

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 2.89 ▲	\$ 0.00 ▼	\$ (0.04) ▼

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 65.69 ▼	\$ (0.36) ▼	\$ 1.7 ▲

	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 68.23 ▼	\$ (0.23) ▼	\$ 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](#)

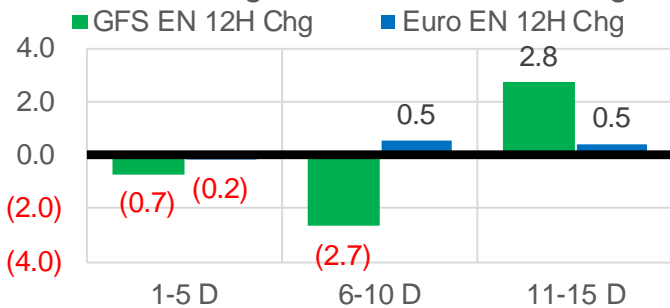
[Nat Gas Options Volume and Open Interest](#)

[Nat Gas Futures Open Interest](#)

[Price Summary](#)

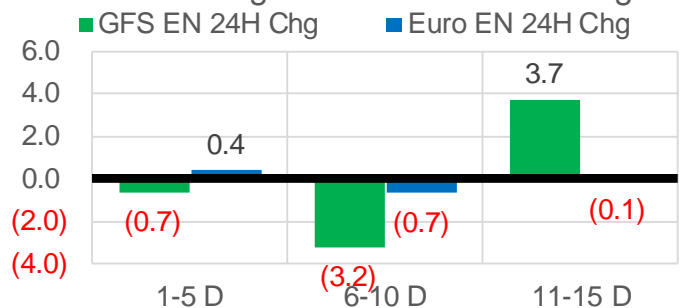
### Vs. 12H Ago

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	91.2 ▼	-1.39 ▼	-0.76 ▼

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	30.4 ▲	0.69 ▲	1.77 ▲

	Current	Δ from YD	Δ from 7D Avg
US ResComm	8.7 ▼	-0.54 ▼	-0.38 ▼

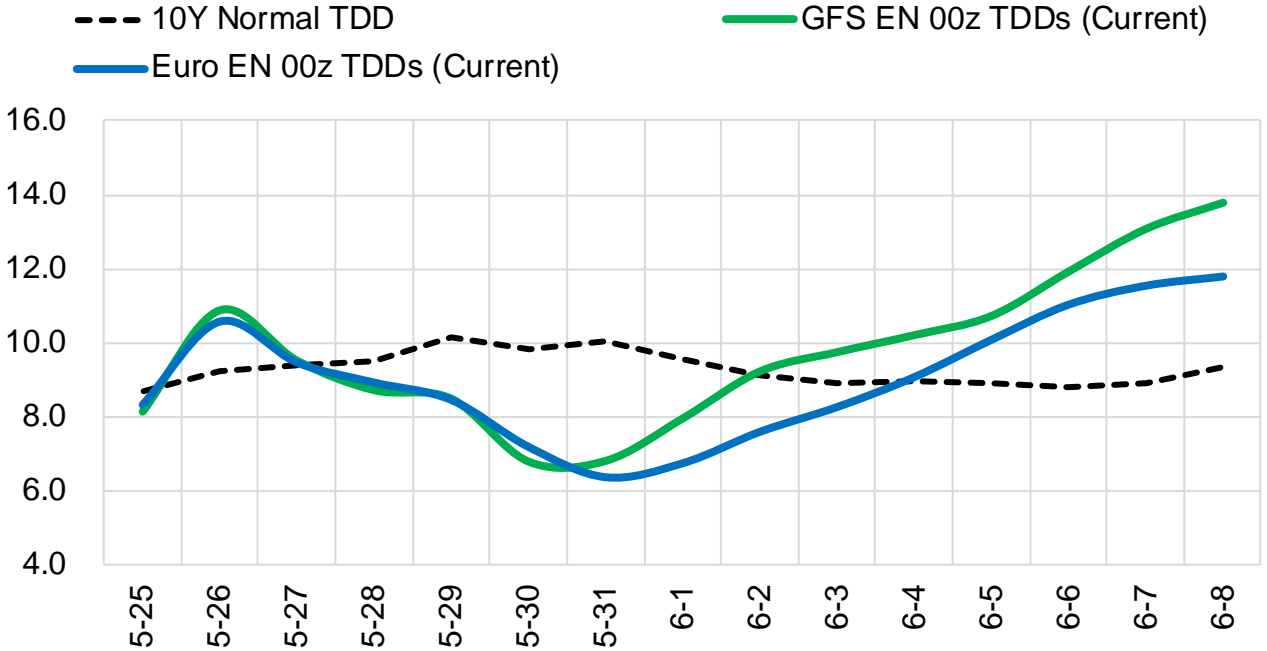
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	4.4 ▲	0.02 ▲	-0.15 ▼

