

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 2.96	▼ \$ (0.01)	▲ \$ 0.03

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 65.21	▲ \$ 0.72	▲ \$ 1.3

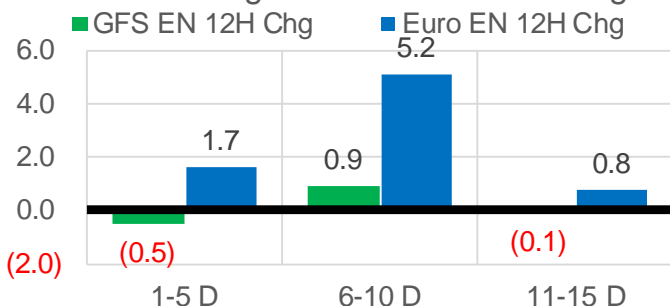
	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 68.38	▲ \$ 0.82	▲ \$ 1.0

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

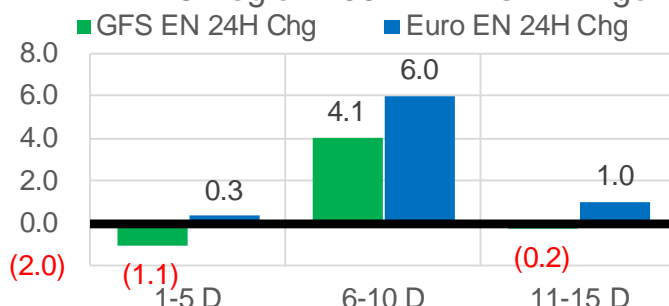
Vs. 12H Ago

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	87.9	▼ -2.29	▼ -2.29

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	27.9	▼ -0.11	▲ 0.88

	Current	Δ from YD	Δ from 7D Avg
US ResComm	11.8	▲ 0.45	▼ -0.42

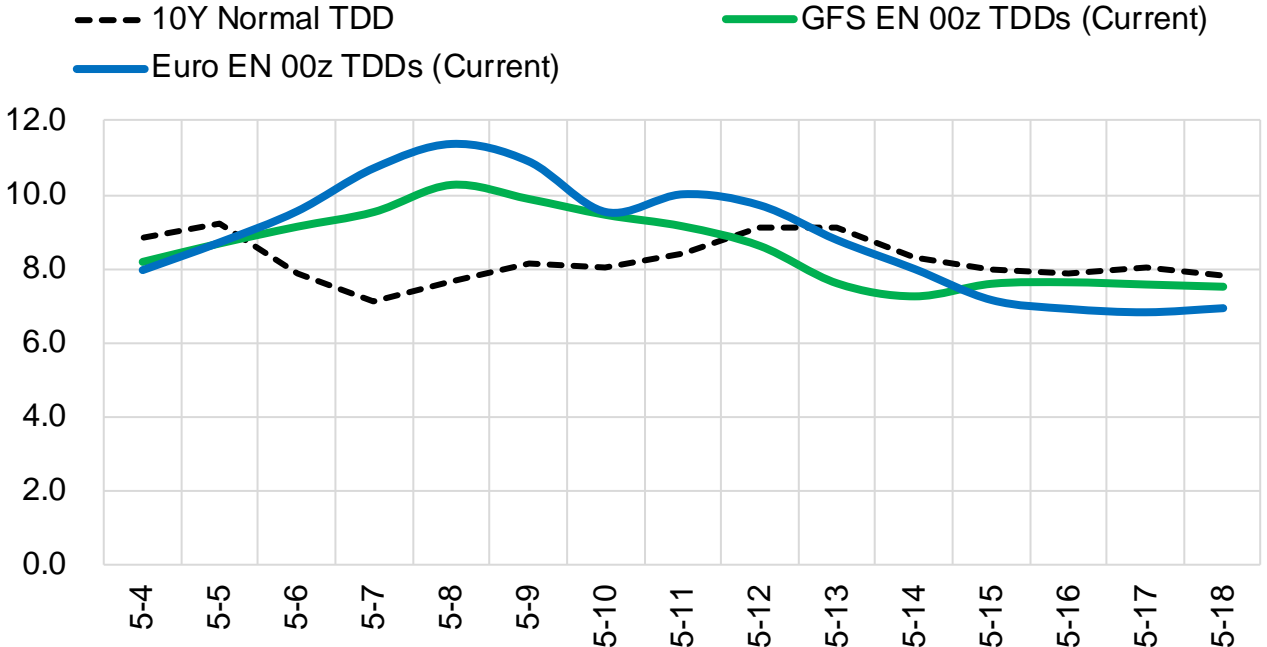
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	4.7	▲ 0.64	▲ 0.24

