

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 3.11	▼ \$ (0.00)	▲ \$ 0.12

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 66.61	▲ \$ 0.34	▲ \$ 1.2

	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 69.92	▲ \$ 0.46	▲ \$ 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](#)

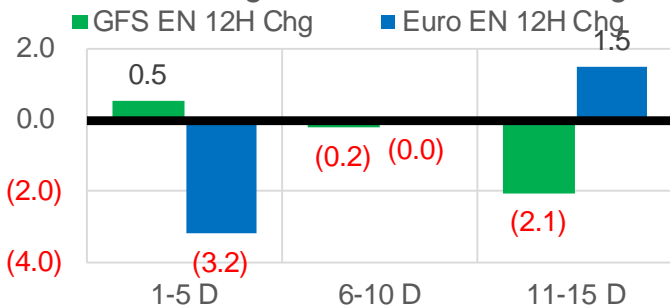
[Nat Gas Options Volume and Open Interest](#)

[Nat Gas Futures Open Interest](#)

[Price Summary](#)

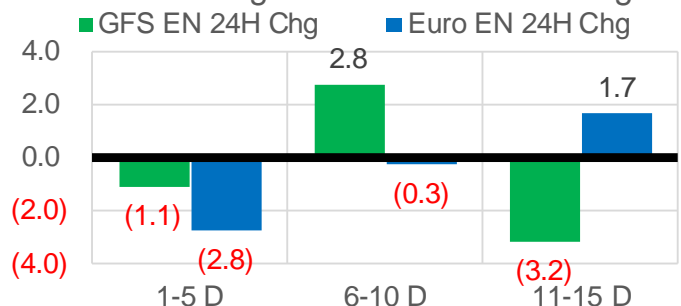
### Vs. 12H Ago

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	90.6	▼ -1.67	▼ -1.60

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	27.5	▲ 0.95	▲ 1.57

	Current	Δ from YD	Δ from 7D Avg
US ResComm	8.9	▼ -1.23	▼ -4.96

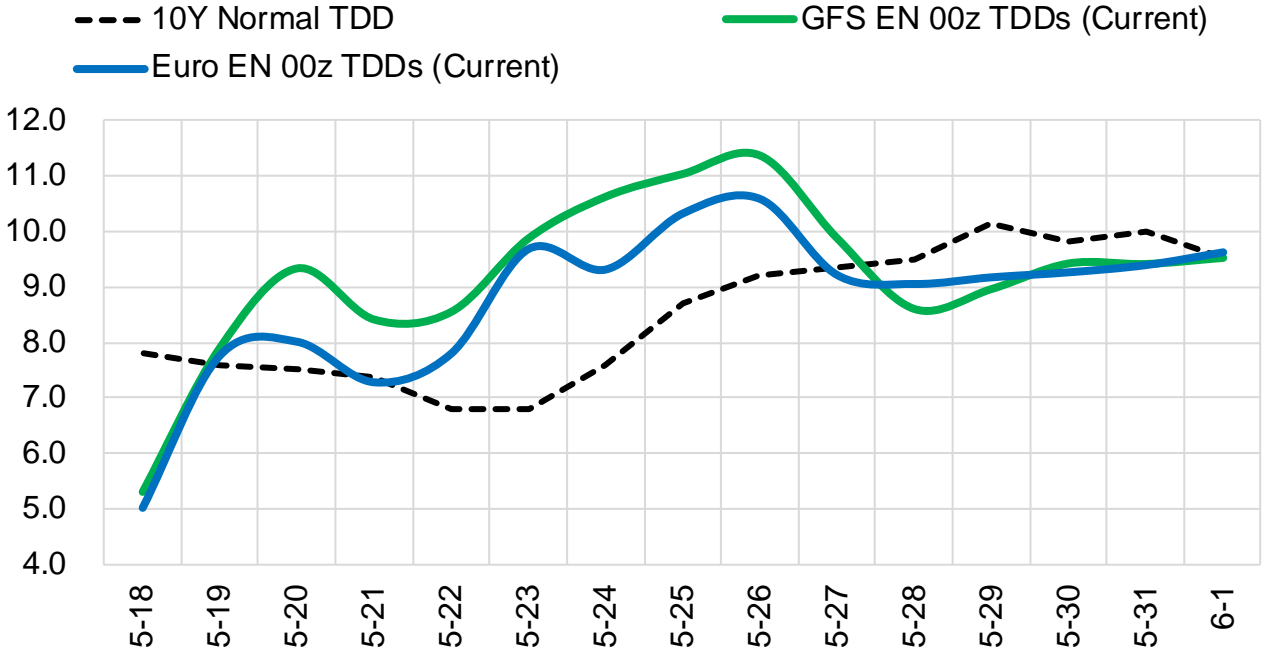
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	4.2	▼ -0.21	▼ -0.47