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	10.7 ▼	-0.04 ▼	0.00 ▲

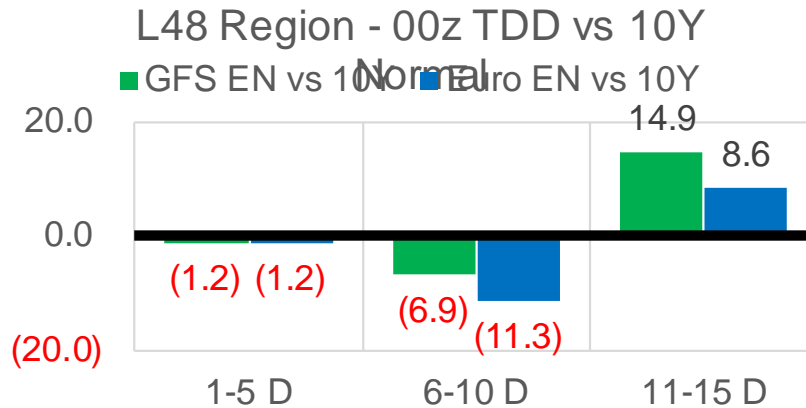
	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.9 ▲	0.08 ▲	0.10 ▲

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

#### L48 Region



### Vs. 10Y Normal



Source: WSI , Bloomberg

## Lower 48 Component Models

### Daily Balances

	19-May	20-May	21-May	22-May	23-May	24-May	25-May	DoD	vs. 7D
<b>Lower 48 Dry Production</b>	<b>91.3</b>	<b>91.9</b>	<b>92.1</b>	<b>92.4</b>	<b>92.4</b>	<b>92.6</b>	<b>91.2</b>	▼ -1.4	▼ -0.9
<b>Canadian Imports</b>	<b>4.9</b>	<b>4.8</b>	<b>4.5</b>	<b>4.3</b>	<b>4.3</b>	<b>4.3</b>	<b>4.4</b>	▲ 0.0	▼ -0.1
L48 Power	28.8	29.4	28.3	27.8	28.6	29.7	30.4	▲ 0.7	▲ 1.6
L48 Residential & Commercial	8.8	9.3	9.3	8.9	8.9	9.3	8.7	▼ -0.5	▼ -0.4
L48 Industrial	20.0	20.1	20.3	20.6	20.9	21.2	21.2	▲ 0.0	▲ 0.6
L48 Lease and Plant Fuel	5.0	5.0	5.0	5.1	5.1	5.1	5.0	▼ -0.1	▼ -0.1
L48 Pipeline Distribution	1.9	2.0	1.9	1.9	1.9	2.0	2.0	▲ 0.0	▲ 0.1
<b>L48 Regional Gas Consumption</b>	<b>64.5</b>	<b>65.9</b>	<b>64.9</b>	<b>64.1</b>	<b>65.4</b>	<b>67.2</b>	<b>67.2</b>	▲ 0.1	▲ 1.9
<b>Net LNG Delivered</b>	<b>10.42</b>	<b>10.58</b>	<b>10.72</b>	<b>11.12</b>	<b>11.18</b>	<b>10.70</b>	<b>10.66</b>	▼ 0.0	▼ -0.1
<b>Total Mexican Exports</b>	<b>7.1</b>	<b>7.0</b>	<b>6.9</b>	<b>6.5</b>	<b>6.3</b>	<b>6.9</b>	<b>6.9</b>	▲ 0.1	▲ 0.2
<b>Implied Daily Storage Activity</b>	<b>14.1</b>	<b>13.2</b>	<b>14.0</b>	<b>14.9</b>	<b>13.7</b>	<b>12.2</b>	<b>10.7</b>		
<b>EIA Reported Daily Storage Activity</b>									
<b>Daily Model Error</b>									

### EIA Storage Week Balances

	16-Apr	23-Apr	30-Apr	7-May	14-May	21-May	WoW	vs. 4W
<b>Lower 48 Dry Production</b>	<b>91.7</b>	<b>90.9</b>	<b>91.5</b>	<b>91.6</b>	<b>91.7</b>	<b>91.6</b>	▼ -0.1	▲ 0.2
<b>Canadian Imports</b>	<b>4.3</b>	<b>5.3</b>	<b>4.6</b>	<b>4.6</b>	<b>4.8</b>	<b>4.6</b>	▼ -0.3	▼ -0.3
L48 Power	24.6	25.8	26.5	26.5	25.9	26.6	▲ 0.7	▲ 0.5
L48 Residential & Commercial	18.6	24.0	16.5	13.6	18.0	10.3	▼ -7.7	▼ -7.7
L48 Industrial	21.0	19.8	20.1	20.4	18.1	19.8	▲ 1.7	▲ 0.2
L48 Lease and Plant Fuel	5.0	5.0	5.0	5.0	5.0	5.0	▼ 0.0	▲ 0.0
L48 Pipeline Distribution	2.1	2.5	2.1	2.0	2.2	1.9	▼ -0.4	▼ -0.3
<b>L48 Regional Gas Consumption</b>	<b>71.4</b>	<b>77.0</b>	<b>70.2</b>	<b>67.6</b>	<b>69.3</b>	<b>63.7</b>	▼ -5.6	▼ -7.3
<b>Net LNG Exports</b>	<b>11.4</b>	<b>11.6</b>	<b>11.4</b>	<b>11.3</b>	<b>11.0</b>	<b>10.4</b>	▼ -0.6	▼ -0.9
<b>Total Mexican Exports</b>	<b>7.3</b>	<b>6.8</b>	<b>6.7</b>	<b>6.7</b>	<b>6.8</b>	<b>6.8</b>	▼ 0.0	▲ 0.1
<b>Implied Daily Storage Activity</b>	<b>6.0</b>	<b>0.9</b>	<b>7.9</b>	<b>10.6</b>	<b>9.5</b>	<b>15.3</b>	<b>5.8</b>	
<b>EIA Reported Daily Storage Activity</b>	<b>5.4</b>	<b>2.1</b>	<b>8.6</b>	<b>10.1</b>	<b>10.1</b>			
<b>Daily Model Error</b>	<b>0.6</b>	<b>-1.2</b>	<b>-0.6</b>	<b>0.5</b>	<b>-0.7</b>			