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	11.5	▲ 0.57	▲ 0.33

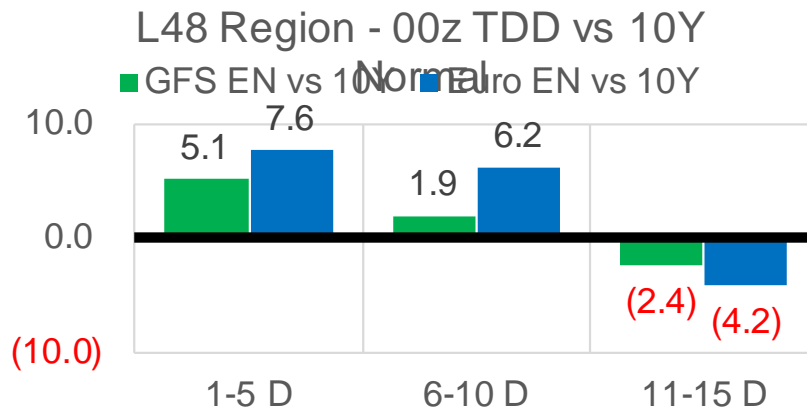
	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.7	▲ 0.35	▲ 0.10

Short-term Weather Model Outlooks (00z)

L48 Region



Vs. 10Y Normal



Source: WSI , Bloomberg

Lower 48 Component Models

Daily Balances

	28-Apr	29-Apr	30-Apr	1-May	2-May	3-May	4-May	DoD	vs. 7D
Lower 48 Dry Production	90.0	90.2	90.5	90.5	89.7	90.1	87.9	▼ -2.3	▼ -2.3
Canadian Imports	4.9	5.0	4.8	4.0	4.0	4.1	4.7	▲ 0.6	▲ 0.3
L48 Power	29.1	28.6	26.4	24.1	25.1	28.0	27.9	▼ -0.1	▲ 1.0
L48 Residential & Commercial	11.5	12.1	15.1	13.0	9.3	11.3	11.8	▲ 0.4	▼ -0.2
L48 Industrial	18.4	19.2	20.1	20.2	19.9	19.6	18.4	▼ -1.2	▼ -1.2
L48 Lease and Plant Fuel	5.0	5.0	5.0	5.0	5.0	5.0	4.9	▼ -0.1	▼ -0.1
L48 Pipeline Distribution	2.0	2.0	2.0	1.9	1.8	2.0	2.0	▲ 0.0	▲ 0.1
L48 Regional Gas Consumption	65.9	66.8	68.6	64.1	61.0	66.0	64.9	▼ -1.0	▼ -0.5
Net LNG Delivered	10.69	11.18	11.61	11.65	10.49	10.91	11.48	▲ 0.6	▲ 0.4
Total Mexican Exports	7.0	7.0	6.8	6.5	5.8	6.4	6.7	▲ 0.4	▲ 0.2
Implied Daily Storage Activity	11.2	10.2	8.3	12.2	16.3	11.0	9.4		
EIA Reported Daily Storage Activity									
Daily Model Error									

EIA Storage Week Balances

	26-Mar	2-Apr	9-Apr	16-Apr	23-Apr	30-Apr	WoW	vs. 4W
Lower 48 Dry Production	90.7	91.5	91.3	90.9	90.3	90.6	▲ 0.3	▼ -0.4
Canadian Imports	4.5	4.5	4.2	4.3	5.3	4.6	▼ -0.7	▲ 0.0
L48 Power	24.1	24.6	23.2	24.6	25.9	26.7	▲ 0.8	▲ 2.1
L48 Residential & Commercial	25.0	23.4	18.6	18.6	24.0	16.5	▼ -7.5	▼ -4.6
L48 Industrial	19.1	20.1	20.6	21.1	19.5	18.7	▼ -0.7	▼ -1.6
L48 Lease and Plant Fuel	5.0	5.0	5.0	5.0	5.0	5.0	▲ 0.0	▼ 0.0
L48 Pipeline Distribution	2.3	2.3	2.1	2.1	2.5	2.1	▼ -0.3	▼ -0.1
L48 Regional Gas Consumption	75.5	75.4	69.5	71.4	76.8	69.0	▼ -7.8	▼ -4.3
Net LNG Exports	11.6	11.7	11.5	11.4	11.6	11.4	▼ -0.2	▼ -0.1
Total Mexican Exports	6.6	6.4	6.2	7.3	6.8	6.7	▼ -0.1	▲ 0.0
Implied Daily Storage Activity	1.6	2.4	8.3	5.2	0.5	8.1	7.6	
EIA Reported Daily Storage Activity	2.0	2.9	8.7	5.4	2.1			
Daily Model Error	-0.4	-0.4	-0.4	-0.3	-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	90.1	86.5	90.3	83.2	90.7	90.8	89.5	▼ -1.3	▲ 6.3
Canadian Imports	4.7	3.9	6.3	6.4	4.8	4.7	4.2	▼ -0.4	▼ -2.2
L48 Power	26.9	26.9	28.2	27.9	25.0	25.2	26.3	▲ 1.1	▼ -1.7
L48 Residential & Commercial	12.8	12.7	43.9	47.9	28.4	19.7	11.4	▼ -8.4	▼ -36.5
L48 Industrial	22.7	18.9	23.1	20.2	18.8	20.0	19.5	▼ -0.5	▼ -0.7
L48 Lease and Plant Fuel	5.0	4.8	5.0	4.7	5.0	5.0	5.0	▼ 0.0	▲ 0.3
L48 Pipeline Distribution	2.1	2.0	3.2	3.3	2.5	2.2	1.9	▼ -0.3	▼ -1.4
L48 Regional Gas Consumption	69.4	65.3	103.4	103.9	79.8	72.2	64.0	▼ -8.1	▼ -39.9
Net LNG Exports	5.6	6.7	10.5	8.4	11.1	11.5	11.1	▼ -0.3	▲ 2.7
Total Mexican Exports	5.0	4.8	6.2	5.7	6.5	6.7	6.4	▼ -0.3	▲ 0.7
Implied Daily Storage Activity	14.8	13.6	-23.5	-28.5	-1.9	5.1	12.2		
EIA Reported Daily Storage Activity									
Daily Model Error									

