

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 2.98	▼ \$ (0.03)	▼ \$ (0.01)

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 64.12	▼ \$ (1.37)	▼ \$ (1.3)

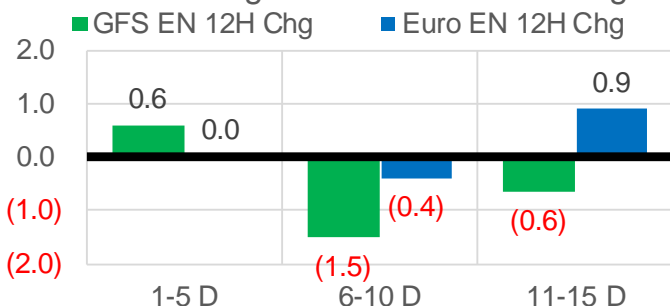
	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 67.33	▼ \$ (1.38)	▼ \$ (1.3)

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](#)

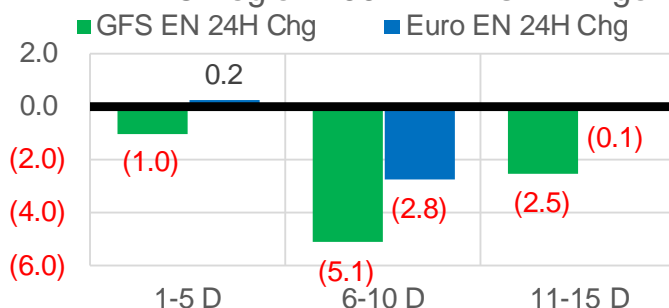
Vs. 12H Ago

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	90.1	▼ -1.29	▼ -2.08

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	28.2	▲ 0.66	▲ 2.17

	Current	Δ from YD	Δ from 7D Avg
US ResComm	8.8	▼ -0.39	▼ -3.71

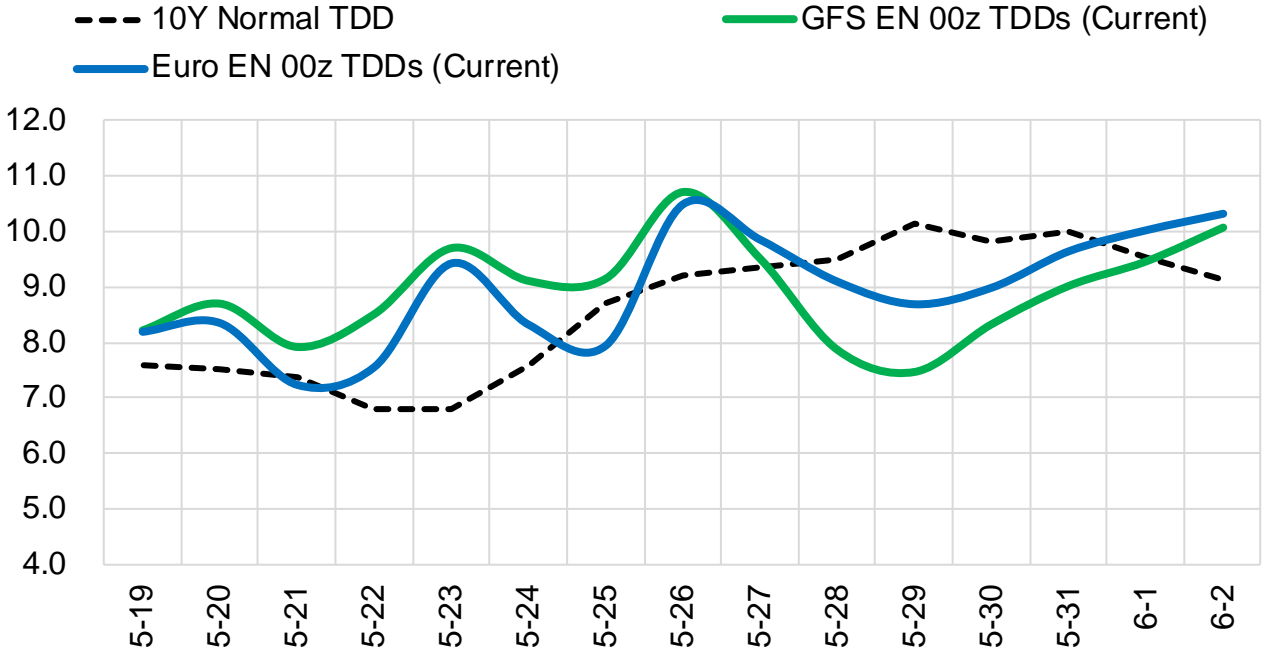
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	4.6	▲ 0.18	▲ 0.06

