

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 3.04	▲ \$ 0.08	▲ \$ 0.08

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 65.14	▼ \$ (0.23)	▼ \$ (0.0)

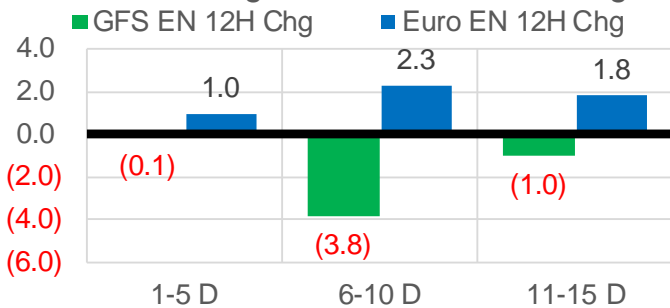
	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 68.51	▼ \$ (0.20)	▲ \$ 0.0

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](#)

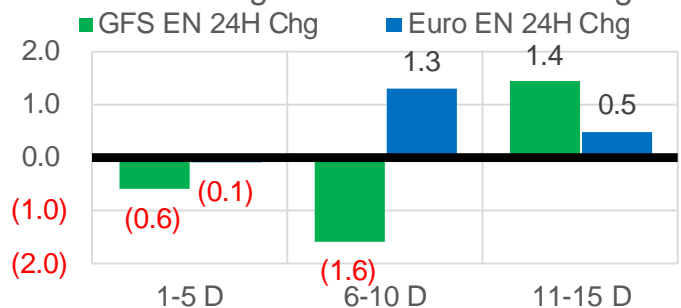
Vs. 12H Ago

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	90.9	▼ -1.30	▼ -1.22

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	24.8	▲ 0.35	▼ -1.27

	Current	Δ from YD	Δ from 7D Avg
US ResComm	10.2	▼ -0.25	▼ -5.03

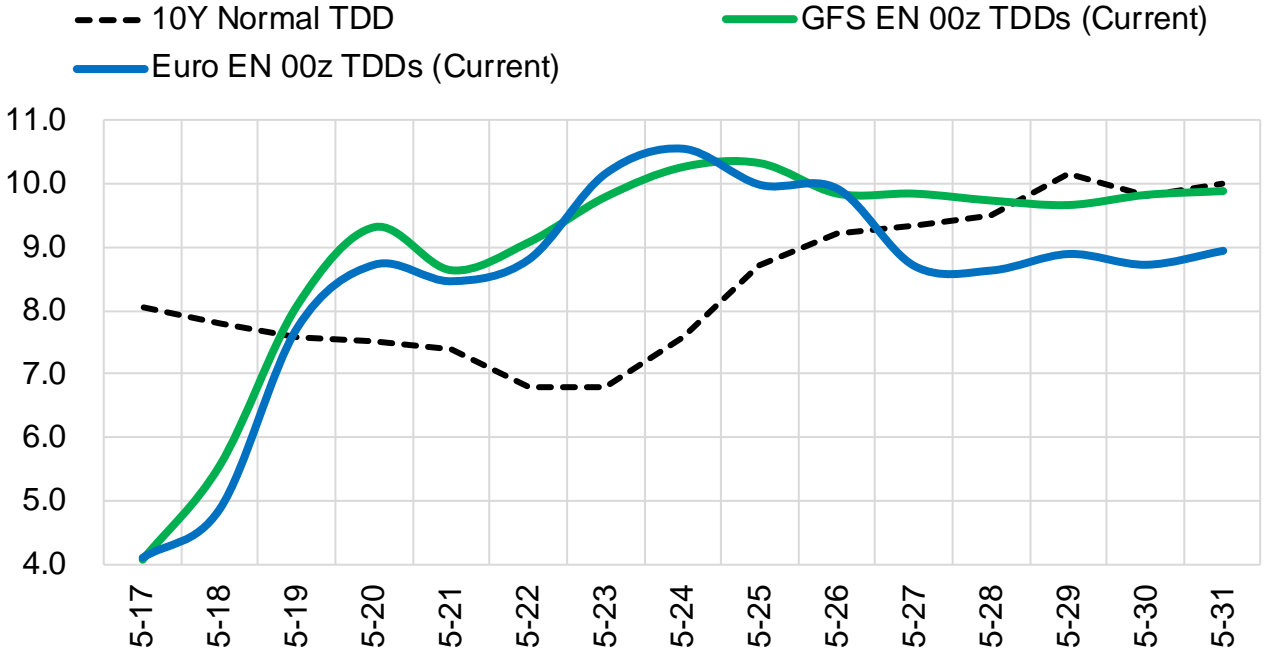
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	4.3	▼ -0.08	▼ -0.46