Source: Bloomberg, analytix.ai

Regional S/D Models Storage Projection

Week Ending 30-Apr

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	7.8	1.3	9.1	64
East	0.2	2.0	2.3	16
Midwest	2.7	0.1	2.7	19
Mountain	3.6	-3.1	0.5	4
South Central	0.1	2.8	2.8	20
Pacific	1.2	-0.5	0.7	5

*Adjustment Factor is calculated based on historical regional deltas

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

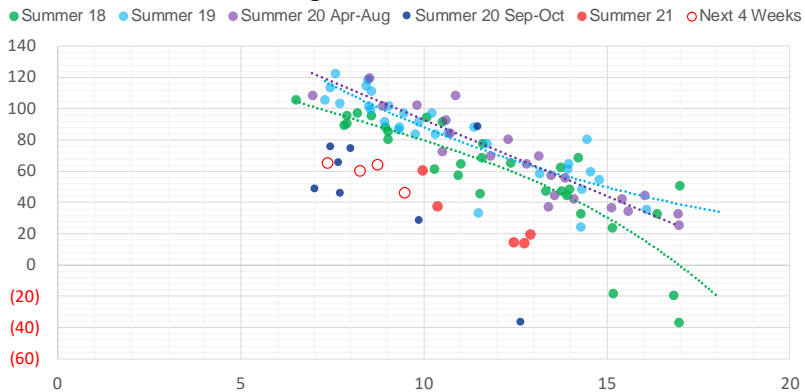


Weather Model Storage Projection

Next report
and beyond

Week Ending	GWDDs	Week Storage Projection
30-Apr	8.8	64
07-May	8.3	60
14-May	9.5	46
21-May	7.4	65

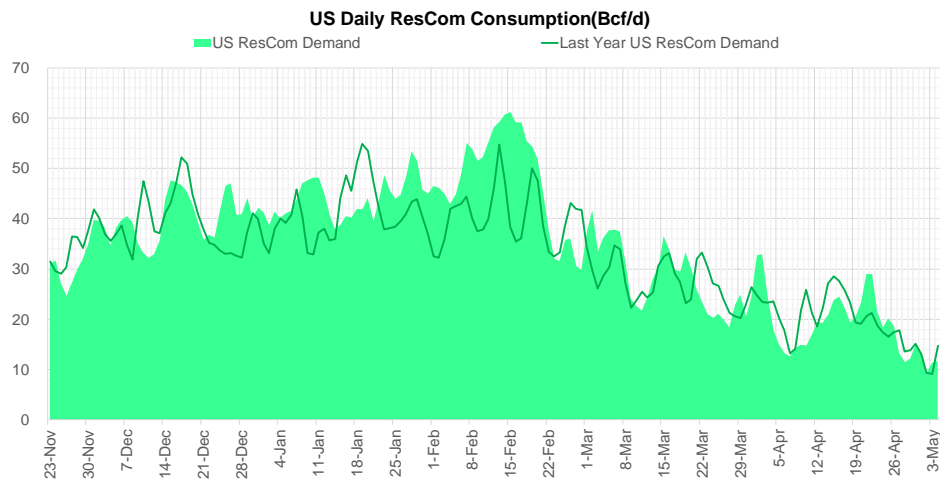
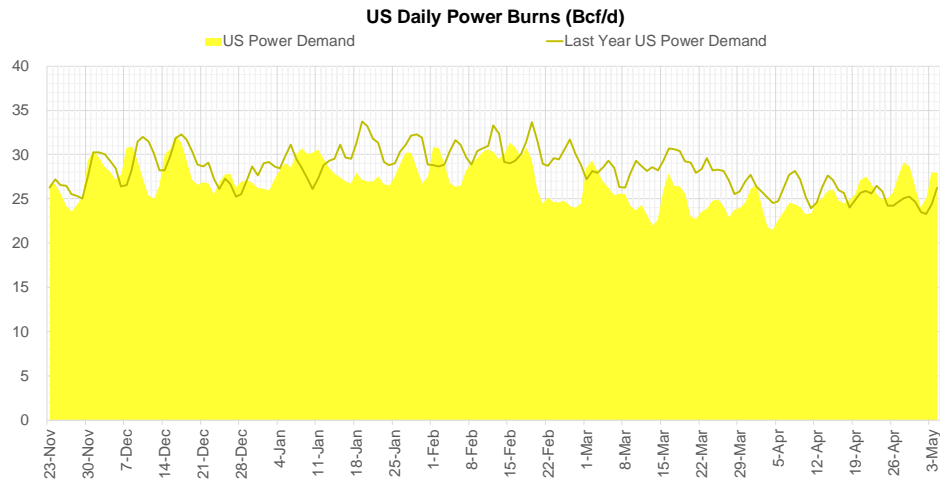
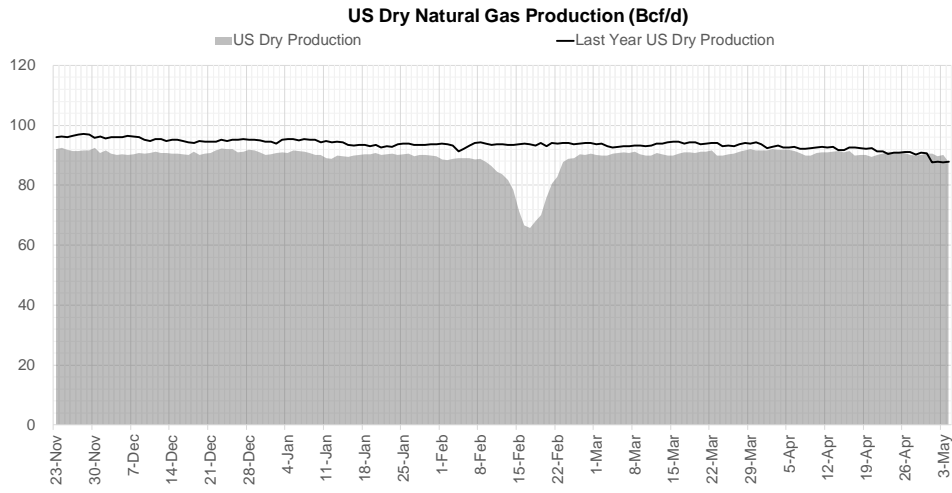
Weather Storage Model - Next 4 Week Forecast