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	10.4	▲ 0.48	▲ 0.07

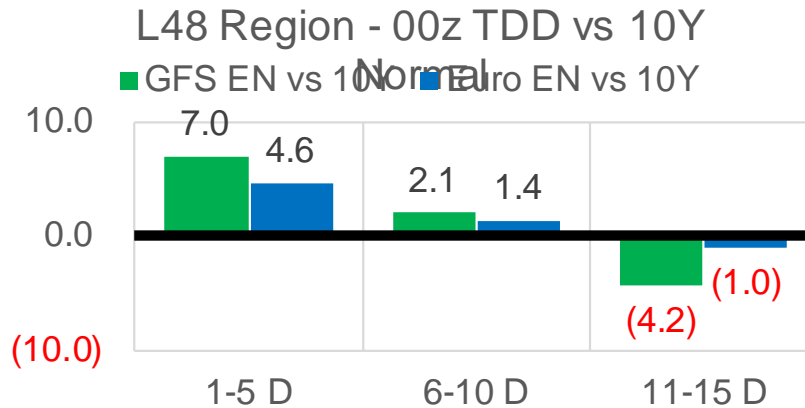
	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	7.1	▼ -0.04	▲ 0.35

Short-term Weather Model Outlooks (00z)

L48 Region



Vs. 10Y Normal



Source: WSI , Bloomberg

Lower 48 Component Models

Daily Balances

	13-May	14-May	15-May	16-May	17-May	18-May	19-May	DoD	vs. 7D
Lower 48 Dry Production	92.4	92.2	92.7	92.2	92.3	91.3	90.1	▼ -1.3	▼ -2.2
Canadian Imports	4.8	4.7	4.3	4.3	4.4	4.5	4.6	▲ 0.2	▲ 0.1
L48 Power	26.6	25.3	24.0	24.4	26.6	27.5	28.2	▲ 0.7	▲ 2.4
L48 Residential & Commercial	15.4	13.0	11.7	10.2	10.1	9.1	8.8	▼ -0.4	▼ -2.8
L48 Industrial	20.7	21.0	21.3	21.3	21.4	20.9	20.1	▼ -0.8	▼ -1.0
L48 Lease and Plant Fuel	5.1	5.1	5.1	5.1	5.1	5.0	4.9	▼ -0.1	▼ -0.1
L48 Pipeline Distribution	2.1	2.0	1.8	1.8	1.9	1.9	1.9	▲ 0.0	▼ 0.0
L48 Regional Gas Consumption	70.0	66.3	64.0	62.7	65.0	64.4	63.9	▼ -0.6	▼ -1.5
Net LNG Delivered	9.99	9.95	10.98	10.80	10.28	9.89	10.37	▲ 0.5	▲ 0.1
Total Mexican Exports	6.9	6.6	6.2	6.3	6.7	7.1	7.1	▼ 0.0	▲ 0.4
Implied Daily Storage Activity	10.3	14.0	15.8	16.7	14.7	14.4	13.4		
EIA Reported Daily Storage Activity									
Daily Model Error									

EIA Storage Week Balances

	9-Apr	16-Apr	23-Apr	30-Apr	7-May	14-May	WoW	vs. 4W
Lower 48 Dry Production	92.9	92.3	91.5	92.1	92.2	92.4	▲ 0.2	▲ 0.3
Canadian Imports	4.2	4.3	5.3	4.6	4.6	4.8	▲ 0.3	▲ 0.1
L48 Power	23.3	24.6	25.7	26.4	26.5	25.9	▼ -0.6	▲ 0.0
L48 Residential & Commercial	18.6	18.6	24.0	16.5	13.7	18.0	▲ 4.3	▼ -0.2
L48 Industrial	22.0	21.5	20.3	20.7	21.8	20.6	▼ -1.2	▼ -0.5
L48 Lease and Plant Fuel	5.1	5.0	5.0	5.0	5.0	5.1	▲ 0.0	▲ 0.0
L48 Pipeline Distribution	2.1	2.1	2.5	2.1	2.0	2.2	▲ 0.2	▲ 0.1
L48 Regional Gas Consumption	71.0	71.9	77.6	70.8	69.1	71.8	▲ 2.7	▼ -0.5
Net LNG Exports	11.5	11.4	11.6	11.4	11.3	11.0	▼ -0.3	▼ -0.4
Total Mexican Exports	6.2	7.3	6.8	6.7	6.7	6.8	▲ 0.1	▼ -0.1
Implied Daily Storage Activity	8.3	6.0	0.9	7.8	9.7	7.6	-2.2	
EIA Reported Daily Storage Activity	8.7	5.4	2.1	8.6	10.1			
Daily Model Error	-0.4	0.6	-1.2	-0.8	-0.4			