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	11.2	▲ 0.18	▲ 0.54

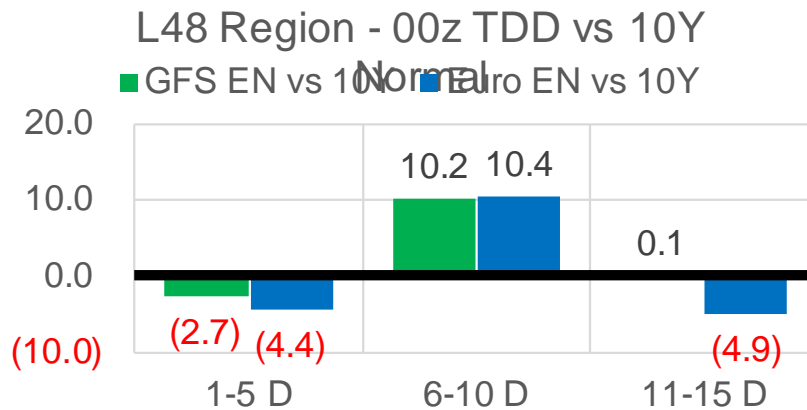
	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.6	▲ 0.18	▼ -0.20

Short-term Weather Model Outlooks (00z)

L48 Region



Vs. 10Y Normal



Source: WSI , Bloomberg

Lower 48 Component Models

Daily Balances

	11-May	12-May	13-May	14-May	15-May	16-May	17-May	DoD	vs. 7D
Lower 48 Dry Production	92.0	91.6	92.4	91.9	92.4	92.2	90.9	▼ -1.3	▼ -1.2
Canadian Imports	5.1	5.1	4.8	4.7	4.3	4.3	4.3	▼ -0.1	▼ -0.5
L48 Power	27.5	27.5	26.7	25.2	23.8	24.4	24.8	▲ 0.4	▼ -1.1
L48 Residential & Commercial	19.0	17.8	15.4	13.0	11.9	10.4	10.2	▼ -0.3	▼ -4.4
L48 Industrial	20.1	20.5	21.2	21.8	22.6	22.8	22.7	▼ 0.0	▲ 1.2
L48 Lease and Plant Fuel	5.0	5.0	5.1	5.0	5.1	5.1	5.0	▼ -0.1	▼ -0.1
L48 Pipeline Distribution	2.4	2.3	2.2	1.9	1.8	1.8	1.8	▲ 0.0	▼ -0.3
L48 Regional Gas Consumption	74.0	73.1	70.5	66.9	65.2	64.5	64.5	▼ 0.0	▼ -4.6
Net LNG Delivered	10.89	10.18	9.99	9.95	10.98	10.98	11.16	▲ 0.2	▲ 0.7
Total Mexican Exports	7.2	7.2	6.9	6.6	6.2	6.4	6.6	▲ 0.2	▼ -0.2
Implied Daily Storage Activity	5.0	6.2	9.7	13.1	14.3	14.7	13.0		
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	92.7	92.1	91.3	92.0	92.1	92.3	▲ 0.2	▲ 0.4
Canadian Imports	4.2	4.3	5.3	4.6	4.6	4.8	▲ 0.3	▲ 0.1
L48 Power	23.2	24.6	25.9	26.7	26.7	26.0	▼ -0.8	▲ 0.0
L48 Residential & Commercial	18.6	18.6	24.0	16.5	13.7	18.0	▲ 4.4	▼ -0.2
L48 Industrial	22.0	21.4	20.1	20.4	21.6	20.4	▼ -1.1	▼ -0.4
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	2.1	2.3	▲ 0.2	▲ 0.1
L48 Regional Gas Consumption	70.9	71.8	77.4	70.7	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	-2.1	
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	-0.5			

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	92.0	92.1	92.1	▲ 0.0	▲ 7.4
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	25.0	25.2	25.9	▲ 0.8	▼ -2.0
L48 Residential & Commercial	12.8	12.7	43.9	47.9	28.4	19.7	14.8	▼ -4.9	▼ -33.0
L48 Industrial	23.2	19.8	24.3	21.6	20.1	21.0	21.3	▲ 0.3	▼ -0.3
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	81.1	73.2	69.2	▼ -3.9	▼ -36.1
Net LNG Exports	5.6	6.7	10.5	8.4	11.1	11.5	11.0	▼ -0.4	▲ 2.6
Total Mexican Exports	5.0	4.8	6.2	5.7	6.5	6.7	6.6	▼ -0.1	▲ 0.9
Implied Daily Storage Activity	14.8	13.6	-23.5	-28.4	-1.9	5.4	9.8		
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	7.3	0.8	8.1	56
East	0.0	0.6	0.6	4
Midwest	1.2	0.0	1.2	8
Mountain	3.9	-3.1	0.9	6
South Central	0.3	3.3	3.6	25
Pacific	1.8	-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)