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	10.3	▲ 0.06	▼ -0.09

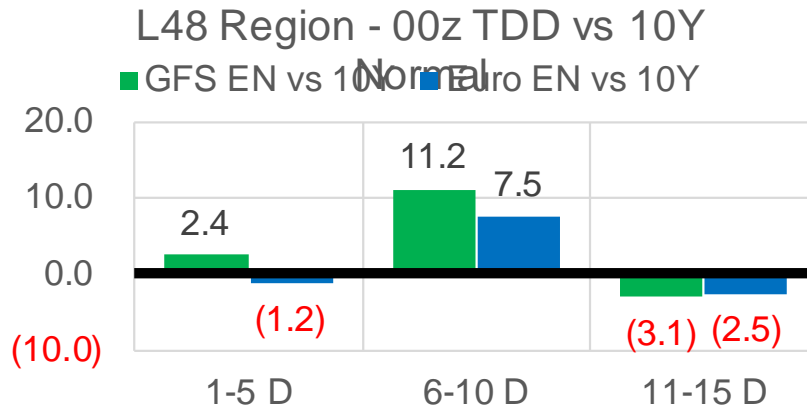
	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	7.0	▲ 0.36	▲ 0.28

## Short-term Weather Model Outlooks (00z)

### L48 Region



## Vs. 10Y Normal



Source: WSI , Bloomberg

## Lower 48 Component Models

### Daily Balances

	12-May	13-May	14-May	15-May	16-May	17-May	18-May	DoD	vs. 7D
<b>Lower 48 Dry Production</b>	<b>91.7</b>	<b>92.5</b>	<b>92.2</b>	<b>92.5</b>	<b>92.2</b>	<b>92.3</b>	<b>90.6</b>	▼ -1.7	▼ -1.6
<b>Canadian Imports</b>	<b>5.1</b>	<b>4.8</b>	<b>4.7</b>	<b>4.3</b>	<b>4.3</b>	<b>4.4</b>	<b>4.2</b>	▼ -0.2	▼ -0.4
L48 Power	27.5	26.6	25.3	23.9	24.4	26.6	27.5	▲ 1.0	▲ 1.8
L48 Residential & Commercial	17.8	15.4	13.0	11.7	10.3	10.2	8.9	▼ -1.2	▼ -4.1
L48 Industrial	20.5	20.9	21.2	21.6	21.7	21.8	21.3	▼ -0.4	▲ 0.1
L48 Lease and Plant Fuel	5.0	5.1	5.1	5.1	5.1	5.1	5.0	▼ -0.1	▼ -0.1
L48 Pipeline Distribution	2.3	2.1	2.0	1.8	1.8	1.9	1.9	▼ 0.0	▼ -0.1
<b>L48 Regional Gas Consumption</b>	<b>73.1</b>	<b>70.1</b>	<b>66.6</b>	<b>64.1</b>	<b>63.2</b>	<b>65.4</b>	<b>64.6</b>	▼ -0.8	▼ -2.4
<b>Net LNG Delivered</b>	<b>10.18</b>	<b>9.99</b>	<b>9.95</b>	<b>10.98</b>	<b>10.80</b>	<b>10.28</b>	<b>10.35</b>	▲ 0.1	▼ 0.0
<b>Total Mexican Exports</b>	<b>7.2</b>	<b>6.9</b>	<b>6.6</b>	<b>6.2</b>	<b>6.3</b>	<b>6.7</b>	<b>7.0</b>	▲ 0.4	▲ 0.4
Implied Daily Storage Activity	6.3	10.2	13.7	15.5	16.2	14.3	12.8		
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
<b>Lower 48 Dry Production</b>	<b>92.9</b>	<b>92.3</b>	<b>91.5</b>	<b>92.1</b>	<b>92.2</b>	<b>92.4</b>	▲ 0.2	▲ 0.4
<b>Canadian Imports</b>	<b>4.2</b>	<b>4.3</b>	<b>5.3</b>	<b>4.6</b>	<b>4.6</b>	<b>4.8</b>	▲ 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	▲ 4.4	▼ -0.2