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	92.2	92.2	92.1	▼ -0.1	▲ 7.5
Canadian Imports	4.7	3.9	6.3	6.4	4.8	4.7	4.6	▼ 0.0	▼ -1.8
L48 Power	26.9	26.9	28.2	27.9	25.1	25.1	26.1	▲ 1.0	▼ -1.8
L48 Residential & Commercial	12.8	12.7	43.9	47.9	28.4	19.7	14.2	▼ -5.5	▼ -33.7
L48 Industrial	23.1	19.7	24.3	21.7	20.2	21.2	21.1	▼ -0.1	▼ -0.5
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	2.1	▼ -0.1	▼ -1.2
L48 Regional Gas Consumption	69.9	66.2	104.7	105.4	81.3	73.3	68.6	▼ -4.8	▼ -36.8
Net LNG Exports	5.6	6.7	10.5	8.4	11.1	11.5	10.9	▼ -0.6	▲ 2.5
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	10.6		
EIA Reported Daily Storage Activity									
Daily Model Error									

Source: Bloomberg, analytix.ai

Regional S/D Models Storage Projection

Week Ending 14-May

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	7.2	0.8	8.0	56
East	0.0	0.6	0.7	5
Midwest	1.2	0.1	1.2	9
Mountain	3.9	-3.0	0.9	6
South Central	0.3	3.2	3.5	24
Pacific	1.9	-0.1	1.7	12

*Adjustment Factor is calculated based on historical regional deltas

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

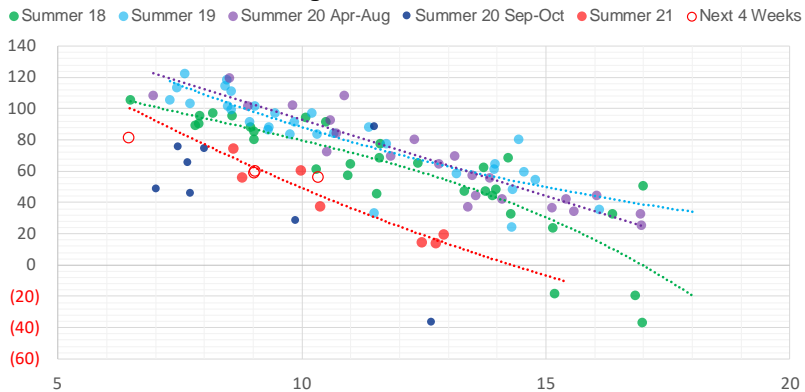


Weather Model Storage Projection

Next report
and beyond

Week Ending	GWDDs	Week Storage Projection
14-May	10.3	56
21-May	6.5	81
28-May	9.0	59
04-Jun	9.1	60