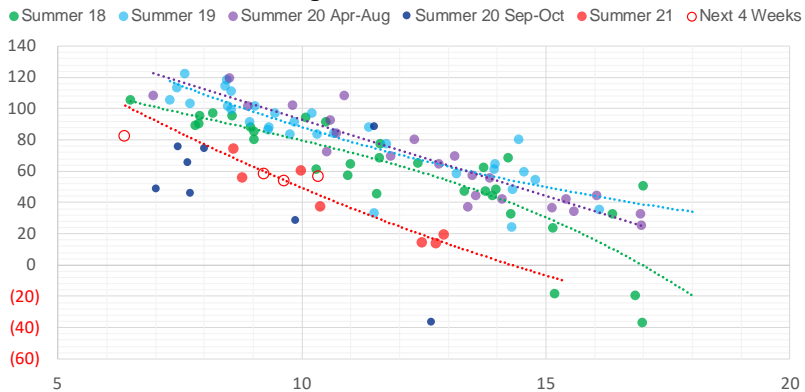


Weather Model Storage Projection

Next report
and beyond

Week Ending	GWDDs	Week Storage Projection
14-May	10.3	56
21-May	6.4	82
28-May	9.6	54
04-Jun	9.2	58

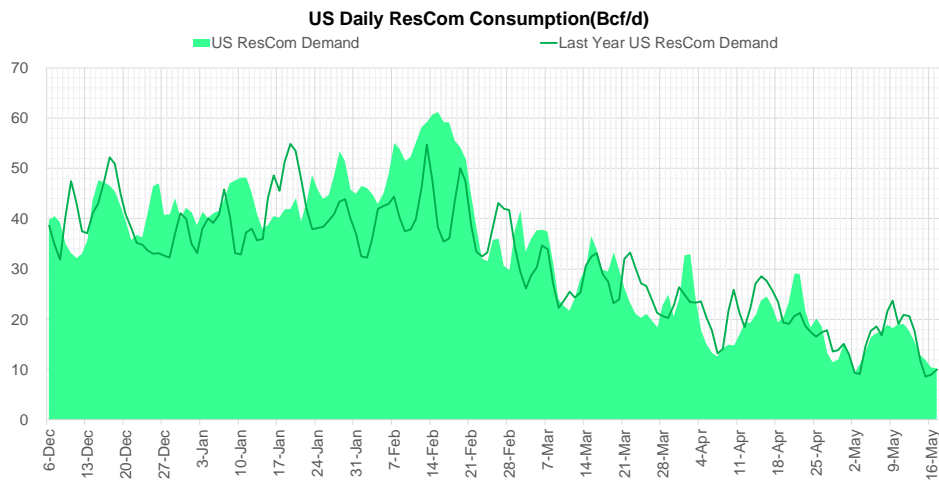
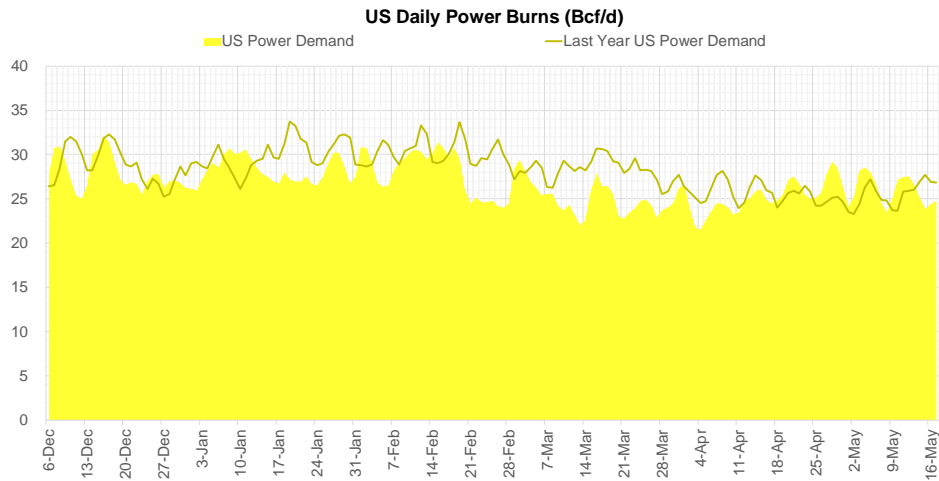
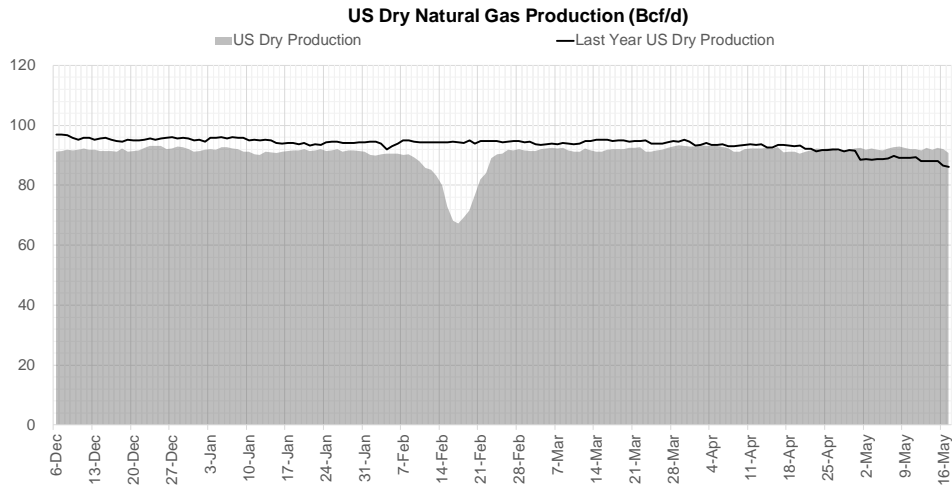
Weather Storage Model - Next 4 Week Forecast