L48 Industrial	22.0	21.5	20.3	20.7	21.8	20.7	▼ -1.2	▼ -0.4
L48 Lease and Plant Fuel	5.1	5.0	5.0	5.0	5.1	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
<b>L48 Regional Gas Consumption</b>	<b>71.0</b>	<b>71.9</b>	<b>77.6</b>	<b>70.8</b>	<b>69.1</b>	<b>71.8</b>	▲ 2.8	▼ -0.5
<b>Net LNG Exports</b>	<b>11.5</b>	<b>11.4</b>	<b>11.6</b>	<b>11.4</b>	<b>11.3</b>	<b>11.0</b>	▼ -0.3	▼ -0.4
<b>Total Mexican Exports</b>	<b>6.2</b>	<b>7.3</b>	<b>6.8</b>	<b>6.7</b>	<b>6.7</b>	<b>6.8</b>	▲ 0.1	▼ -0.1
Implied Daily Storage Activity	8.3	6.0	0.9	7.8	9.7	7.5	-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
<b>Lower 48 Dry Production</b>	<b>90.6</b>	<b>87.3</b>	<b>91.6</b>	<b>84.7</b>	<b>92.2</b>	<b>92.2</b>	<b>92.2</b>	▼ 0.0	▲ 7.5
<b>Canadian Imports</b>	<b>4.7</b>	<b>3.9</b>	<b>6.3</b>	<b>6.4</b>	<b>4.8</b>	<b>4.7</b>	<b>4.6</b>	▼ 0.0	▼ -1.8
L48 Power	26.9	26.9	28.2	27.9	25.1	25.1	26.0	▲ 0.9	▼ -1.9
L48 Residential & Commercial	12.8	12.7	43.9	47.9	28.4	19.7	14.5	▼ -5.2	▼ -33.4
L48 Industrial	23.1	19.7	24.3	21.7	20.2	21.2	21.3	▲ 0.1	▼ -0.4
L48 Lease and Plant Fuel	5.0	4.8	5.0	4.7	5.0	5.0	5.1	▲ 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
<b>L48 Regional Gas Consumption</b>	<b>69.9</b>	<b>66.2</b>	<b>104.7</b>	<b>105.4</b>	<b>81.3</b>	<b>73.3</b>	<b>68.9</b>	▼ -4.4	▼ -36.4
<b>Net LNG Exports</b>	<b>5.6</b>	<b>6.7</b>	<b>10.5</b>	<b>8.4</b>	<b>11.1</b>	<b>11.5</b>	<b>10.9</b>	▼ -0.5	▲ 2.5
<b>Total Mexican Exports</b>	<b>5.0</b>	<b>4.8</b>	<b>6.2</b>	<b>5.7</b>	<b>6.5</b>	<b>6.7</b>	<b>6.7</b>	▼ 0.0	▲ 1.0
Implied Daily Storage Activity	14.8	13.6	-23.5	-28.5	-1.9	5.4	10.2		
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	0.6	4
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)