### 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>91.7</b>	<b>91.7</b>	<b>91.7</b>	▲ 0.1	▲ 7.1
<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>	▼ -0.1	▼ -1.8
L48 Power	26.9	26.9	28.2	27.9	25.1	25.1	26.9	▲ 1.7	▼ -1.0
L48 Residential & Commercial	12.8	12.7	43.9	47.9	28.4	19.7	13.0	▼ -6.8	▼ -34.9
L48 Industrial	23.1	19.7	24.3	21.6	19.7	20.7	19.6	▼ -1.0	▼ -2.0
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
<b>L48 Regional Gas Consumption</b>	<b>69.9</b>	<b>66.2</b>	<b>104.7</b>	<b>105.4</b>	<b>80.7</b>	<b>72.7</b>	<b>66.5</b>	▼ -6.2	▼ -38.8
<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>	▼ -0.6	▲ 2.4
<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
<b>Implied Daily Storage Activity</b>	<b>14.8</b>	<b>13.6</b>	<b>-23.5</b>	<b>-28.5</b>	<b>-1.9</b>	<b>5.4</b>	<b>12.2</b>		
<b>EIA Reported Daily Storage Activity</b>									
<b>Daily Model Error</b>									

Source: Bloomberg, analytix.ai

### Regional S/D Models Storage Projection

Week Ending 21-May

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	15.0	0.8	15.8	111
East	2.8	0.8	3.6	26
Midwest	4.8	0.1	4.9	34
Mountain	4.3	-3.3	1.0	7
South Central	1.4	3.5	4.9	34
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)

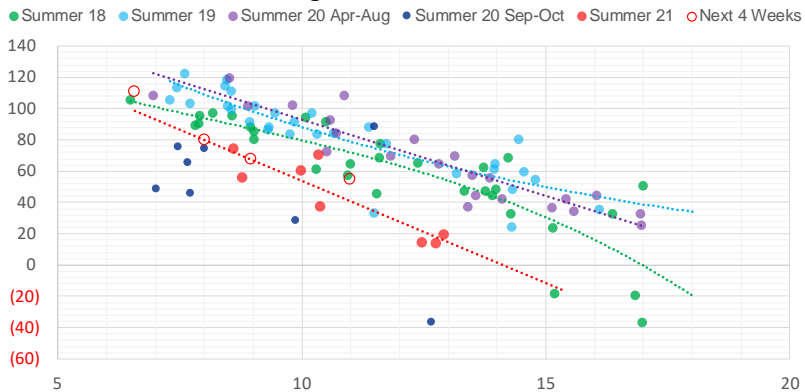


### Weather Model Storage Projection

Next report  
and beyond

Week Ending	GWDDs	Week Storage Projection
21-May	6.6	111
28-May	9.0	68
04-Jun	8.0	80
11-Jun	11.0	55