[Go to larger image](#)



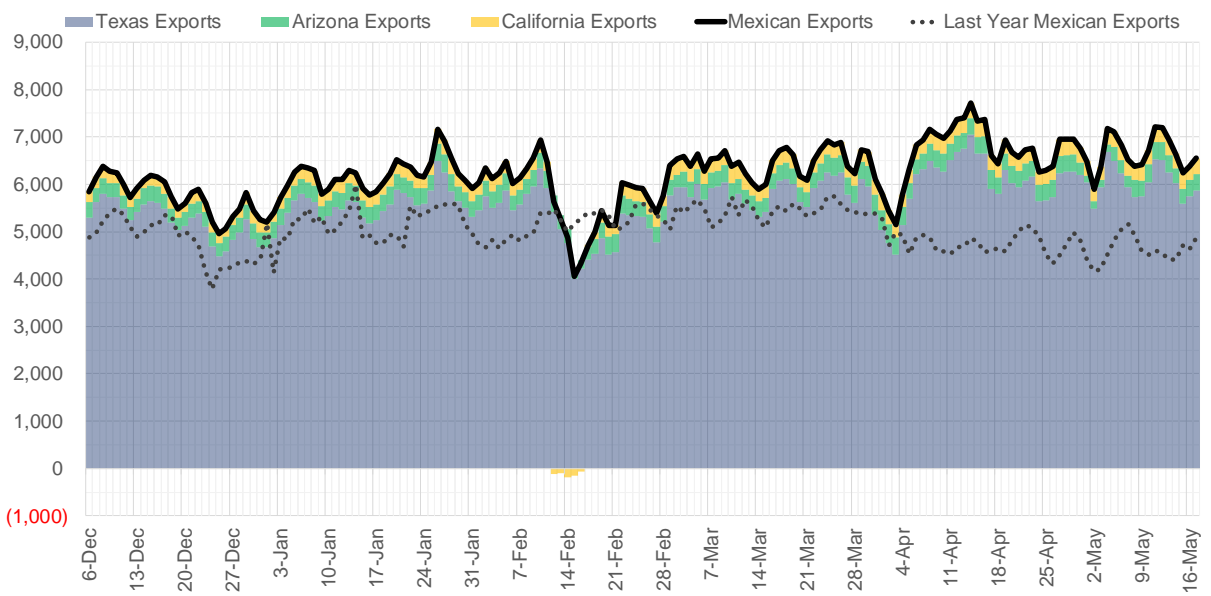
Supply – Demand Trends



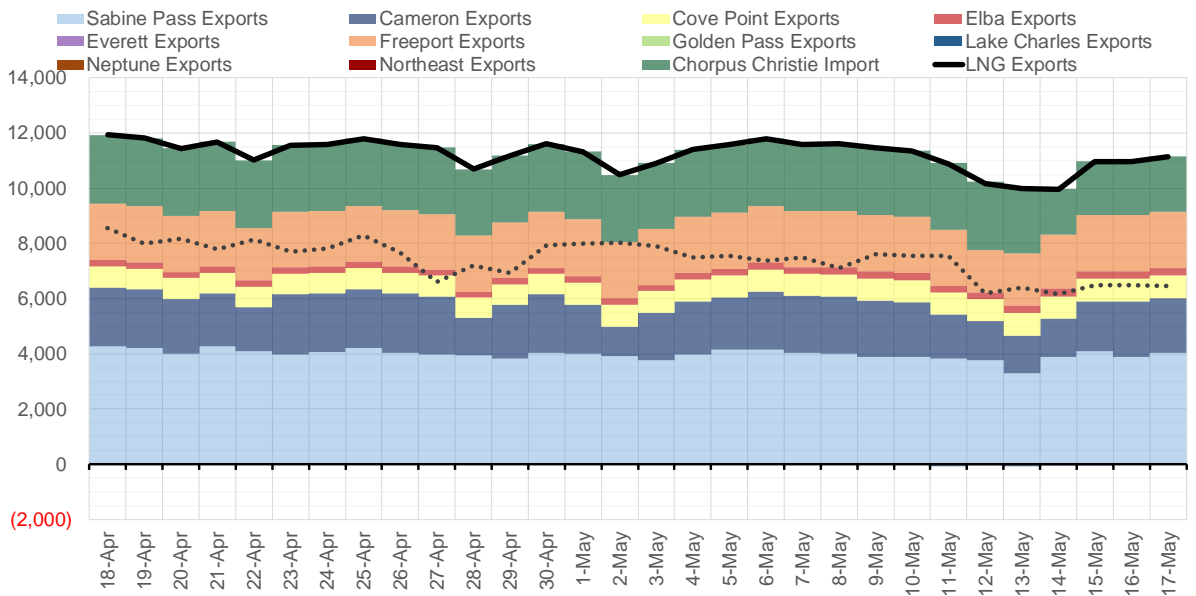
Source: Bloomberg

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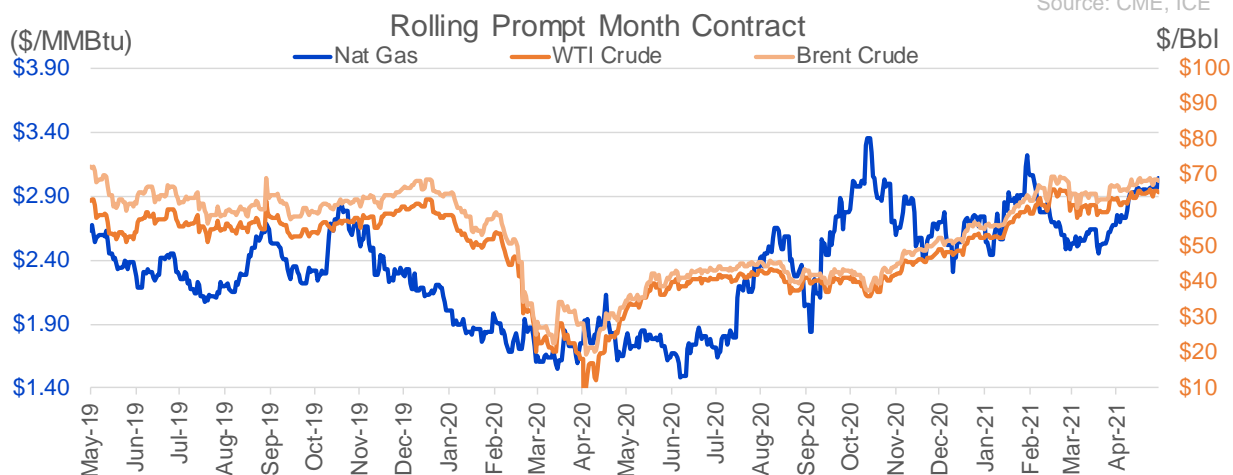
Nat Gas Options Volume and Open Interest CME, ICE and Nasdaq Combined