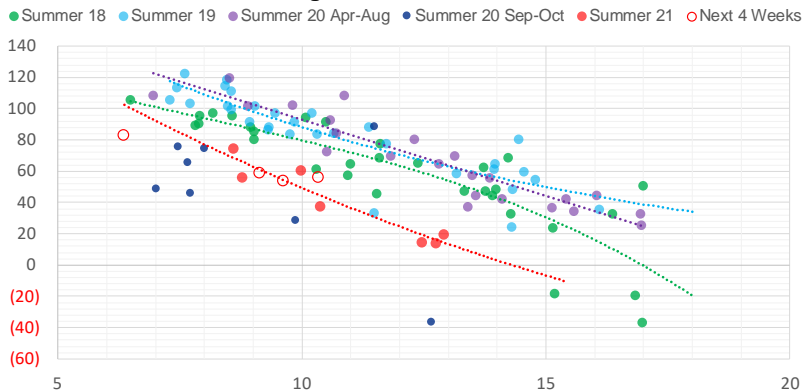


### Weather Model Storage Projection

Next report  
and beyond

Week Ending	GWDDs	Week Storage Projection
14-May	10.3	56
21-May	6.4	83
28-May	9.6	54
04-Jun	9.1	59

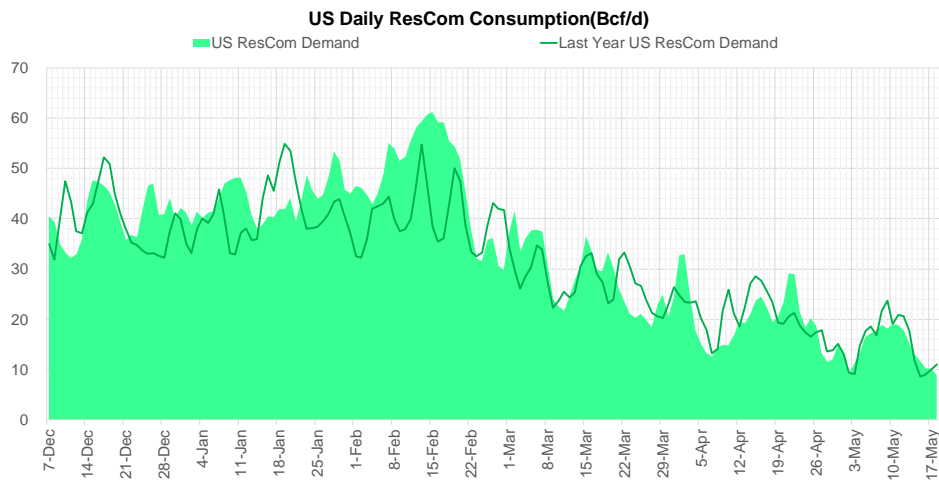
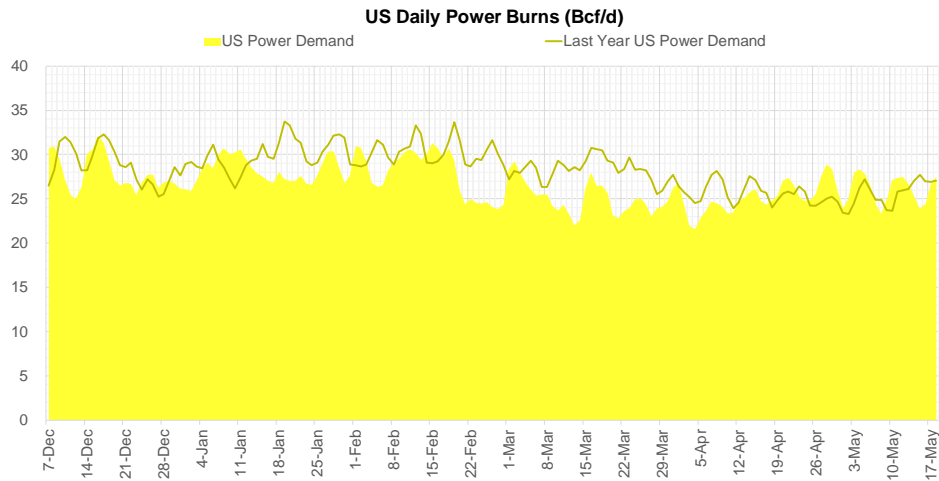
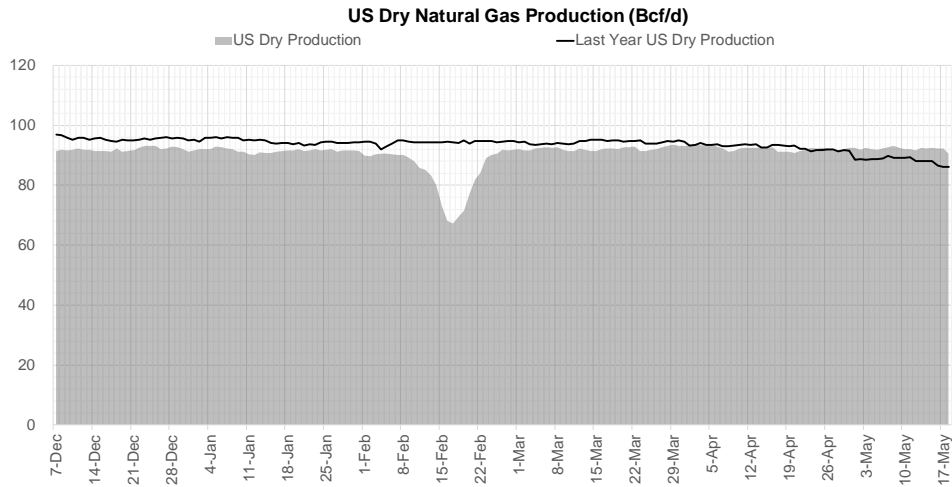
**Weather Storage Model - Next 4 Week Forecast**



[Go to larger image](#)