Go to larger image



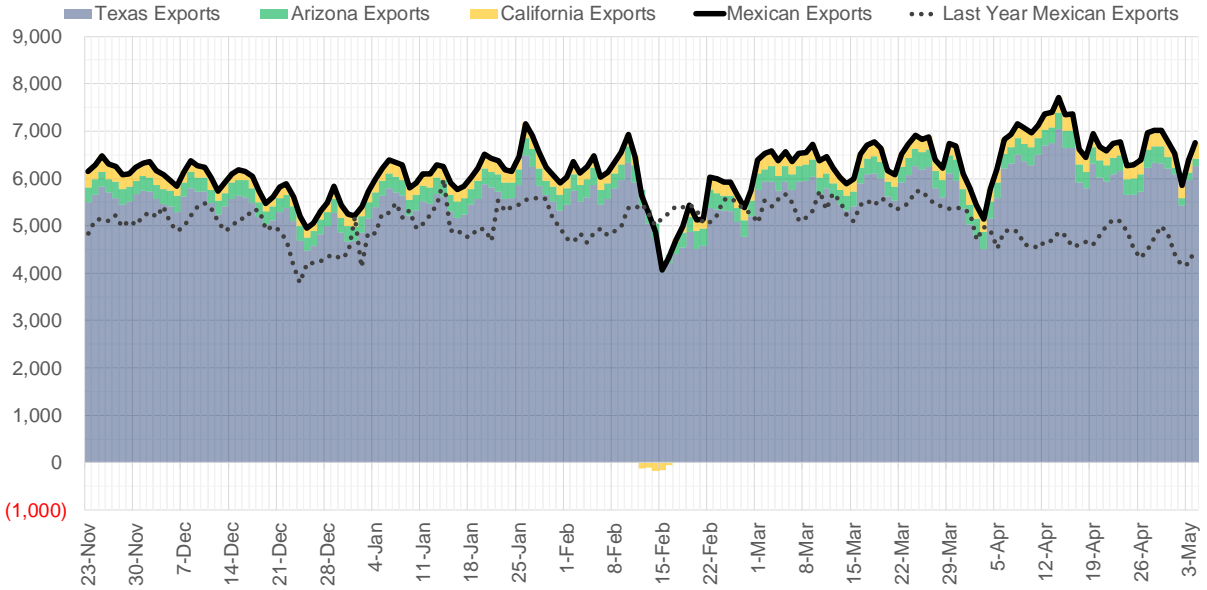
Supply – Demand Trends



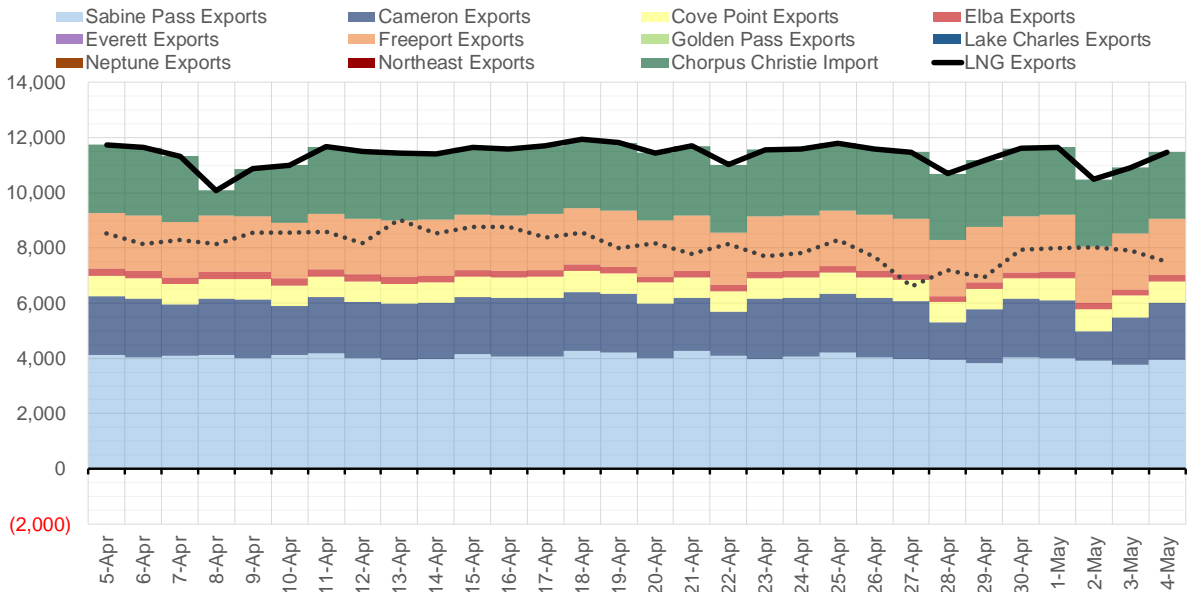
Source: Bloomberg

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