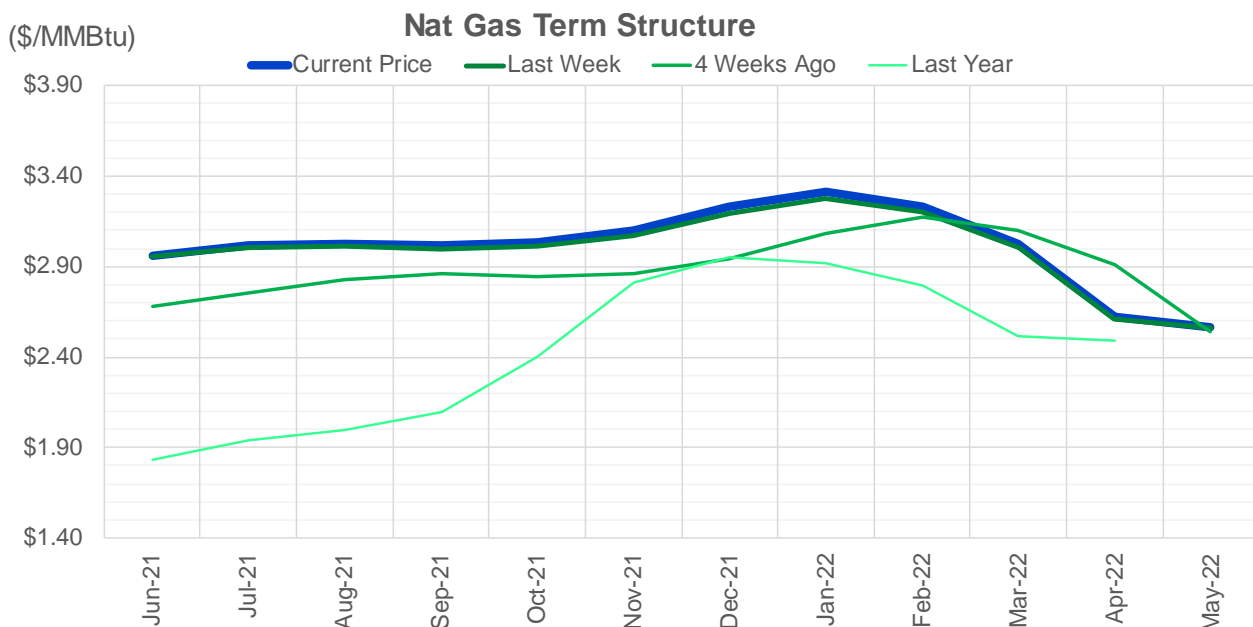
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
6	2021	P	2.75	8058	10	2021	C	4.00	41299
6	2021	P	2.65	7167	8	2021	C	3.50	32828
1	2022	C	8.00	4200	9	2021	C	4.00	32701
2	2022	C	8.00	4200	6	2021	C	3.25	31985
3	2022	C	8.00	4200	8	2021	C	4.00	30304
7	2021	P	2.75	3337	6	2021	P	2.50	29821
6	2021	P	2.90	3012	10	2021	C	3.25	29425
1	2022	C	6.00	2600	6	2021	C	4.00	27949
8	2021	C	3.50	2200	7	2021	C	4.00	27311
7	2021	P	2.50	2173	6	2021	P	2.75	26816
1	2022	C	10.00	2100	8	2021	C	3.25	25989
2	2022	C	6.00	2100	10	2021	C	3.50	25360
2	2022	C	10.00	2100	7	2021	C	3.50	25309
3	2022	C	6.00	2100	9	2021	C	3.50	25277
3	2022	C	10.00	2100	6	2021	C	3.00	25251
7	2021	P	3.00	1778	10	2021	C	5.00	25132
6	2021	C	3.10	1631	10	2021	P	2.50	24814
6	2021	C	3.15	1629	6	2021	C	3.50	22902
6	2021	P	2.85	1552	7	2021	C	3.25	22204
6	2021	C	3.00	1488	7	2021	P	2.50	21966
6	2021	P	2.80	1453	6	2021	P	2.90	21900
10	2021	C	3.50	1451	6	2021	P	2.70	20240
6	2021	P	2.55	1256	10	2021	C	3.00	20184
6	2021	C	3.05	1063	9	2021	P	2.00	19646
6	2021	P	2.95	1044	8	2021	P	2.25	19585
7	2021	C	3.50	1010	4	2022	C	3.00	19579
9	2021	C	3.50	1001	12	2021	C	4.00	19395
10	2021	P	2.30	1000	8	2021	P	2.50	19335
9	2021	P	2.75	825	6	2021	P	2.25	19089
6	2021	C	2.95	613	6	2021	P	2.65	19085
9	2021	C	3.25	601	10	2021	P	2.25	19048
7	2021	C	3.20	544	10	2021	P	2.00	18378
10	2021	P	2.50	538	8	2021	P	2.00	17453
9	2021	P	2.25	506	11	2021	C	4.00	17142
10	2021	C	5.00	505	6	2021	P	2.00	17062
1	2022	P	2.50	505	9	2021	P	2.50	16720
1	2022	C	5.00	500	3	2022	C	4.00	16675
9	2021	P	2.00	495	7	2021	P	2.75	16420
7	2021	C	3.40	492	9	2021	C	3.25	16406
7	2021	C	4.00	450	8	2021	C	3.00	16351
8	2021	C	3.40	450	7	2021	C	3.00	16335