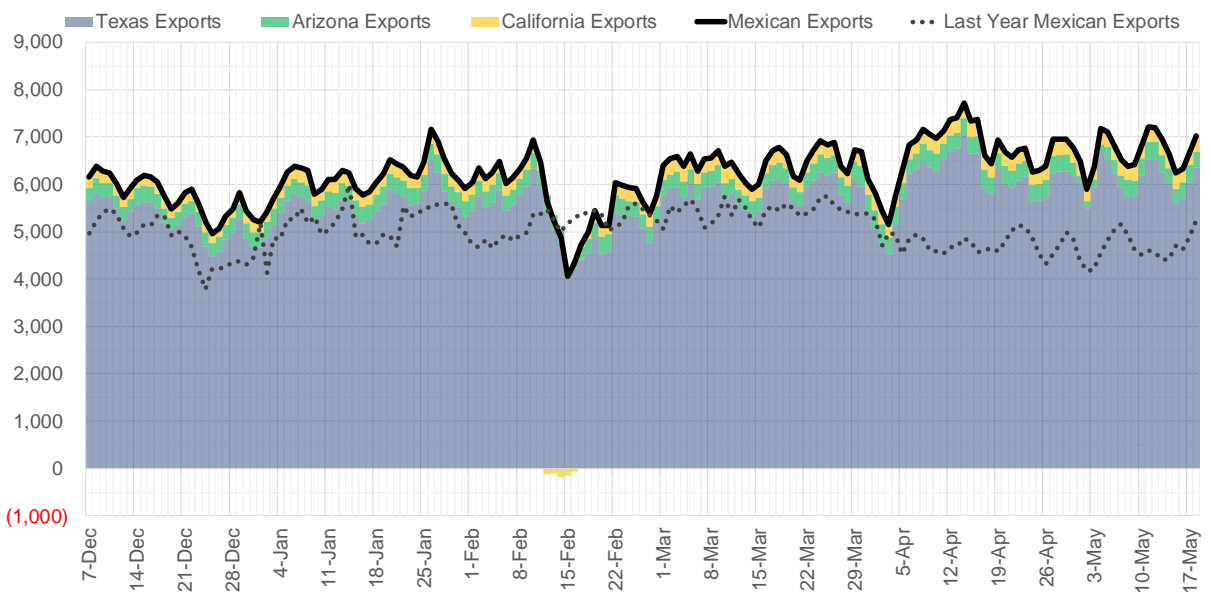
## Supply – Demand Trends



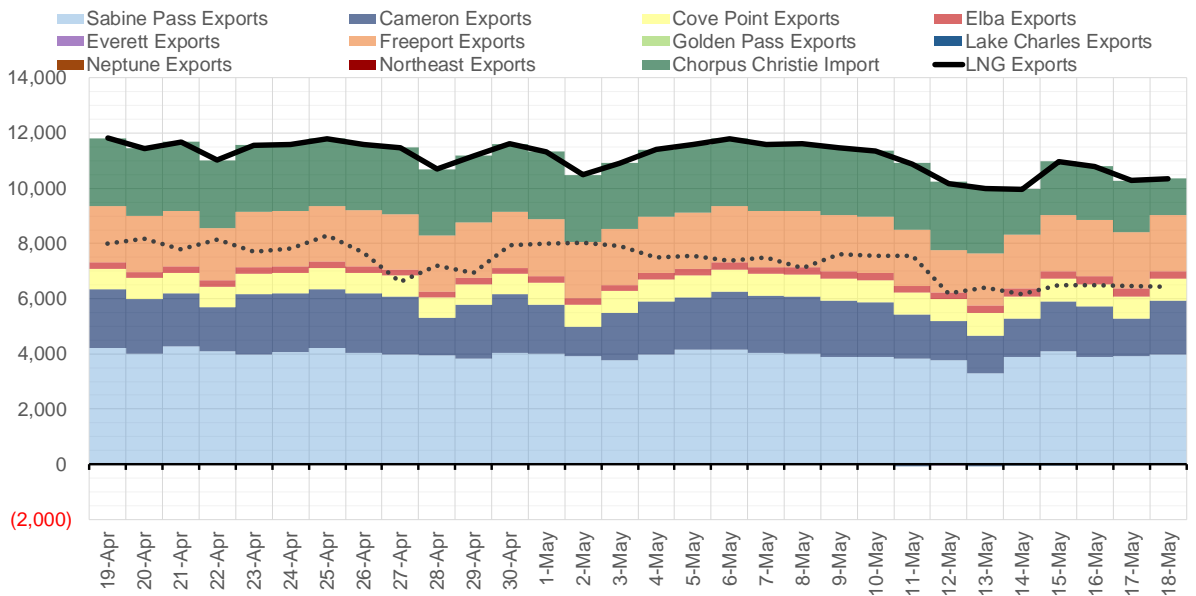
Source: Bloomberg

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

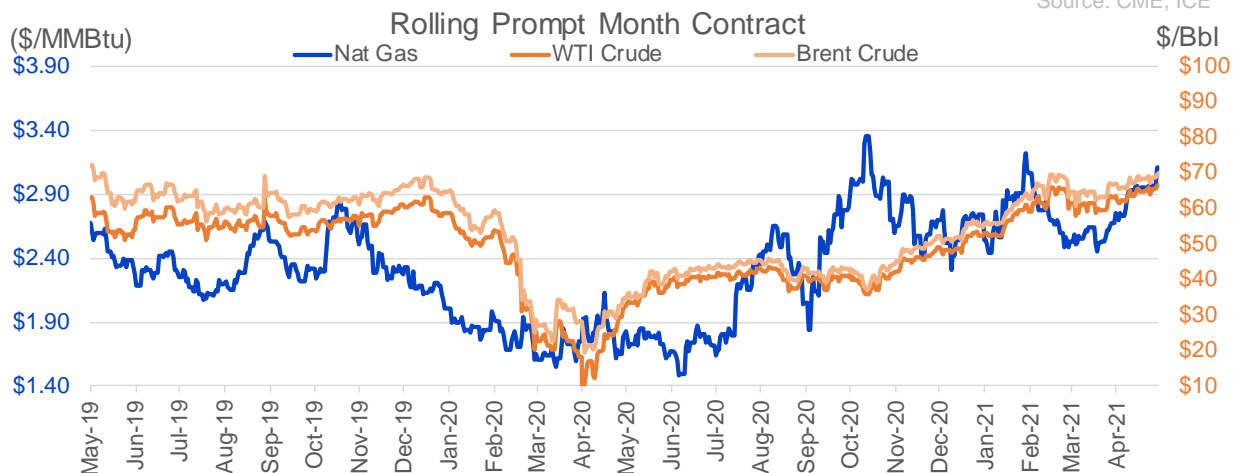
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
7	2021	C	3.50	15692	10	2021	C	4.00	41399
6	2021	C	3.25	11689	6	2021	C	3.25	33574
6	2021	P	3.05	11223	9	2021	C	4.00	32346
6	2021	P	2.90	11141	8	2021	C	3.50	31382
8	2021	C	3.50	9297	8	2021	C	4.00	30429
7	2021	C	4.00	6701	6	2021	P	2.50	29821
6	2021	P	3.00	6417	10	2021	C	3.25	28925
7	2021	P	3.00	6314	6	2021	C	4.00	27949
6	2021	C	3.50	6247	7	2021	C	4.00	26866
10	2021	C	4.00	6076	6	2021	P	2.75	26416
6	2021	C	3.15	5969	8	2021	C	3.25	25365
9	2021	C	4.00	5328	10	2021	C	5.00	25132
6	2021	C	3.20	5293	10	2021	C	3.50	25073
9	2021	C	3.50	4949	7	2021	C	3.50	25036
8	2021	C	4.00	4829	6	2021	C	3.00	25023
7	2021	P	2.85	4656	10	2021	P	2.50	24976
8	2021	C	3.25	4446	7	2021	P	2.50	22857
10	2021	P	2.50	4358	6	2021	C	3.50	22752
8	2021	P	2.50	4302	9	2021	C	3.50	22478
7	2021	C	3.25	4278	7	2021	C	3.25	22117
6	2021	P	3.10	3985	6	2021	P	2.90	21791