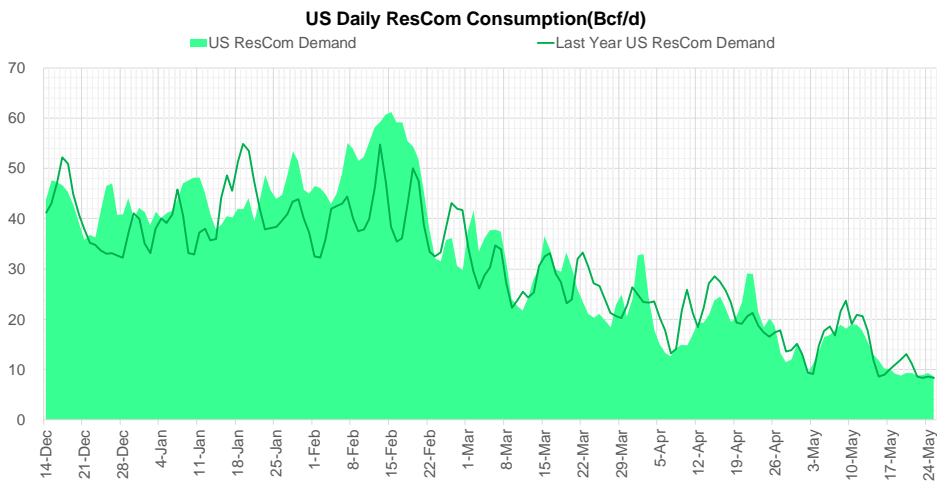
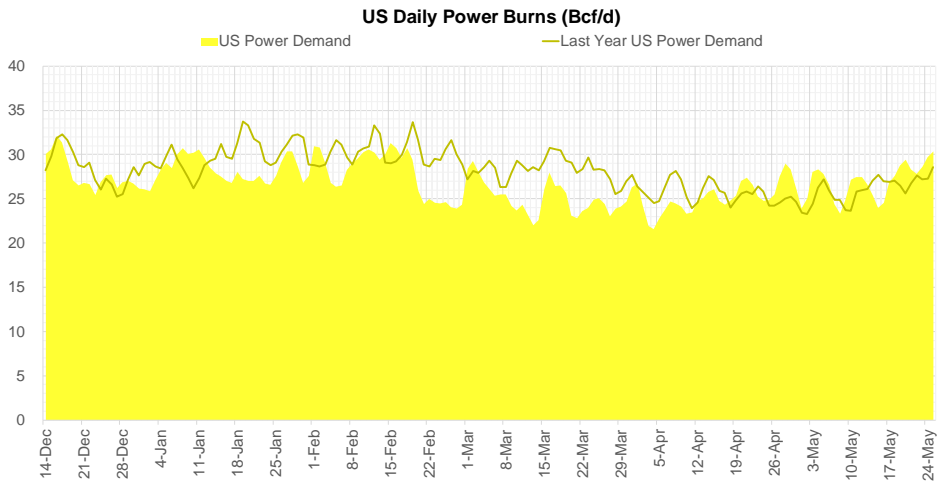
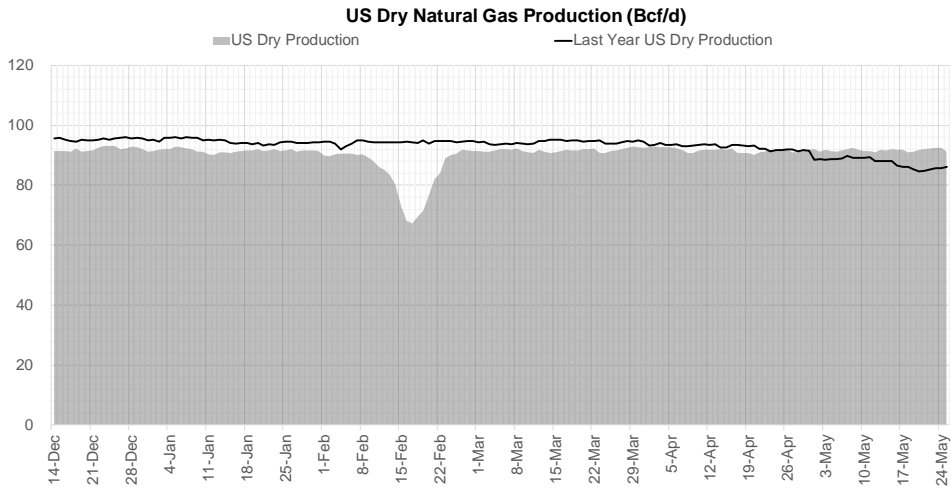
**Weather Storage Model - Next 4 Week Forecast**



[Go to larger image](#)