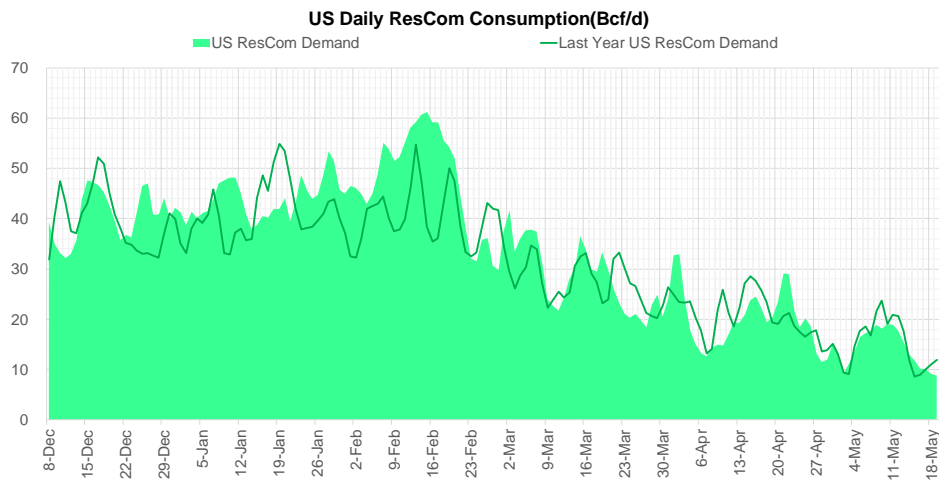
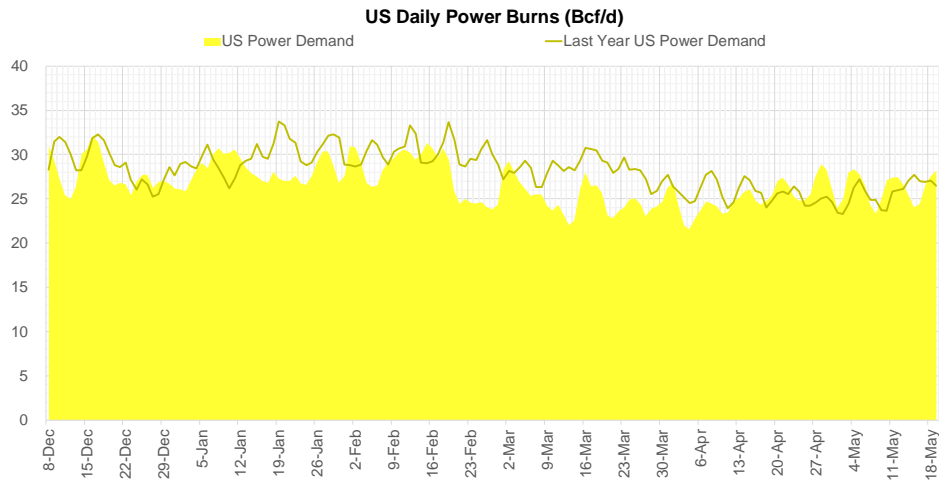
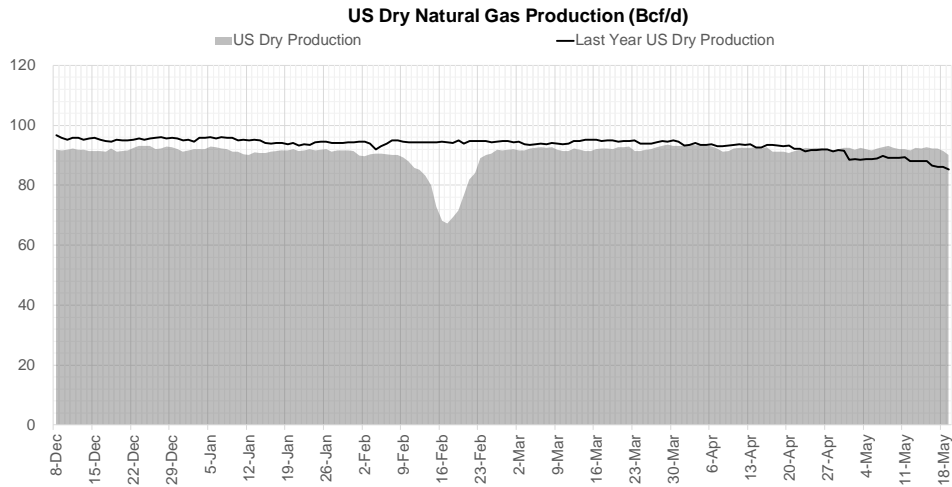
Weather Storage Model - Next 4 Week Forecast



