

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 2.96 ▲	\$ 0.03 ▲	\$ 0.06 ▲

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 63.75 ▲	\$ 0.17 ▲	\$ 0.3 ▲

	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 66.77 ▼	\$ (0.48) ▼	\$ (0.3) ▼

### Page Menu

[Short-term Weather Model Outlooks](#)

[Lower 48 Component Models](#)

[Regional S/D Models Storage Projection](#)

[Weather Model Storage Projection](#)

[Supply – Demand Trends](#)

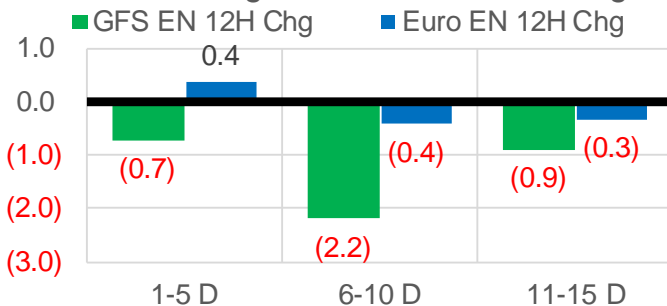
[Nat Gas Options Volume and Open Interest](#)

[Nat Gas Futures Open Interest](#)

[Price Summary](#)

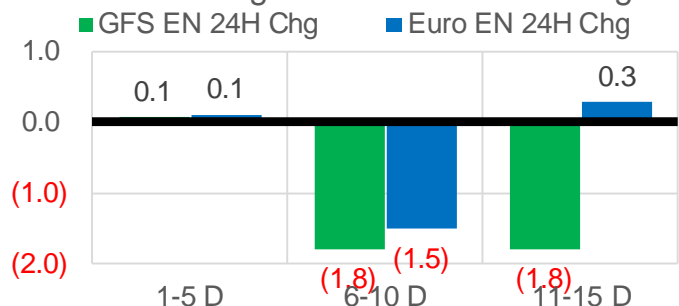
### Vs. 12H Ago

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	87.9 ▼	-0.57 ▼	-0.93 ▼

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	26.0 ▲	0.78 ▲	-0.72 ▼

	Current	Δ from YD	Δ from 7D Avg
US ResComm	10.3 ▲	1.00 ▲	-2.95 ▼

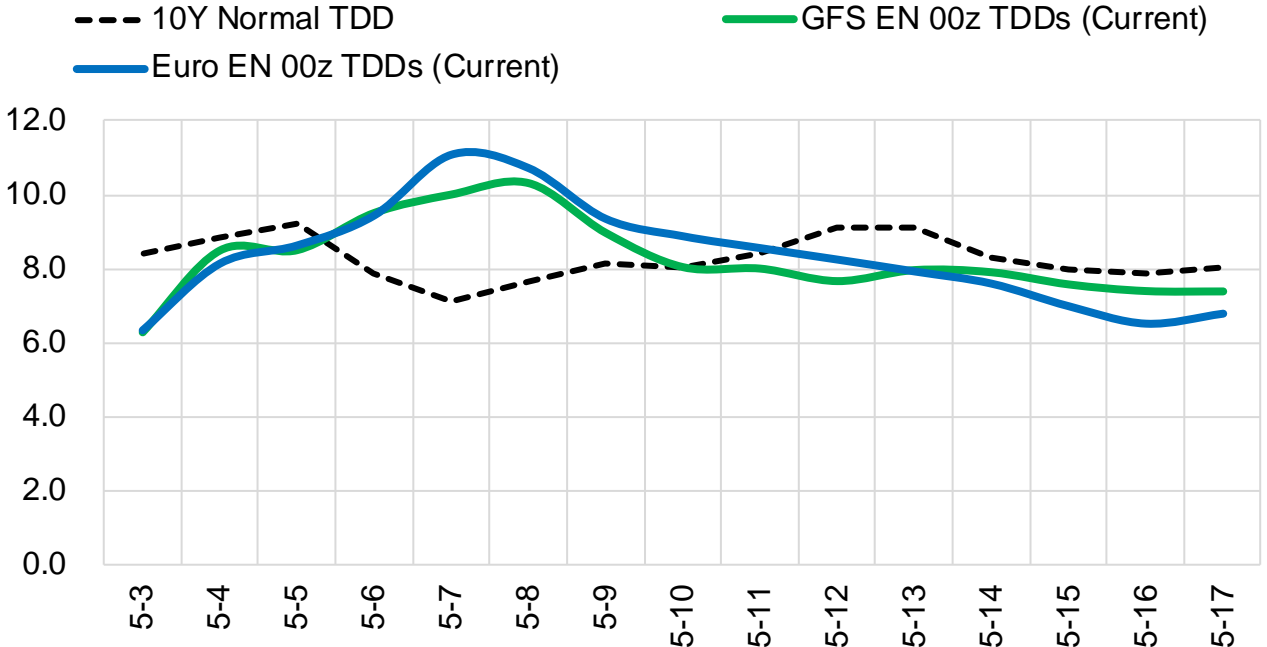
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	3.9 ▼	-0.16 ▼	-0.67 ▼