10	2021	C	5.00	3458	6	2021	P	2.70	20239
10	2021	P	2.25	3330	9	2021	P	2.00	20141
6	2021	C	3.35	3248	10	2021	C	3.00	19784
12	2021	C	4.00	3120	4	2022	C	3.00	19579
7	2021	P	2.75	2864	12	2021	C	4.00	19470
6	2021	P	2.95	2851	8	2021	P	2.25	19348
6	2021	P	2.75	2656	8	2021	P	2.50	19335
6	2021	C	3.30	2629	6	2021	P	2.65	19137
10	2021	P	2.75	2550	6	2021	P	2.25	19089
9	2021	C	3.25	2538	10	2021	P	2.25	19073
7	2021	C	3.40	2398	7	2021	P	2.75	18635
6	2021	C	3.10	2387	10	2021	P	2.00	18378
6	2021	C	3.40	2324	11	2021	C	4.00	18068
6	2021	P	2.85	2298	8	2021	P	2.00	17503
7	2021	P	2.50	2242	8	2021	C	3.75	17100
8	2021	C	3.40	2113	6	2021	P	2.00	17062
8	2021	P	2.80	2108	9	2021	P	2.50	16758
9	2021	C	3.40	2000	3	2022	C	4.00	16675
1	2022	P	3.00	2000	9	2021	C	3.25	16516
7	2021	C	3.75	1864	7	2021	C	3.00	16348
10	2021	C	3.25	1826	8	2021	C	3.00	16345
9	2021	P	2.50	1756	7	2021	P	2.65	16131
11	2021	C	4.00	1700	7	2021	P	2.00	16035
12	2021	C	3.25	1450	6	2021	C	3.05	15980
7	2021	C	3.20	1421	6	2021	C	3.75	15823
10	2021	C	3.75	1418	6	2021	P	2.85	15083
7	2021	P	2.95	1409	6	2021	C	2.75	15032
9	2021	P	2.75	1362	8	2021	P	2.75	14723
					3	2022	C	5	14200

