.65	960	8	2021	P	2.75	16382
11	2021	P	2.70	960	8	2021	C	3.00	16308
7	2021	C	3.05	956	7	2021	P	2.00	16035
9	2021	C	3.50	950	10	2021	P	2.75	15248
11	2021	P	2.75	950	3	2022	C	3.00	14519
7	2021	C	2.95	926	10	2021	C	4.50	14354
8	2021	P	2.65	915	3	2022	C	5.00	14200
3	2022	P	2.25	800	7	2021	P	3.00	14183
7	2021	P	2.90	754	10	2021	C	6.00	13996
10	2021	P	2.50	718	12	2021	P	2.00	13884
12	2021	P	3.00	700	9	2021	P	1.90	13733
7	2021	P	2.50	683	7	2021	P	2.25	13539
8	2021	P	2.80	605	7	2021	C	3.75	13515
7	2021	P	2.85	594	7	2021	P	2.65	13485
11	2021	C	3.25	574	5	2022	C	3.00	13355
10	2021	C	4.50	560	1	2022	C	4.00	13216
9	2021	P	2.25	510	6	2022	C	3.00	13068
					10	2022	C	3	12856

Source: CME, 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		Current	Prior	Daily Change
JUL 21	310762	525	310237	JUL 21	101251	86478	14773
AUG 21	90049	308153	-218104	AUG 21	81166	101052	-19886
SEP 21	145090	84652	60438	SEP 21	76833	79521	-2688
OCT 21	133706	140604	-6898	OCT 21	92660	76752	15909
NOV 21	76228	133400	-57172	NOV 21	70262	93223	-22961
DEC 21	52620	75275	-22655	DEC 21	65112	69404	-4292
JAN 22	82259	52281	29978	JAN 22	71948	64939	7009
FEB 22	30537	81787	-51250	FEB 22	57441	71838	-14398
MAR 22	55524	30109	25415	MAR 22	60104	56886	3219
APR 22	56627	56109	518	APR 22	52821	60340	-7519
MAY 22	37542	56993	-19451	MAY 22	47206	52639	-5433
JUN 22	21214	37209	-15995	JUN 22	43613	47469	-3857
JUL 22	11647	20505	-8858	JUL 22	44361	43495	866
AUG 22	10320	11463	-1143	AUG 22	42338	44337	-1999
SEP 22	11155	10356	799	SEP 22	42787	42314	473
OCT 22	28286	11107	17179	OCT 22	47188	42688	4500
NOV 22	11717	28282	-16565	NOV 22	37945	47035	-9090
DEC 22	11349	11577	-228	DEC 22	42278	37885	4394
JAN 23	6020	11331	-5311	JAN 23	24740	42224	-17484
FEB 23	2816	5920	-3104	FEB 23	22547	24677	-2130
MAR 23	5708	2766	2942	MAR 23	24371	22471	1900
APR 23	5940	5504	436	APR 23	20257	24343	-4085
MAY 23	4499	5740	-1241	MAY 23	19996	20098	-102
JUN 23	965	4500	-3535	JUN 23	18531	19848	-1317
JUL 23	1098	964	134	JUL 23	18489	18373	116
AUG 23	847	1088	-241	AUG 23	18587	18396	192
SEP 23	777	847	-70	SEP 23	17998	18494	-497
OCT 23	1721	777	944	OCT 23	18813	17901	913
NOV 23	684	1721	-1037	NOV 23	18284	18653	-369
DEC 23	1040	684	356	DEC 23	18689	18167	522