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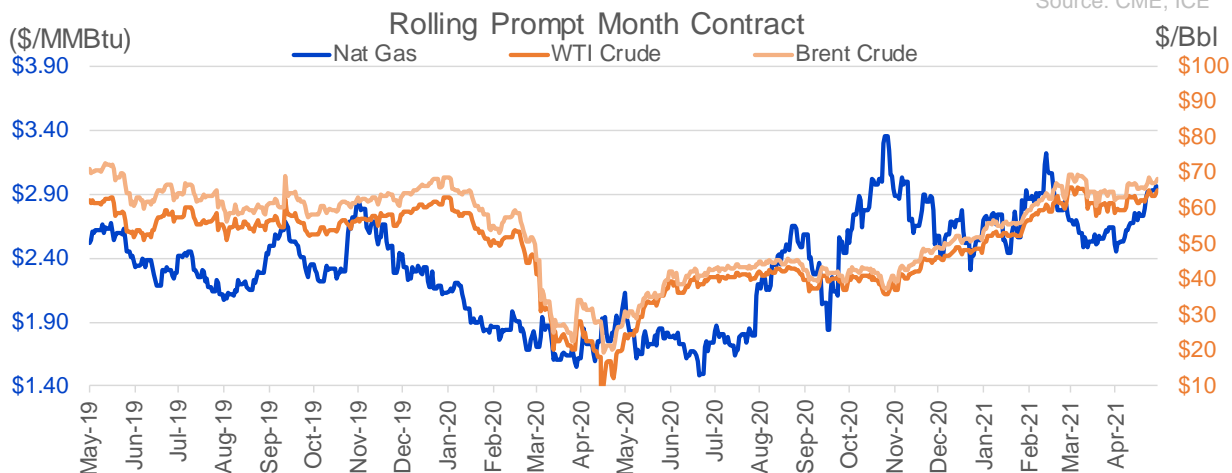
Nat Gas Options Volume and Open Interest CME, ICE and Nasdaq Combined