Go to larger image



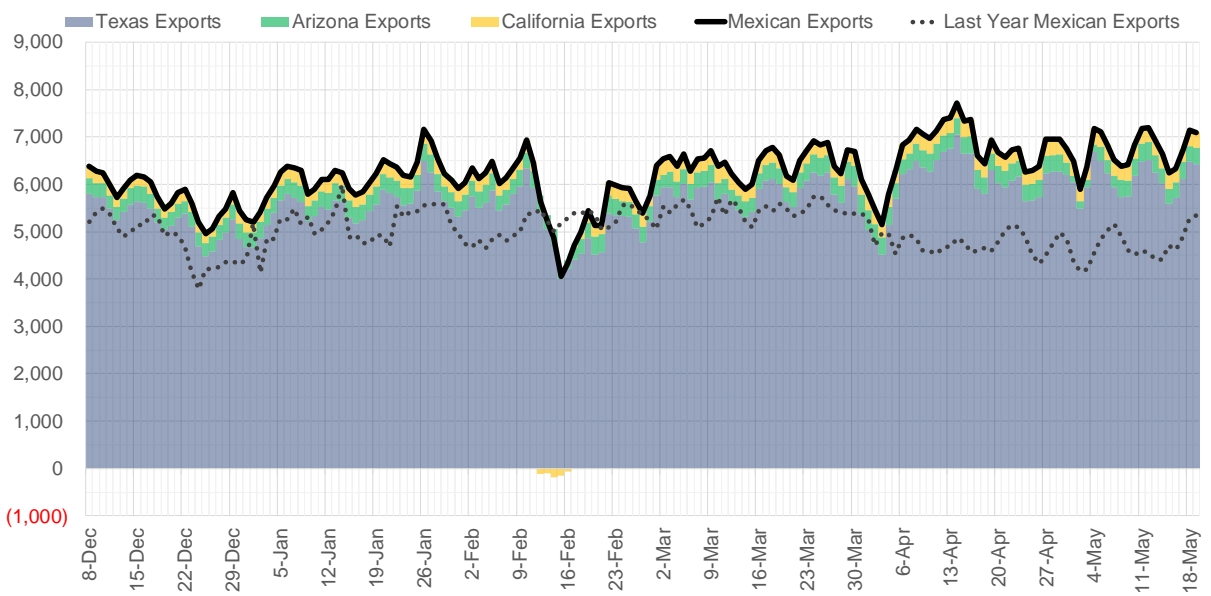
Supply – Demand Trends



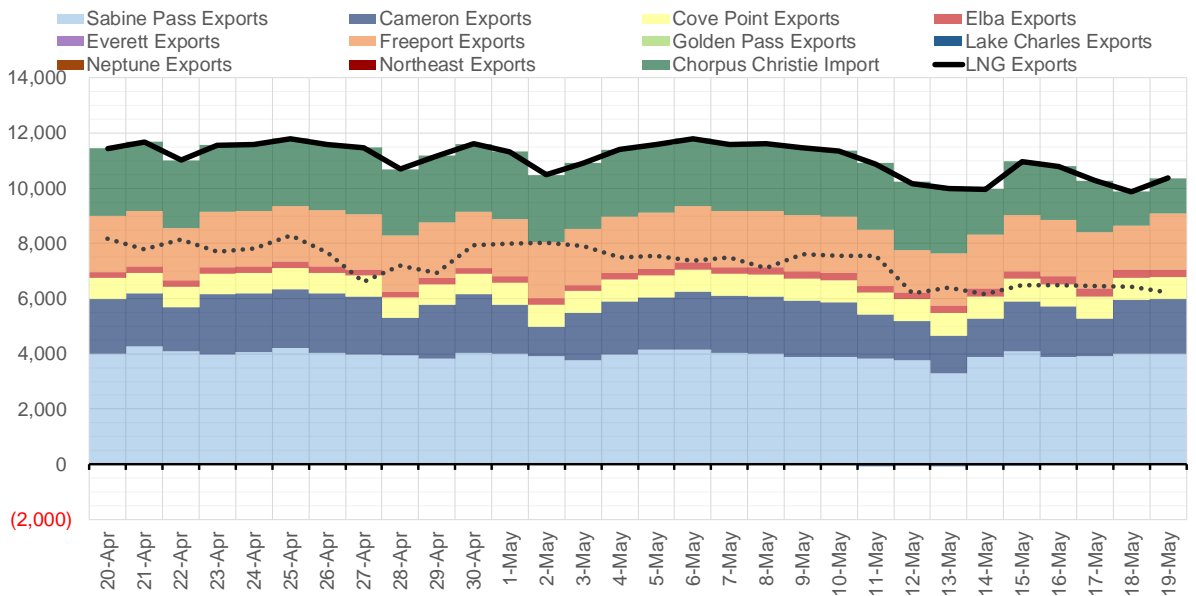
Source: Bloomberg

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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.