8	2021	C	4.00	450	7	2021	P	2.65	16232
9	2021	C	3.40	450	6	2021	C	3.05	16215
9	2021	C	4.00	450	8	2021	C	3.75	16150
8	2021	C	3.00	445	7	2021	P	2.00	16035
8	2021	P	2.25	425	6	2021	C	3.75	15823
6	2021	C	3.25	421	6	2021	C	2.75	15032
1	2022	C	4.50	412	8	2021	P	2.75	14768
8	2021	P	2.75	406	6	2021	P	2.85	14497
					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	115827	132668	-16841	JUN 21	88216	87241	975
JUL 21	262065	253666	8399	JUL 21	94264	92284	1981
AUG 21	71372	70654	718	AUG 21	77868	77339	530
SEP 21	112464	109854	2610	SEP 21	70498	70257	241
OCT 21	129932	128914	1018	OCT 21	88891	88873	17
NOV 21	71031	68861	2170	NOV 21	67919	67607	313
DEC 21	47980	47324	656	DEC 21	61517	61527	-10
JAN 22	82090	81631	459	JAN 22	69356	69173	183
FEB 22	28554	28399	155	FEB 22	53456	53241	215
MAR 22	56734	56430	304	MAR 22	59226	59050	176
APR 22	54166	53495	671	APR 22	49995	49642	353
MAY 22	33194	32714	480	MAY 22	45459	45450	9
JUN 22	19370	18659	711	JUN 22	42372	42316	56
JUL 22	10738	10972	-234	JUL 22	42726	42629	97
AUG 22	9540	9541	-1	AUG 22	40964	40865	99
SEP 22	10543	10438	105	SEP 22	41717	41766	-49
OCT 22	23917	24020	-103	OCT 22	45813	45841	-28
NOV 22	10602	10582	20	NOV 22	37325	37439	-113
DEC 22	10910	10774	136	DEC 22	41618	41139	479
JAN 23	5426	5641	-215	JAN 23	23678	23670	9
FEB 23	2722	2565	157	FEB 23	22030	22027	4
MAR 23	5223	5185	38	MAR 23	23894	23879	15
APR 23	5572	5574	-2	APR 23	19466	19382	84
MAY 23	4700	4698	2	MAY 23	19394	19347	47
JUN 23	963	964	-1	JUN 23	17857	17788	70
JUL 23	1001	1019	-18	JUL 23	17891	17871	20
AUG 23	827	803	24	AUG 23	18035	18015	20
SEP 23	766	765	1	SEP 23	17401	17383	19
OCT 23	1752	1757	-5	OCT 23	18275	18229	47
NOV 23	608	607	1	NOV 23	17746	17687	59