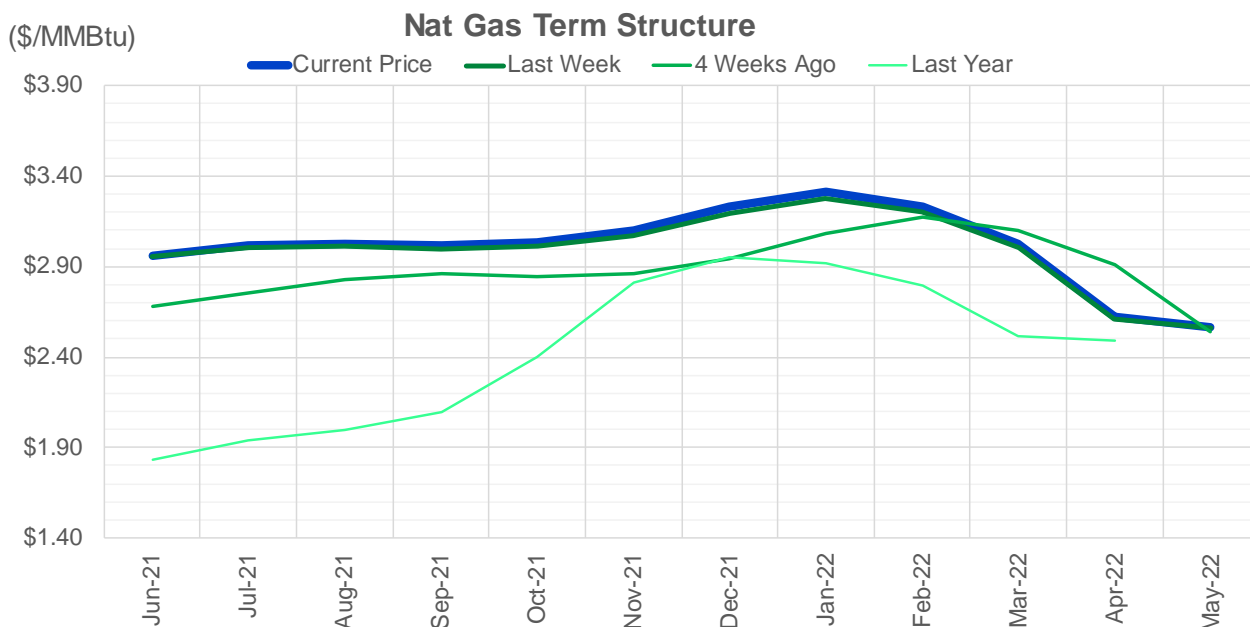
Source: CME, ICE



## 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	103881	115544	-11663	JUN 21	87569	88216	-647
JUL 21	275642	262064	13578	JUL 21	94675	94264	411
AUG 21	69537	71369	-1832	AUG 21	78137	77868	269
SEP 21	117580	112465	5115	SEP 21	72576	70498	2078
OCT 21	131812	129932	1880	OCT 21	90696	88891	1805
NOV 21	72560	71031	1529	NOV 21	67892	67919	-27
DEC 21	50887	47980	2907	DEC 21	62394	61517	877
JAN 22	85707	82090	3617	JAN 22	70951	69356	1595
FEB 22	28713	28554	159	FEB 22	54095	53456	639
MAR 22	58516	56734	1782	MAR 22	59897	59226	671
APR 22	56528	54166	2362	APR 22	51140	49995	1145
MAY 22	36912	33194	3718	MAY 22	46815	45459	1356
JUN 22	20262	19370	892	JUN 22	43393	42372	1021
JUL 22	11290	10738	552	JUL 22	43130	42726	404
AUG 22	9952	9540	412	AUG 22	41839	40964	876
SEP 22	11313	10543	770	SEP 22	42752	41717	1036
OCT 22	27479	23917	3562	OCT 22	47421	45813	1609
NOV 22	11630	10602	1028	NOV 22	37765	37325	440
DEC 22	11080	10910	170	DEC 22	41731	41618	113
JAN 23	5413	5426	-13	JAN 23	24035	23678	357
FEB 23	2682	2722	-40	FEB 23	22106	22030	75
MAR 23	5525	5223	302	MAR 23	24120	23894	227
APR 23	5865	5572	293	APR 23	19550	19466	85
MAY 23	4697	4700	-3	MAY 23	19492	19394	98
JUN 23	963	963	0	JUN 23	17972	17857	115
JUL 23	1001	1001	0	JUL 23	18035	17891	145
AUG 23	830	827	3	AUG 23	18142	18035	107
SEP 23	762	766	-4	SEP 23	17534	17401	133
OCT 23	1752	1752	0	OCT 23	18325	18275	50
NOV 23	578	608	-30	NOV 23	17895	17746	149