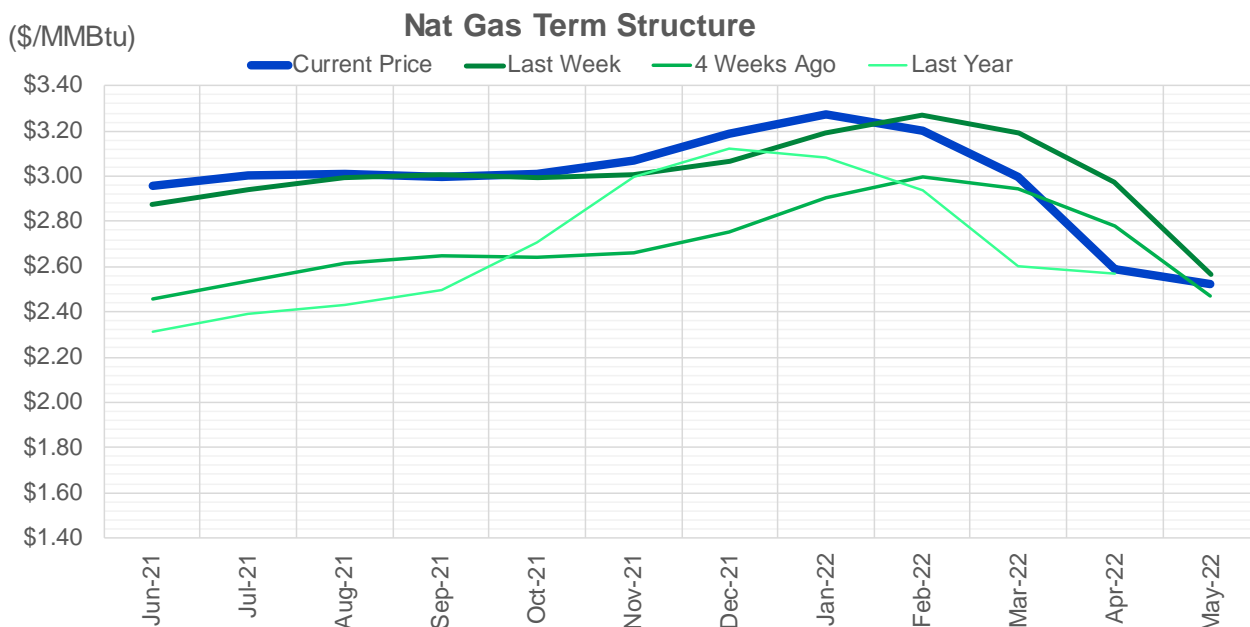
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
6	2021	C	3.25	4705	10	2021	C	4.00	39630
6	2021	P	2.55	4388	6	2021	C	3.00	33582
6	2021	P	2.50	3731	8	2021	C	4.00	32589
6	2021	C	3.00	3348	10	2021	C	3.25	31235
10	2021	P	1.75	3340	6	2021	C	3.25	29977
6	2021	P	2.60	3048	6	2021	P	2.50	29659
6	2021	P	2.40	3002	8	2021	C	3.50	28272
10	2021	C	4.00	2823	7	2021	C	4.00	28268
6	2021	P	2.70	2455	6	2021	P	2.65	28193
12	2021	C	3.75	2365	6	2021	C	4.00	27949
7	2021	P	2.75	1961	10	2021	C	5.00	26619
6	2021	P	2.65	1949	8	2021	C	3.25	26373
8	2021	C	3.00	1921	7	2021	C	3.25	25673
9	2021	C	4.00	1899	10	2021	P	2.50	24373
6	2021	P	2.75	1813	10	2021	C	3.50	23339
7	2021	P	2.50	1786	6	2021	C	3.50	23204
10	2021	C	3.50	1670	9	2021	C	3.50	20442
7	2021	C	3.25	1588	7	2021	C	3.50	20306
10	2021	C	3.25	1533	10	2021	C	3.00	20251
6	2021	P	2.90	1466	9	2021	C	4.00	20132
10	2021	C	3.00	1384	8	2021	P	2.50	19510
7	2021	C	3.00	1383	12	2021	C	4.00	19465
9	2021	C	3.25	1380	4	2022	C	3.00	19174
6	2021	C	3.50	1375	10	2021	P	2.25	19077
6	2021	P	2.85	1336	6	2021	P	2.25	19056
9	2021	C	3.00	1210	7	2021	P	2.50	18495
10	2021	P	2.30	1200	8	2021	P	2.25	18220
7	2021	C	4.00	1189	6	2021	P	2.75	17936
8	2021	C	3.50	1150	9	2021	P	2.00	17869
1	2022	P	2.00	1130	6	2021	P	2.00	17062
8	2021	C	3.25	933	9	2021	C	3.25	16907
6	2021	C	2.95	760	11	2021	C	4.00	16731
6	2021	P	2.95	707	10	2021	P	2.00	16500
6	2021	C	3.20	697	7	2021	P	2.00	16035
7	2021	C	3.75	684	7	2021	C	3.00	15865
6	2021	C	3.15	648	8	2021	P	2.00	15795
3	2022	C	5.00	618	8	2021	C	3.00	15702
10	2021	C	6.00	600	6	2021	C	3.75	15656
8	2021	C	4.00	592	3	2022	C	4.00	14990
6	2021	C	4.00	532	6	2021	C	2.75	14885
1	2022	C	4.00	530	9	2021	P	2.50	14835
2	2022	C	4.00	530	10	2021	C	4.50	14034
3	2022	C	4.00	530	12	2021	P	2.00	14031
10	2021	C	4.25	500	9	2021	P	1.90	13733
1	2022	C	5.00	500	3	2022	C	5.00	13625
2	2022	C	5.00	500	10	2021	C	6.00	13182
7	2021	P	2.25	443	5	2022	C	3.00	13147
6	2021	P	2.80	402	8	2021	C	3.75	13032
6	2021	C	3.05	393	6	2021	P	2.60	13000
					6	2021	P	2.4	12934.25