	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	\$2.961	\$3.018	\$3.029	\$3.020	\$3.038	\$3.104	\$3.232	\$3.311	\$3.233	\$3.023	\$2.619	\$2.563
Last Week	\$2.958	\$3.004	\$3.011	\$2.997	\$3.015	\$3.074	\$3.195	\$3.277	\$3.204	\$3.004	\$2.611	\$2.557
vs. Last Week	\$0.003	\$0.014	\$0.018	\$0.023	\$0.023	\$0.030	\$0.037	\$0.034	\$0.029	\$0.019	\$0.008	\$0.006
4 Weeks Ago	\$2.680	\$2.754	\$2.829	\$2.858	\$2.843	\$2.862	\$2.940	\$3.085	\$3.174	\$3.104	\$2.908	\$2.540
vs. 4 Weeks Ago	\$0.281	\$0.264	\$0.200	\$0.162	\$0.195	\$0.242	\$0.292	\$0.226	\$0.059	-\$0.081	-\$0.289	\$0.023
Last Year	\$1.646	\$1.833	\$1.935	\$2.000	\$2.098	\$2.402	\$2.808	\$2.955	\$2.915	\$2.793	\$2.519	\$2.492
vs. Last Year	\$1.315	\$1.185	\$1.094	\$1.020	\$0.940	\$0.702	\$0.424	\$0.356	\$0.318	\$0.230	\$0.100	\$0.071