	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22
<b>Current Price</b>	<b>\$2.961</b>	<b>\$3.018</b>	<b>\$3.029</b>	<b>\$3.020</b>	<b>\$3.038</b>	<b>\$3.104</b>	<b>\$3.232</b>	<b>\$3.311</b>	<b>\$3.233</b>	<b>\$3.023</b>	<b>\$2.619</b>	<b>\$2.563</b>
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

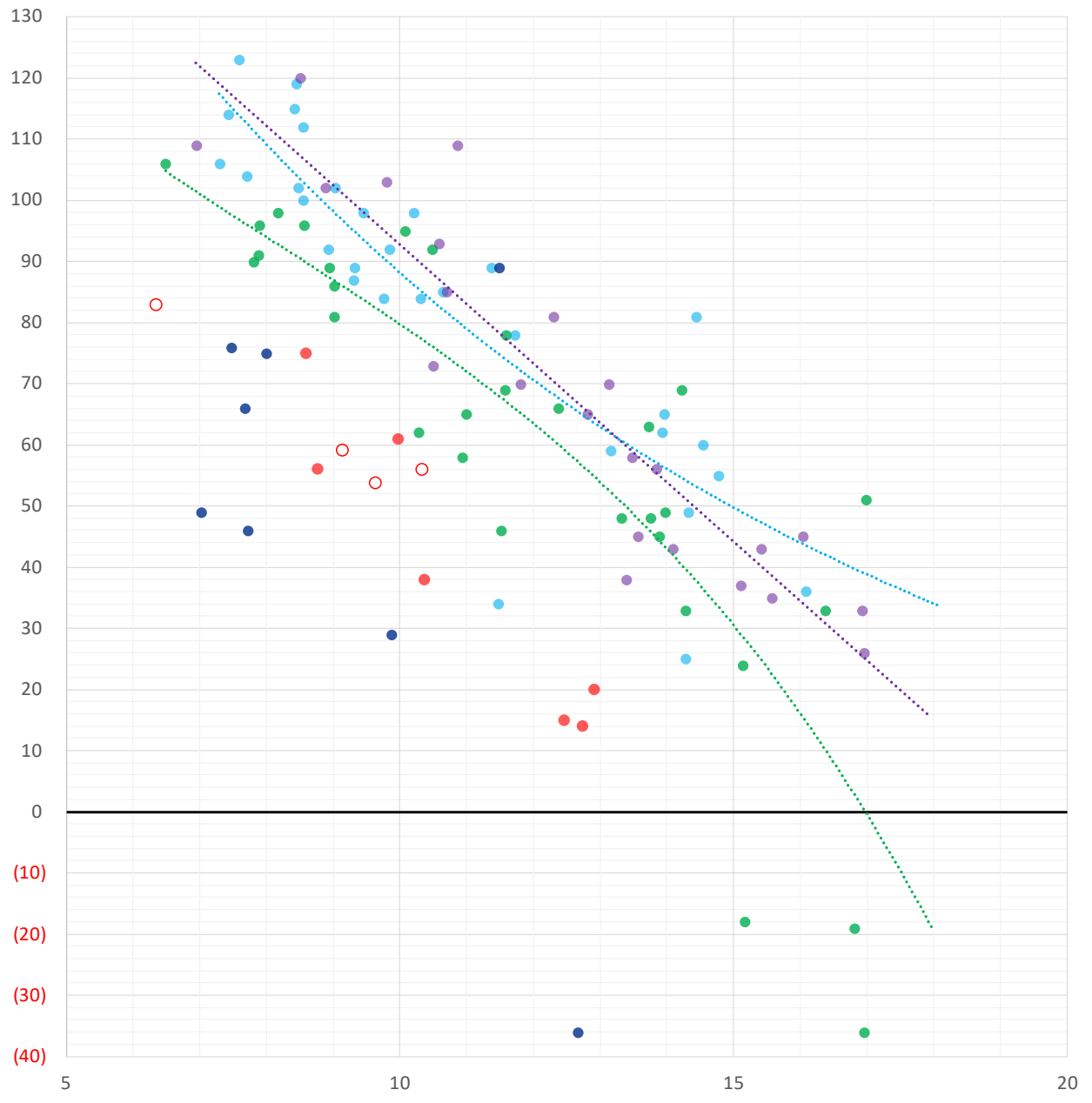
	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	2.00	2.36	0.36
TETCO M3	\$/MMBtu	2.16	2.31	0.15
FGT Zone 3	\$/MMBtu	2.48	3.04	0.56
Zone 6 NY	\$/MMBtu	2.48	2.28	-0.20
Chicago Citygate	\$/MMBtu	2.69	2.84	0.15
Michcon	\$/MMBtu	2.75	2.76	0.01
Columbia TCO Pool	\$/MMBtu	2.47	2.44	-0.03
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



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.