	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22
Current Price	\$2.984	\$3.027	\$3.045	\$3.040	\$3.057	\$3.122	\$3.241	\$3.319	\$3.246	\$3.051	\$2.656	\$2.606
Last Week	\$2.964	\$3.028	\$3.041	\$3.034	\$3.051	\$3.115	\$3.238	\$3.317	\$3.242	\$3.045	\$2.637	\$2.582
vs. Last Week	\$0.020	-\$0.001	\$0.004	\$0.006	\$0.006	\$0.007	\$0.003	\$0.002	\$0.004	\$0.006	\$0.019	\$0.024
4 Weeks Ago	\$2.925	\$2.960	\$3.011	\$3.025	\$3.007	\$3.019	\$3.080	\$3.203	\$3.282	\$3.203	\$2.990	\$2.578
vs. 4 Weeks Ago	\$0.059	\$0.067	\$0.034	\$0.015	\$0.050	\$0.103	\$0.161	\$0.116	-\$0.036	-\$0.152	-\$0.334	\$0.028
Last Year	\$1.722	\$1.886	\$1.972	\$2.024	\$2.102	\$2.410	\$2.814	\$2.956	\$2.921	\$2.797	\$2.515	\$2.489
vs. Last Year	\$1.262	\$1.141	\$1.073	\$1.016	\$0.955	\$0.712	\$0.427	\$0.363	\$0.325	\$0.254	\$0.141	\$0.117

	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	2.50	2.33	-0.17
TETCO M3	\$/MMBtu	2.34	2.29	-0.05
FGT Zone 3	\$/MMBtu	2.41	3.01	0.60
Zone 6 NY	\$/MMBtu	2.41	2.28	-0.13
Chicago Citygate	\$/MMBtu	2.80	2.84	0.04
Michcon	\$/MMBtu	2.82	2.79	-0.03
Columbia TCO Pool	\$/MMBtu	2.50	2.49	-0.01
Ventura	\$/MMBtu	2.75	2.77	0.02
Rockies/Opal	\$/MMBtu	2.69	2.75	0.06
El Paso Permian Basin	\$/MMBtu	2.51	2.81	0.30
Socal Citygate	\$/MMBtu	4.05	3.54	-0.51
Malin	\$/MMBtu	2.78	3.03	0.25
Houston Ship Channel	\$/MMBtu	2.85	3.05	0.20
Henry Hub Cash	\$/MMBtu	2.88	2.79	-0.09
AECO Cash	C\$/GJ	2.60	2.48	-0.12
Station2 Cash	C\$/GJ	2.54	2.90	0.36
Dawn Cash	C\$/GJ	2.81	2.79	-0.02

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks Ago	vs. Last Year
NatGas Jul21/Oct21	\$/MMBtu	0.030	▲ 0.007	▲ 0.022	▲ 0.029
NatGas Oct21/Nov21	\$/MMBtu	0.065	▲ 0.001	▲ 0.004	▲ 0.017
NatGas Oct21/Jan22	\$/MMBtu	0.262	▼ -0.004	▼ -0.001	▼ -0.022
NatGas Apr22/Oct22	\$/MMBtu	0.033	▲ 0.006	▲ 0.011	▼ -0.022
WTI Crude	\$/Bbl	66.21	▲ 2.850	▲ 2.350	▲ 33.400
Brent Crude	\$/Bbl	68.87	▲ 2.210	▲ 1.600	▲ 34.130
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18	▲ 0.000	▲ 0.000	▲ 0.000
Heating Oil	cents/Gallon	204.52	▲ 3.810	▲ 10.660	▲ 107.310
Propane, Mt. Bel	cents/Gallon	0.82	▲ 0.007	▲ 0.007	▲ 0.413
Ethane, Mt. Bel	cents/Gallon	0.26	▼ -0.001	▲ 0.024	▲ 0.038
Coal, PRB	\$/MTon	12.30	▲ 0.000	▲ 0.000	▲ 0.000
Coal, PRB	\$/MMBtu	0.70			
Coal, ILB	\$/MTon	31.05	▲ 0.000	▲ 0.000	▲ 0.000
Coal, ILB	\$/MMBtu	1.32			

Weather Storage Model - Next 4 Week Forecast

● Summer 18
 ● Summer 19
 ● Summer 20 Apr-Aug
 ● Summer 20 Sept-Oct
 ● Summer 21
 ○ Next 4 Weeks