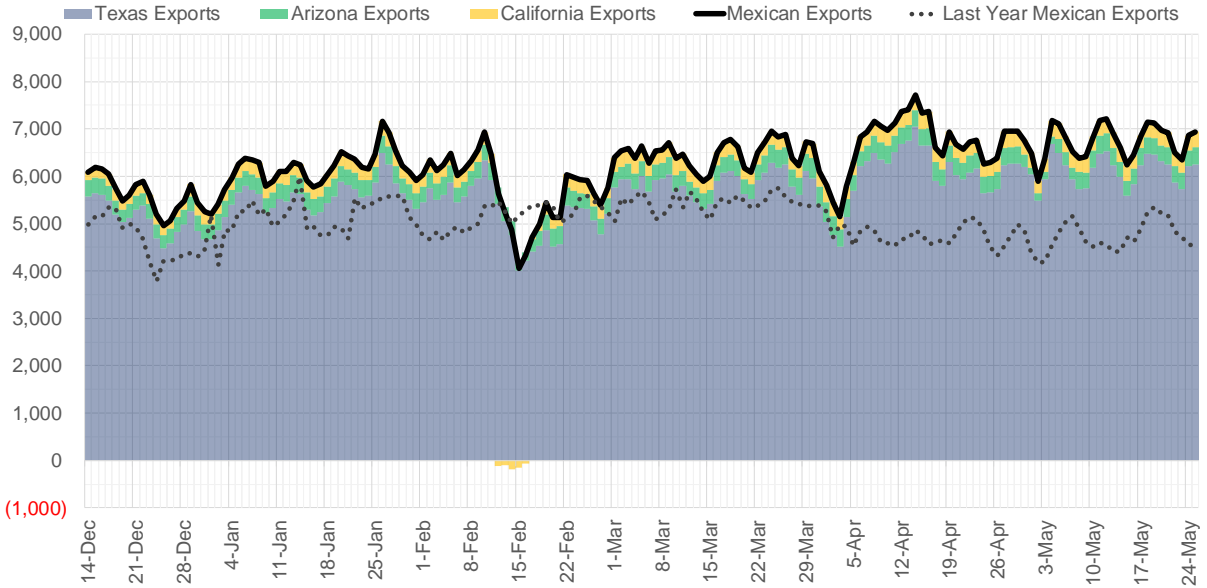
## Supply – Demand Trends



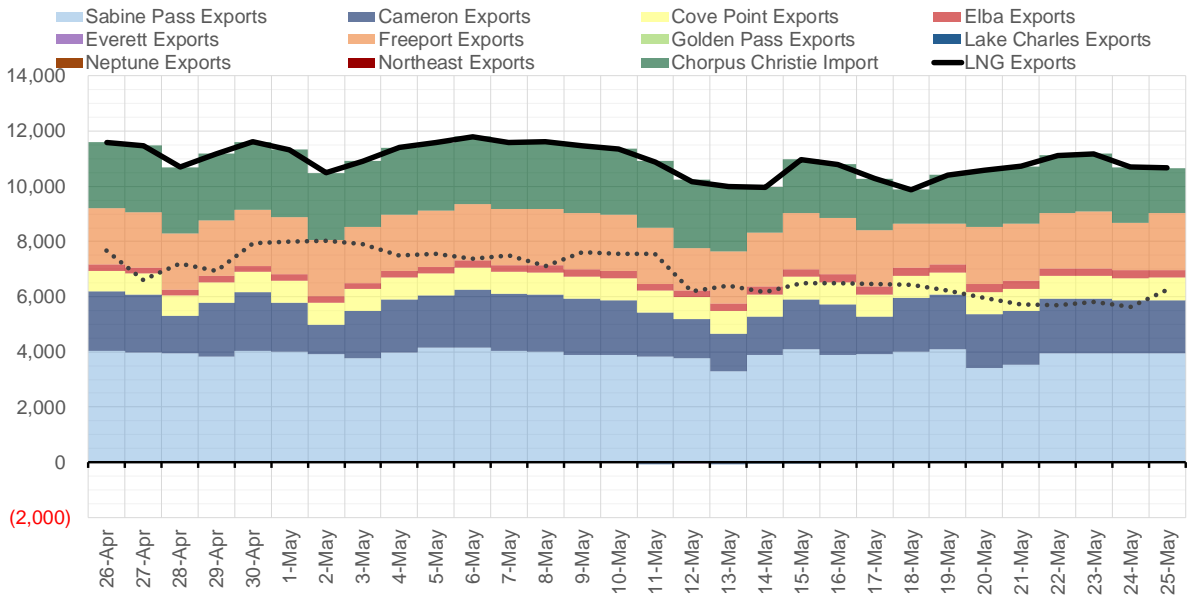
Source: Bloomberg

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

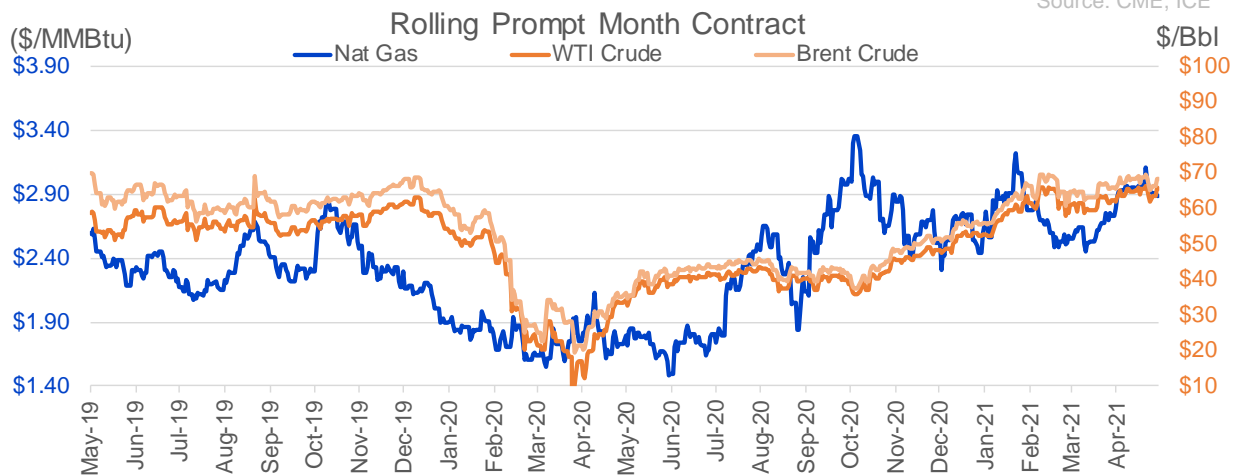
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
6	2021	P	2.75	8639	10	2021	C	4.00	40563
6	2021	C	3.00	8014	8	2021	C	3.50	33811
6	2021	C	2.90	5818	9	2021	C	4.00	32194
6	2021	C	2.95	3332	6	2021	C	3.25	31461
6	2021	P	2.80	3139	6	2021	P	2.75	30615
8	2021	C	3.50	2954	6	2021	P	2.50	29821
7	2021	C	3.50	2929	8	2021	C	4.00	29460
7	2021	C	3.25	2494	8	2021	C	3.25	28909
7	2021	P	2.75	2454	10	2021	C	3.25	28884
6	2021	P	2.85	2383	6	2021	C	3.00	28498
7	2021	P	2.70	2166	10	2021	P	2.50	28150
8	2021	C	3.25	2009	6	2021	C	4.00	27924
7	2021	P	2.80	1555	10	2021	C	5.00	27284
7	2021	P	2.50	1501	7	2021	C	4.00	26867
7	2021	C	3.00	1355	6	2021	C	3.50	26258
6	2021	P	2.90	1167	7	2021	C	3.50	25682
10	2021	P	2.50	1101	10	2021	C	3.50	25556
7	2021	C	3.75	1001	7	2021	P	2.50	21918
7	2021	C	4.25	1000	7	2021	C	3.25	21652
7	2021	C	4.50	1000	9	2021	C	3.50	21554
10	2021	P	2.30	900	6	2021	P	2.90	20794
6	2021	C	2.85	879	12	2021	C	4.00	20764