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	201051	204949	-3898	JUN 21	87618	87301	317
JUL 21	202390	197415	4975	JUL 21	85666	85341	325
AUG 21	70563	70960	-397	AUG 21	79223	79313	-89
SEP 21	107253	108285	-1032	SEP 21	69617	69378	239
OCT 21	130282	128667	1615	OCT 21	89132	88538	594
NOV 21	68318	67359	959	NOV 21	61937	61465	473
DEC 21	46170	46153	17	DEC 21	60113	59490	623
JAN 22	76304	74664	1640	JAN 22	65990	65732	258
FEB 22	23498	23150	348	FEB 22	47580	47416	164
MAR 22	48460	47266	1194	MAR 22	52773	52707	66
APR 22	49937	49535	402	APR 22	47886	47755	132
MAY 22	29752	28959	793	MAY 22	43314	43132	182
JUN 22	16348	16461	-113	JUN 22	40600	40320	280
JUL 22	9999	9984	15	JUL 22	40644	40494	149
AUG 22	8897	8822	75	AUG 22	39140	38971	169
SEP 22	9372	9245	127	SEP 22	40017	39769	248
OCT 22	22361	22155	206	OCT 22	45281	44976	305
NOV 22	11022	10590	432	NOV 22	35811	35602	209
DEC 22	10063	10102	-39	DEC 22	39756	39679	77
JAN 23	5233	5215	18	JAN 23	22705	22598	107
FEB 23	2547	2548	-1	FEB 23	21199	21023	176
MAR 23	5124	5068	56	MAR 23	22745	22675	70
APR 23	5748	5718	30	APR 23	18577	18593	-16
MAY 23	4407	4411	-4	MAY 23	18750	18659	91
JUN 23	960	955	5	JUN 23	17151	17069	81
JUL 23	1077	1077	0	JUL 23	17255	17147	109
AUG 23	754	754	0	AUG 23	17398	17290	109
SEP 23	763	763	0	SEP 23	16796	16691	105
OCT 23	1754	1754	0	OCT 23	17564	17473	91
NOV 23	608	608	0	NOV 23	16889	16839	50





	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	\$2.956	\$3.004	\$3.013	\$2.995	\$3.011	\$3.070	\$3.190	\$3.276	\$3.201	\$2.994	\$2.587	\$2.524
Last Week	\$2.873	\$2.942	\$2.995	\$3.010	\$2.993	\$3.007	\$3.069	\$3.193	\$3.273	\$3.192	\$2.977	\$2.566
vs. Last Week	\$0.083	\$0.062	\$0.018	-\$0.015	\$0.018	\$0.063	\$0.121	\$0.083	-\$0.072	-\$0.198	-\$0.390	-\$0.042
4 Weeks Ago	\$2.456	\$2.536	\$2.618	\$2.650	\$2.642	\$2.661	\$2.751	\$2.902	\$2.996	\$2.943	\$2.779	\$2.469
vs. 4 Weeks Ago	\$0.500	\$0.468	\$0.395	\$0.345	\$0.369	\$0.409	\$0.439	\$0.374	\$0.205	\$0.051	-\$0.192	\$0.055
Last Year	\$2.134	\$2.312	\$2.388	\$2.430	\$2.498	\$2.705	\$2.994	\$3.125	\$3.080	\$2.935	\$2.605	\$2.568
vs. Last Year	\$0.822	\$0.692	\$0.625	\$0.565	\$0.513	\$0.365	\$0.196	\$0.151	\$0.121	\$0.059	-\$0.018	-\$0.044