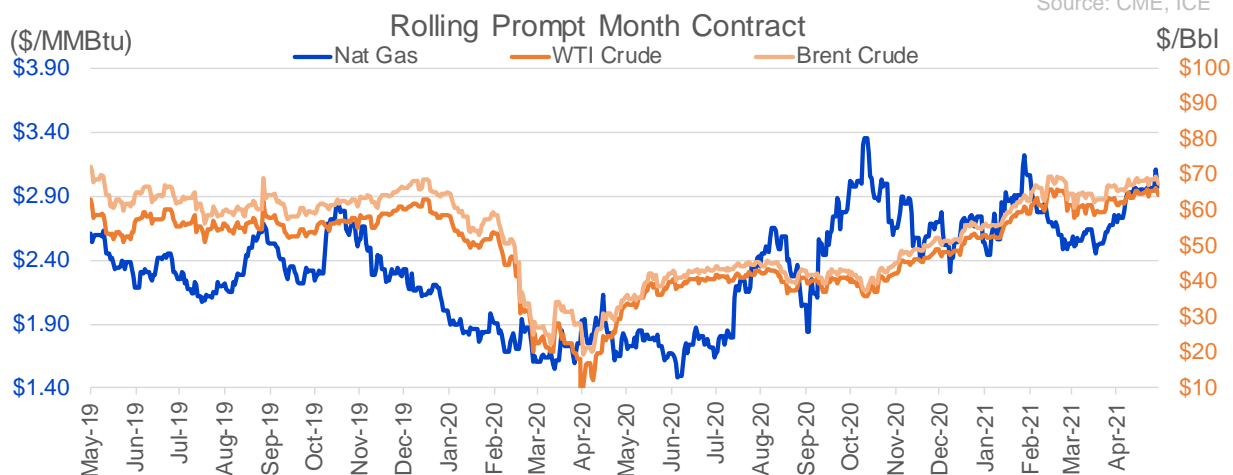
Nat Gas Options Volume and Open Interest CME, ICE and Nasdaq Combined

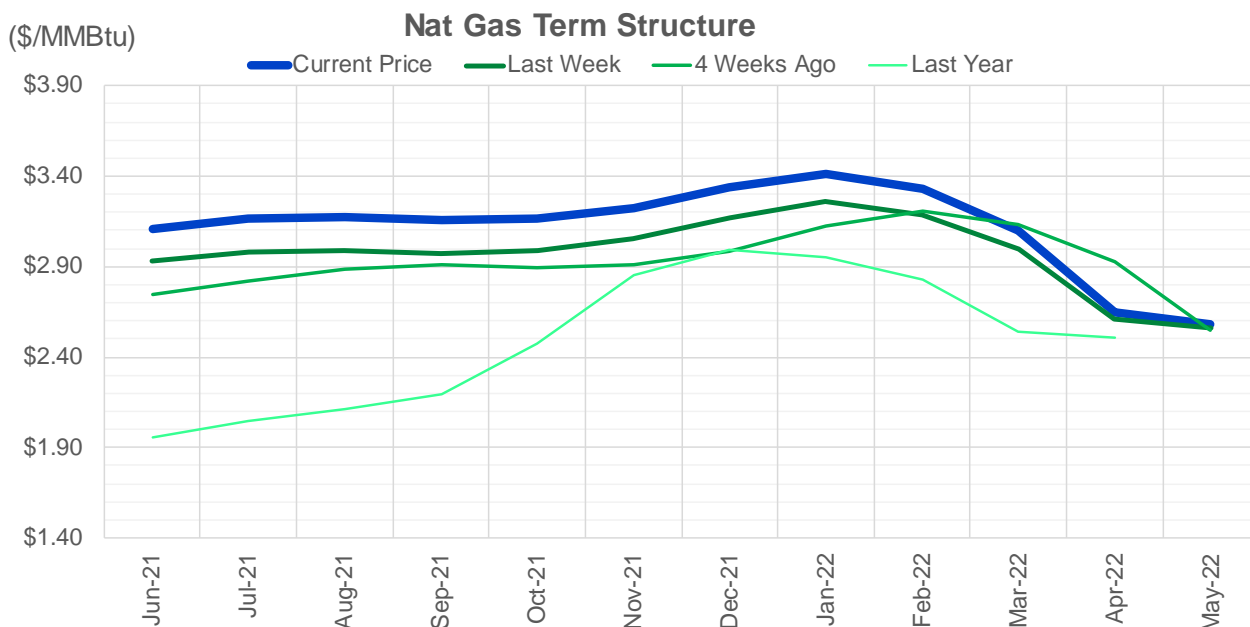
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
6	2021	P	2.75	8380	10	2021	C	4.00	40452
6	2021	P	2.90	7009	6	2021	P	2.75	33119
6	2021	C	3.25	5525	8	2021	C	3.50	32098
6	2021	P	2.80	4914	9	2021	C	4.00	31093
7	2021	P	2.75	3478	6	2021	P	2.50	29821
10	2021	C	4.00	3266	8	2021	C	4.00	29005
7	2021	P	3.00	3203	6	2021	C	3.25	28822
10	2021	P	2.75	2648	10	2021	C	3.25	28352
10	2021	P	2.25	2414	6	2021	C	4.00	27924
6	2021	C	3.00	2388	7	2021	C	4.00	26747
10	2021	C	3.25	2356	10	2021	C	5.00	26533
6	2021	P	3.00	1866	6	2021	C	3.50	26360
8	2021	C	3.50	1822	10	2021	P	2.50	25713
6	2021	C	3.15	1791	10	2021	C	3.50	24924
7	2021	P	2.50	1738	6	2021	C	3.00	24518
6	2021	C	3.05	1717	8	2021	C	3.25	23769
8	2021	C	3.75	1674	9	2021	C	3.50	22903
6	2021	C	3.10	1599	7	2021	P	2.50	22812
9	2021	P	2.75	1513	7	2021	C	3.50	22512
6	2021	C	3.20	1489	6	2021	P	2.90	22273
6	2021	P	3.05	1460	7	2021	C	3.25	21173
7	2021	C	3.75	1386	12	2021	C	4.00	20620
7	2021	P	2.60	1358	9	2021	P	2.00	20142
6	2021	C	4.00	1278	6	2021	P	2.70	20022
6	2021	P	2.85	1262	8	2021	P	2.50	19933
9	2021	C	3.25	1252	4	2022	C	3.00	19629
6	2021	C	3.30	1119	10	2021	C	3.00	19437
1	2022	P	3.15	1100	8	2021	P	2.25	19347
2	2022	P	3.15	1100	6	2021	P	2.65	19137
3	2022	P	3.15	1100	6	2021	P	2.25	19089
7	2021	C	3.50	1092	11	2021	C	4.00	18414
7	2021	C	4.00	1054	10	2021	P	2.00	18388
3	2022	C	4.00	1050	7	2021	P	2.75	18099
7	2021	P	2.70	1035	9	2021	P	2.50	18086
9	2021	P	2.80	1001	8	2021	P	2.00	17503
2	2022	C	3.25	1000	10	2021	P	2.25	17219
3	2022	C	3.00	1000	6	2021	P	2.00	17062
9	2021	C	4.00	868	8	2021	C	3.75	17012
6	2021	P	2.70	845	3	2022	C	4.00	16775
7	2021	P	2.65	807	9	2021	C	3.25	16488
8	2021	P	2.50	797	7	2021	P	2.65	16411
7	2021	C	3.25	790	8	2021	C	3.00	16369
10	2021	P	2.50	759	7	2021	C	3.00	16335
6	2021	P	3.10	729	6	2021	C	3.05	16238
10	2021	C	4.50	714	7	2021	P	2.00	16035
11	2021	C	4.00	707	6	2021	C	3.75	15823
9	2021	P	2.50	659	6	2021	P	2.85	15304
8	2021	P	2.70	627	6	2021	C	2.75	15022
6	2021	P	2.95	625	8	2021	P	2.75	14670
					3	2022	C	5	14200