9	2021	C	4.00	702	9	2021	P	2.00	20162
10	2021	C	3.50	675	8	2021	P	2.50	19895
3	2022	C	3.25	650	6	2021	P	2.70	19881
8	2021	P	2.50	642	4	2022	C	3.00	19635
6	2021	C	2.93	582	8	2021	P	2.25	19347
7	2021	P	2.35	550	10	2021	C	3.00	19262
7	2021	C	2.95	536	6	2021	P	2.25	19088
6	2021	P	2.70	511	7	2021	P	2.75	19069
6	2021	P	2.65	500	6	2021	P	2.65	18973
8	2021	C	2.80	500	9	2021	P	2.50	18890
3	2022	P	2.25	500	11	2021	C	4.00	18417
9	2021	C	3.50	400	10	2021	P	2.00	18388
4	2022	C	2.75	400	7	2021	C	3.00	17773
6	2021	C	3.05	379	10	2021	P	2.25	17691
8	2021	C	3.30	378	8	2021	P	2.00	17663
7	2021	P	2.40	356	6	2021	P	2.00	17062
10	2021	C	4.50	320	3	2022	C	4.00	16995
10	2021	C	4.00	301	8	2021	C	3.75	16863
4	2022	P	2.00	300	9	2021	C	3.25	16587
7	2021	C	3.40	258	7	2021	P	2.65	16438
9	2021	C	3.00	254	6	2021	C	3.05	16389
7	2021	P	2.25	251	8	2021	C	3.00	16192
9	2021	C	3.75	250	7	2021	P	2.00	16035
10	2021	P	2.85	250	6	2021	C	3.75	15823
4	2022	C	3.50	250	6	2021	P	2.85	15329
8	2021	C	3.00	232	6	2021	C	2.75	15022
9	2021	C	3.25	226	8	2021	P	2.75	15012
					3	2022	C	3	14519

Source: CME, ICE



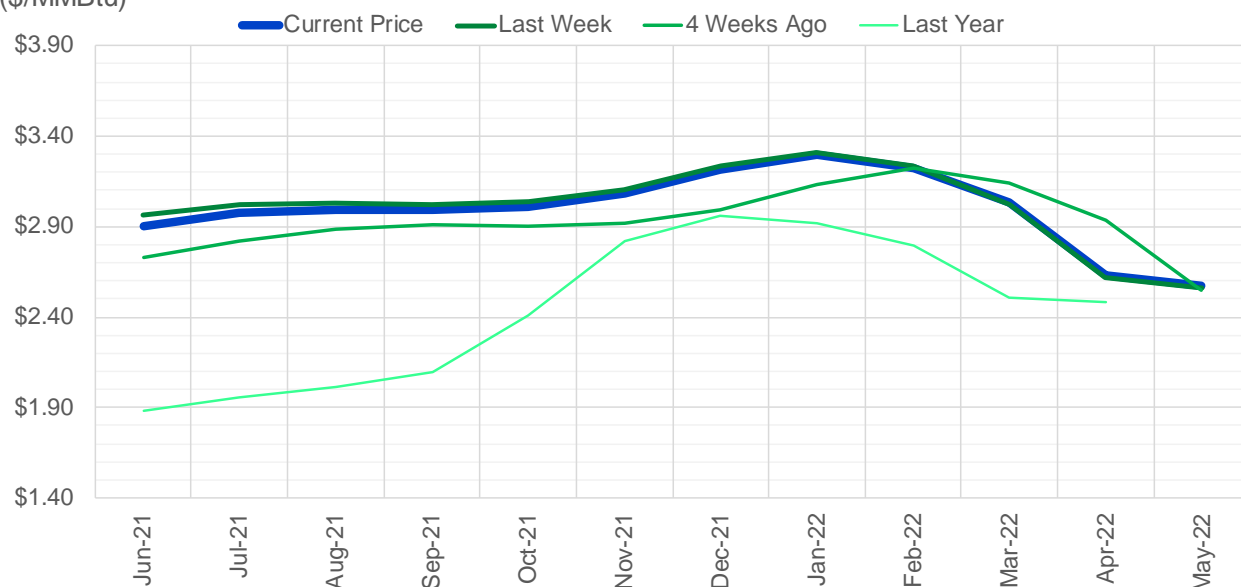
## Nat Gas Futures Open Interest CME, and ICE Combined