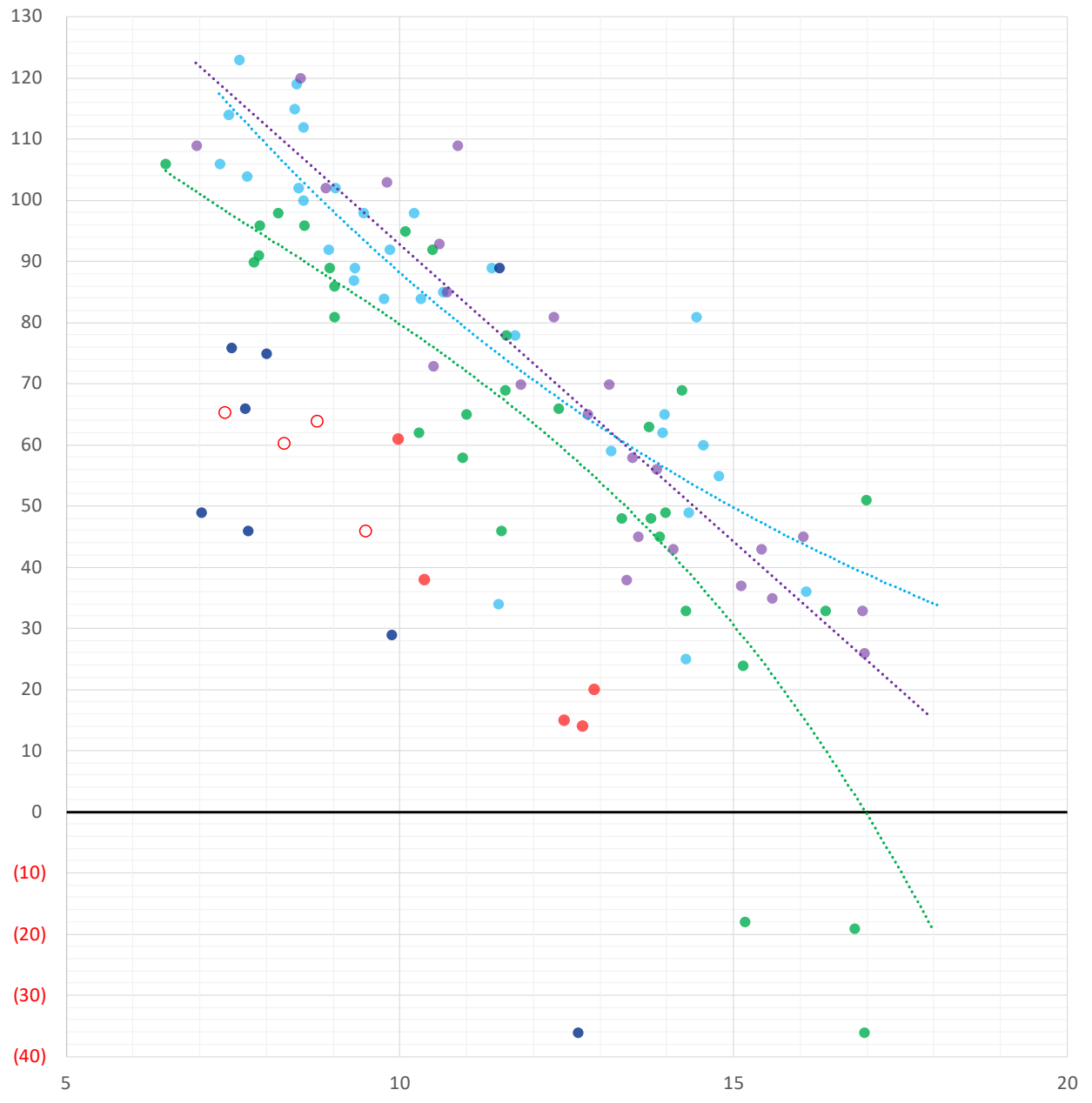
	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	3.25	2.23	-1.02
TETCO M3	\$/MMBtu	2.32	2.14	-0.18
FGT Zone 3	\$/MMBtu	2.38	2.93	0.55
Zone 6 NY	\$/MMBtu	2.38	2.02	-0.36
Chicago Citygate	\$/MMBtu	2.76	2.82	0.06
Michcon	\$/MMBtu	2.75	2.76	0.01
Columbia TCO Pool	\$/MMBtu	2.52	2.41	-0.12
Ventura	\$/MMBtu	2.56	2.74	0.18
Rockies/Opal	\$/MMBtu	2.76	2.67	-0.09
El Paso Permian Basin	\$/MMBtu	2.56	2.72	0.16
Socal Citygate	\$/MMBtu	3.35	3.11	-0.24
Malin	\$/MMBtu	2.80	2.85	0.05
Houston Ship Channel	\$/MMBtu	2.94	2.96	0.02
Henry Hub Cash	\$/MMBtu	2.95	2.73	-0.22
AECO Cash	C\$/GJ	2.45	2.35	-0.10
Station2 Cash	C\$/GJ	2.17	2.75	0.58
Dawn Cash	C\$/GJ	2.74	2.77	0.03

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks Ago	vs. Last Year
NatGas Jul21/Oct21	\$/MMBtu	0.007	▼ -0.005	▼ -0.036	▲ 0.009
NatGas Oct21/Nov21	\$/MMBtu	0.059	▼ -0.003	▼ -0.031	▲ 0.020
NatGas Oct21/Jan22	\$/MMBtu	0.265	▼ -0.001	▼ -0.070	▼ -0.009
NatGas Apr22/Oct22	\$/MMBtu	0.020	▼ -0.002	▼ -0.020	▼ -0.030
WTI Crude	\$/Bbl	65.21	▲ 2.270	▲ 5.880	▲ 40.650
Brent Crude	\$/Bbl	68.38	▲ 1.960	▲ 5.640	▲ 37.410
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18	▲ 0.000	▲ 0.000	▲ 0.000
Heating Oil	cents/Gallon	198.08	▲ 7.510	▲ 18.670	▲ 108.480
Propane, Mt. Bel	cents/Gallon	0.80	▼ -0.010	▼ -0.120	▲ 0.436
Ethane, Mt. Bel	cents/Gallon	0.25	▲ 0.018	▲ 0.033	▲ 0.036
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



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