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	FOR JUNE 26	Current	Prior	Daily Change
JUN 21	77882	103862	-25980	JUN 21	84868	87569	-2701
JUL 21	280256	275790	4466	JUL 21	94339	94675	-336
AUG 21	68771	69472	-701	AUG 21	78897	78137	761
SEP 21	119817	117519	2298	SEP 21	73075	72576	499
OCT 21	133209	131812	1397	OCT 21	91935	90696	1239
NOV 21	73623	72560	1063	NOV 21	68198	67892	306
DEC 21	51325	50887	438	DEC 21	62524	62394	131
JAN 22	86042	85707	335	JAN 22	71131	70951	180
FEB 22	29729	28713	1016	FEB 22	53953	54095	-142
MAR 22	58169	58516	-347	MAR 22	60036	59897	139
APR 22	55433	56528	-1095	APR 22	51290	51140	150
MAY 22	37698	36912	786	MAY 22	46866	46815	52
JUN 22	20452	20262	190	JUN 22	43466	43393	73
JUL 22	11325	11290	35	JUL 22	43219	43130	89
AUG 22	9934	9952	-18	AUG 22	41884	41839	45
SEP 22	11343	11313	30	SEP 22	42810	42752	58
OCT 22	27651	27479	172	OCT 22	47520	47421	99
NOV 22	11556	11630	-74	NOV 22	37847	37765	82
DEC 22	11090	11080	10	DEC 22	41765	41731	34
JAN 23	5450	5413	37	JAN 23	24179	24035	143
FEB 23	2603	2682	-79	FEB 23	22192	22106	86
MAR 23	5574	5525	49	MAR 23	24239	24120	119
APR 23	5889	5865	24	APR 23	19561	19550	11
MAY 23	4699	4697	2	MAY 23	19554	19492	62
JUN 23	964	963	1	JUN 23	18070	17972	98
JUL 23	997	1001	-4	JUL 23	18138	18035	103
AUG 23	836	830	6	AUG 23	18245	18142	103
SEP 23	762	762	0	SEP 23	17634	17534	100
OCT 23	1753	1752	1	OCT 23	18395	18325	71
NOV 23	578	578	0	NOV 23	17941	17895	46