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	15349	23844	-8495	JUN 21	85145	83176	1969
JUL 21	295927	293980	1947	JUL 21	91419	91923	-505
AUG 21	81497	80821	676	AUG 21	79485	79101	384
SEP 21	129780	127786	1994	SEP 21	76082	76086	-4
OCT 21	134838	134840	-2	OCT 21	92946	93015	-70
NOV 21	75912	76398	-486	NOV 21	69340	69474	-134
DEC 21	49826	50096	-270	DEC 21	64746	64544	202
JAN 22	80453	81055	-602	JAN 22	71456	71233	223
FEB 22	29922	29898	24	FEB 22	56252	56072	180
MAR 22	56830	57899	-1069	MAR 22	60245	59926	319
APR 22	55851	55332	519	APR 22	52139	51965	174
MAY 22	37093	37802	-709	MAY 22	47066	47040	27
JUN 22	20692	20896	-204	JUN 22	43311	43285	26
JUL 22	11443	11398	45	JUL 22	43890	43750	140
AUG 22	10256	10235	21	AUG 22	41900	41760	141
SEP 22	11010	11063	-53	SEP 22	42572	42561	11
OCT 22	28168	28733	-565	OCT 22	47132	47113	19
NOV 22	11530	11527	3	NOV 22	37862	37853	9
DEC 22	11184	11197	-13	DEC 22	41940	41923	17
JAN 23	5777	5885	-108	JAN 23	24631	24572	59
FEB 23	2717	2638	79	FEB 23	22464	22358	106
MAR 23	5498	5446	52	MAR 23	24188	24144	44
APR 23	5794	5790	4	APR 23	19990	19970	20
MAY 23	4699	4696	3	MAY 23	19818	19799	19
JUN 23	965	965	0	JUN 23	18333	18301	33
JUL 23	1089	1089	0	JUL 23	18351	18313	39
AUG 23	846	846	0	AUG 23	18453	18414	39
SEP 23	777	777	0	SEP 23	17836	17798	38
OCT 23	1720	1720	0	OCT 23	18616	18481	135
NOV 23	684	609	75	NOV 23	18142	18116	27



(\$/MMBtu)

### Nat Gas Term Structure



	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>\$2.906</b>	<b>\$2.977</b>	<b>\$2.996</b>	<b>\$2.993</b>	<b>\$3.013</b>	<b>\$3.087</b>	<b>\$3.215</b>	<b>\$3.295</b>	<b>\$3.225</b>	<b>\$3.031</b>	<b>\$2.631</b>	<b>\$2.576</b>
Last Week	\$2.961	\$3.018	\$3.029	\$3.020	\$3.038	\$3.104	\$3.232	\$3.311	\$3.233	\$3.023	\$2.619	\$2.563
vs. Last Week	-\$0.055	-\$0.041	-\$0.033	-\$0.027	-\$0.025	-\$0.017	-\$0.017	-\$0.016	-\$0.008	\$0.008	\$0.012	\$0.013
4 Weeks Ago	\$2.730	\$2.818	\$2.884	\$2.910	\$2.899	\$2.919	\$2.992	\$3.131	\$3.220	\$3.142	\$2.934	\$2.545
vs. 4 Weeks Ago	\$0.176	\$0.159	\$0.112	\$0.083	\$0.114	\$0.168	\$0.223	\$0.164	\$0.005	-\$0.111	-\$0.303	\$0.031
Last Year	\$1.731	\$1.881	\$1.958	\$2.013	\$2.095	\$2.408	\$2.817	\$2.957	\$2.920	\$2.795	\$2.511	\$2.485
vs. Last Year	\$1.175	\$1.096	\$1.038	\$0.980	\$0.918	\$0.679	\$0.398	\$0.338	\$0.305	\$0.236	\$0.120	\$0.091