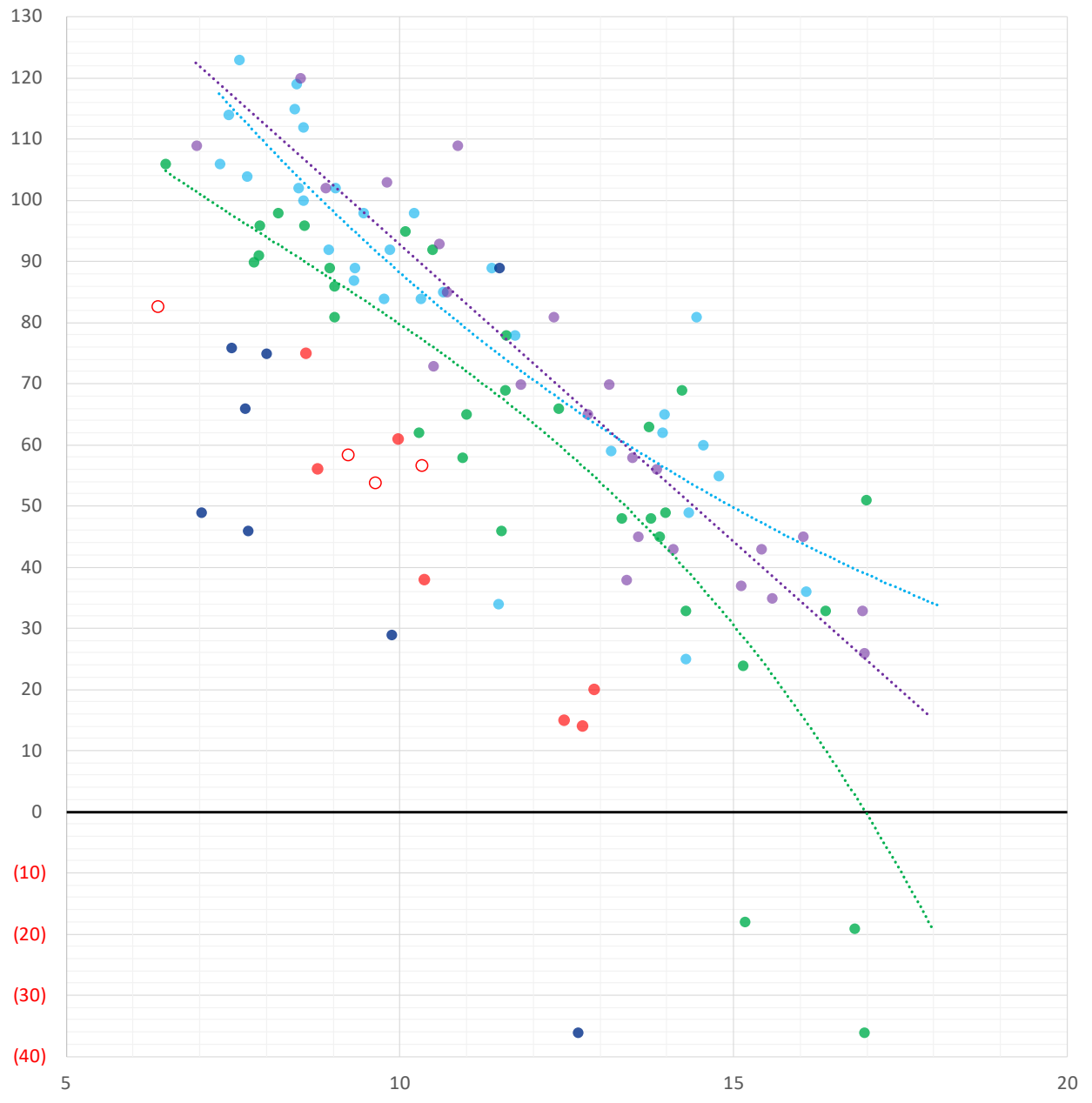
	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	2.00	2.36	0.36
TETCO M3	\$/MMBtu	2.16	2.31	0.15
FGT Zone 3	\$/MMBtu	2.17	3.04	0.87
Zone 6 NY	\$/MMBtu	2.17	2.28	0.11
Chicago Citygate	\$/MMBtu	2.69	2.84	0.15
Michcon	\$/MMBtu	2.75	2.76	0.01
Columbia TCO Pool	\$/MMBtu	2.47	2.44	-0.03
Ventura	\$/MMBtu	2.66	2.77	0.11
Rockies/Opal	\$/MMBtu	2.65	2.76	0.11
El Paso Permian Basin	\$/MMBtu	2.50	2.85	0.35
Socal Citygate	\$/MMBtu	2.90	3.48	0.58
Malin	\$/MMBtu	2.91	3.00	0.09
Houston Ship Channel	\$/MMBtu	2.91	3.06	0.15
Henry Hub Cash	\$/MMBtu	2.87	2.80	-0.07
AECO Cash	C\$/GJ	2.57	2.48	-0.09
Station2 Cash	C\$/GJ	2.52	2.85	0.33
Dawn Cash	C\$/GJ	2.76	2.77	0.01

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks Ago	vs. Last Year
NatGas Jul21/Oct21	\$/MMBtu	0.020	▲ 0.009	▼ -0.013	▲ 0.016
NatGas Oct21/Nov21	\$/MMBtu	0.066	▲ 0.007	▼ -0.012	▲ 0.018
NatGas Oct21/Jan22	\$/MMBtu	0.273	▲ 0.011	▼ -0.039	▼ -0.020
NatGas Apr22/Oct22	\$/MMBtu	0.025	▲ 0.005	▼ -0.008	▼ -0.024
WTI Crude	\$/Bbl	65.37	▲ 0.470	▲ 2.240	▲ 35.940
Brent Crude	\$/Bbl	68.71	▲ 0.430	▲ 1.940	▲ 36.210
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18	▲ 0.000	▲ 0.000	▲ 0.000
Heating Oil	cents/Gallon	203.62	▲ 2.560	▲ 14.050	▲ 111.580
Propane, Mt. Bel	cents/Gallon	0.81	▲ 0.011	▼ -0.007	▲ 0.414
Ethane, Mt. Bel	cents/Gallon	0.26	▲ 0.003	▲ 0.028	▲ 0.033
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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