	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	\$3.109	\$3.164	\$3.170	\$3.157	\$3.169	\$3.224	\$3.339	\$3.416	\$3.329	\$3.103	\$2.650	\$2.585
Last Week	\$2.932	\$2.978	\$2.986	\$2.973	\$2.990	\$3.052	\$3.174	\$3.257	\$3.188	\$2.994	\$2.610	\$2.558
vs. Last Week	\$0.177	\$0.186	\$0.184	\$0.184	\$0.179	\$0.172	\$0.165	\$0.159	\$0.141	\$0.109	\$0.040	\$0.027
4 Weeks Ago	\$2.749	\$2.818	\$2.885	\$2.912	\$2.895	\$2.912	\$2.982	\$3.121	\$3.208	\$3.134	\$2.929	\$2.546
vs. 4 Weeks Ago	\$0.360	\$0.346	\$0.285	\$0.245	\$0.274	\$0.312	\$0.357	\$0.295	\$0.121	-\$0.031	-\$0.279	\$0.039
Last Year	\$1.783	\$1.959	\$2.050	\$2.110	\$2.198	\$2.474	\$2.850	\$2.993	\$2.954	\$2.827	\$2.541	\$2.510
vs. Last Year	\$1.326	\$1.205	\$1.120	\$1.047	\$0.971	\$0.750	\$0.489	\$0.423	\$0.375	\$0.276	\$0.109	\$0.075

	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	3.25	2.31	-0.94
TETCO M3	\$/MMBtu	2.54	2.24	-0.30
FGT Zone 3	\$/MMBtu	2.63	2.99	0.36
Zone 6 NY	\$/MMBtu	2.63	2.24	-0.39
Chicago Citygate	\$/MMBtu	2.88	2.79	-0.09
Michcon	\$/MMBtu	2.92	2.72	-0.20
Columbia TCO Pool	\$/MMBtu	2.64	2.38	-0.26
Ventura	\$/MMBtu	2.81	2.72	-0.09
Rockies/Opal	\$/MMBtu	2.86	2.73	-0.13
El Paso Permian Basin	\$/MMBtu	2.80	2.80	0.00
Socal Citygate	\$/MMBtu	3.38	3.43	0.05
Malin	\$/MMBtu	2.91	2.95	0.04
Houston Ship Channel	\$/MMBtu	3.00	3.02	0.02
Henry Hub Cash	\$/MMBtu	2.96	2.76	-0.21
AECO Cash	C\$/GJ	2.67	2.43	-0.24
Station2 Cash	C\$/GJ	2.60	2.80	0.20
Dawn Cash	C\$/GJ	2.90	2.73	-0.17

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks Ago	vs. Last Year
NatGas Jul21/Oct21	\$/MMBtu	0.005	▼ -0.007	▼ -0.022	▲ 0.002
NatGas Oct21/Nov21	\$/MMBtu	0.055	▼ -0.007	▼ -0.015	▲ 0.010
NatGas Oct21/Jan22	\$/MMBtu	0.247	▼ -0.020	▼ -0.049	▼ -0.039
NatGas Apr22/Oct22	\$/MMBtu	0.015	▼ -0.009	▼ -0.016	▼ -0.033
WTI Crude	\$/Bbl	66.27	▲ 1.350	▲ 2.890	▲ 34.450
Brent Crude	\$/Bbl	69.46	▲ 1.140	▲ 2.410	▲ 34.650
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18	▲ 0.000	▲ 0.000	▲ 0.000
Heating Oil	cents/Gallon	206.04	▲ 4.380	▲ 16.790	▲ 105.400
Propane, Mt. Bel	cents/Gallon	0.82	▲ 0.011	▲ 0.019	▲ 0.405
Ethane, Mt. Bel	cents/Gallon	0.26	▲ 0.009	▲ 0.032	▲ 0.028
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