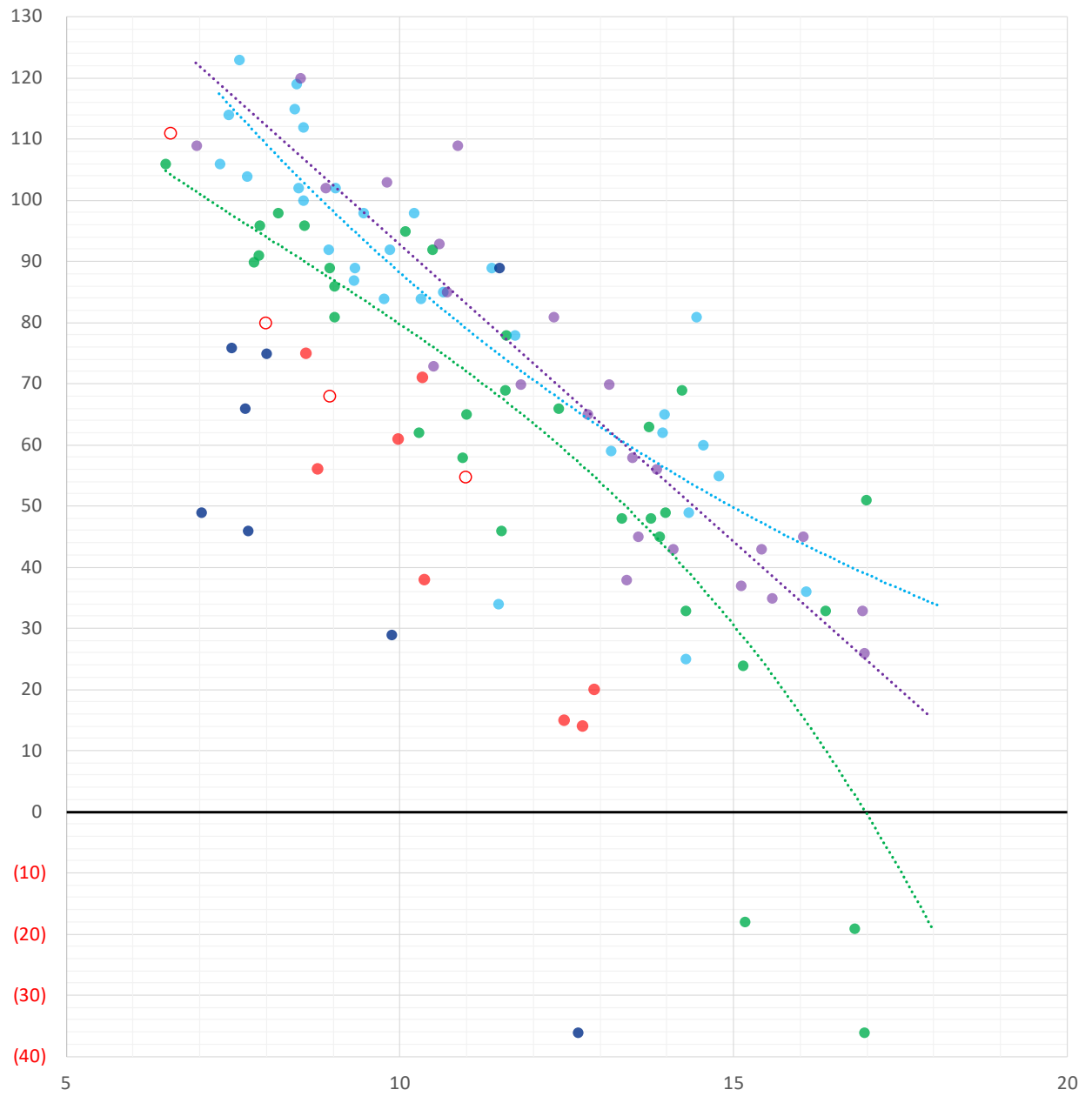
	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	2.48	2.31	-0.17
TETCO M3	\$/MMBtu	2.41	2.26	-0.15
FGT Zone 3	\$/MMBtu	2.56	3.03	0.48
Zone 6 NY	\$/MMBtu	2.56	2.26	-0.30
Chicago Citygate	\$/MMBtu	2.74	2.85	0.11
Michcon	\$/MMBtu	2.77	2.80	0.03
Columbia TCO Pool	\$/MMBtu	2.47	2.43	-0.04
Ventura	\$/MMBtu	2.64	2.77	0.13
Rockies/Opal	\$/MMBtu	2.59	2.79	0.20
El Paso Permian Basin	\$/MMBtu	2.50	2.83	0.33
Socal Citygate	\$/MMBtu	3.05	3.60	0.55
Malin	\$/MMBtu	2.65	3.03	0.38
Houston Ship Channel	\$/MMBtu	2.78	3.07	0.29
Henry Hub Cash	\$/MMBtu	2.80	2.81	0.01
AECO Cash	C\$/GJ	2.53	2.50	-0.03
Station2 Cash	C\$/GJ	2.51	2.91	0.40
Dawn Cash	C\$/GJ	2.77	2.79	0.02

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks Ago	vs. Last Year
NatGas Jul21/Oct21	\$/MMBtu	0.036	▲ 0.016	▲ 0.001	▲ 0.036
NatGas Oct21/Nov21	\$/MMBtu	0.074	▲ 0.008	▲ 0.001	▲ 0.024
NatGas Oct21/Jan22	\$/MMBtu	0.282	▲ 0.009	▼ -0.019	▼ -0.009
NatGas Apr22/Oct22	\$/MMBtu	0.029	▲ 0.004	▼ -0.004	▼ -0.025
WTI Crude	\$/Bbl	63.58	▼ -1.790	▲ 1.440	▲ 30.330
Brent Crude	\$/Bbl	66.44	▼ -2.270	▲ 0.330	▲ 31.310
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18	▲ 0.000	▲ 0.000	▲ 0.000
Heating Oil	cents/Gallon	198.82	▼ -4.800	▲ 11.470	▲ 100.620
Propane, Mt. Bel	cents/Gallon	0.81	▲ 0.004	▲ 0.003	▲ 0.402
Ethane, Mt. Bel	cents/Gallon	0.26	▲ 0.001	▲ 0.026	▲ 0.039
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.