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	11.5 ▲	0.99 ▲	0.24 ▲

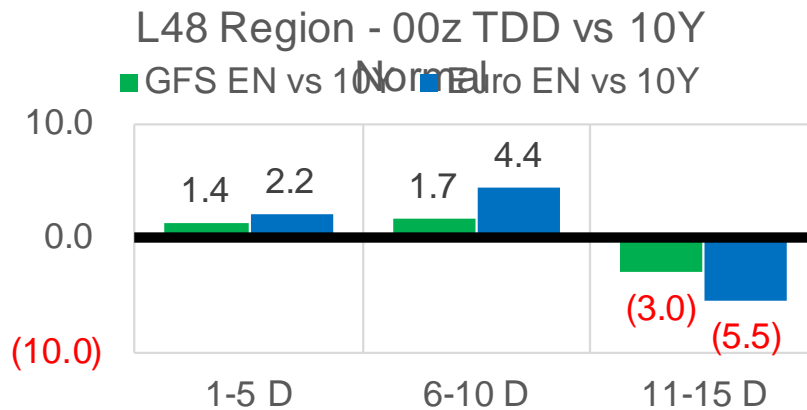
	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.1 ▲	0.53 ▲	-0.48 ▼

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

#### L48 Region



### Vs. 10Y Normal



Source: WSI , Bloomberg

## Lower 48 Component Models

### Daily Balances

	27-Apr	28-Apr	29-Apr	30-Apr	1-May	2-May	3-May	DoD	vs. 7D
<b>Lower 48 Dry Production</b>	<b>88.5</b>	<b>88.5</b>	<b>88.9</b>	<b>89.0</b>	<b>89.2</b>	<b>88.5</b>	<b>87.9</b>	▼ -0.6	▼ -0.9
<b>Canadian Imports</b>	<b>4.6</b>	<b>4.9</b>	<b>5.0</b>	<b>4.8</b>	<b>4.0</b>	<b>4.0</b>	<b>3.9</b>	▼ -0.2	▼ -0.7
L48 Power	27.7	29.1	28.7	26.4	24.1	25.2	26.0	▲ 0.8	▼ -0.9
L48 Residential & Commercial	13.3	11.5	12.2	15.0	13.2	9.3	10.3	▲ 1.0	▼ -2.1
L48 Industrial	17.4	17.8	18.3	18.8	18.7	18.6	18.9	▲ 0.3	▲ 0.6
L48 Lease and Plant Fuel	4.9	4.9	4.9	4.9	4.9	4.9	4.9	▼ 0.0	▼ 0.0
L48 Pipeline Distribution	2.0	2.0	2.0	2.0	1.9	1.8	1.9	▲ 0.1	▼ -0.1
<b>L48 Regional Gas Consumption</b>	<b>65.3</b>	<b>65.3</b>	<b>66.1</b>	<b>67.1</b>	<b>62.8</b>	<b>59.8</b>	<b>61.9</b>	▲ 2.1	▼ -2.4
<b>Net LNG Delivered</b>	<b>11.48</b>	<b>10.69</b>	<b>11.18</b>	<b>11.61</b>	<b>11.65</b>	<b>10.49</b>	<b>11.48</b>	▲ 1.0	▲ 0.3
<b>Total Mexican Exports</b>	<b>7.0</b>	<b>7.0</b>	<b>7.0</b>	<b>6.8</b>	<b>6.5</b>	<b>5.6</b>	<b>6.1</b>	▲ 0.5	▼ -0.5
Implied Daily Storage Activity	9.4	10.4	9.6	8.3	12.3	16.6	12.2		
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
<b>Lower 48 Dry Production</b>	<b>89.9</b>	<b>90.4</b>	<b>90.0</b>	<b>89.3</b>	<b>88.5</b>	<b>89.0</b>	▲ 0.5	▼ -0.5
<b>Canadian Imports</b>	<b>4.5</b>	<b>4.5</b>	<b>4.2</b>	<b>4.3</b>	<b>5.3</b>	<b>4.6</b>	▼ -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	18.3	19.2	19.4	19.3	17.6	17.7	▲ 0.1	▼ -1.2
L48 Lease and Plant Fuel	5.0	5.0	5.0	4.9	4.9	4.9	▲ 0.0	▼ 0.0
L48 Pipeline Distribution	2.3	2.3	2.1	2.1	2.5	2.1	▼ -0.3	▼ -0.1
<b>L48 Regional Gas Consumption</b>	<b>74.6</b>	<b>74.4</b>	<b>68.3</b>	<b>69.6</b>	<b>74.9</b>	<b>67.9</b>	▼ -6.9	▼ -3.9
<b>Net LNG Exports</b>	<b>11.6</b>	<b>11.7</b>	<b>11.5</b>	<b>11.4</b>	<b>11.6</b>	<b>11.4</b>	▼ -0.2	▼ -0.1
<b>Total Mexican Exports</b>	<b>6.6</b>	<b>6.4</b>	<b>6.2</b>	<b>7.3</b>	<b>6.8</b>	<b>6.7</b>	▼ -0.1	▲ 0.0
Implied Daily Storage Activity	1.7	2.4	8.3	5.4	0.7	7.7	7.0	
EIA Reported Daily Storage Activity	2.0	2.9	8.7	5.4	2.1			
Daily Model Error	-0.3	-0.5	-0.5	0.0	-1.5			

### 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>90.1</b>	<b>86.4</b>	<b>90.3</b>	<b>83.1</b>	<b>89.9</b>	<b>89.3</b>	<b>88.5</b>	▼ -0.7	▲ 5.4
<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>4.0</b>	▼ -0.7	▼ -2.4
L48 Power	26.9	26.9	28.2	27.9	25.0	25.2	25.1	▼ -0.1	▼ -2.9
L48 Residential & Commercial	12.8	12.7	43.9	47.9	28.4	19.7	11.0	▼ -8.8	▼ -36.9
L48 Industrial	22.7	18.9	23.0	20.1	18.1	18.6	18.7	▲ 0.1	▼ -1.4
L48 Lease and Plant Fuel	5.0	4.8	5.0	4.7	5.0	4.9	4.9	▼ 0.0	▲ 0.2
L48 Pipeline Distribution	2.1	2.0	3.2	3.3	2.5	2.2	1.8	▼ -0.4	▼ -1.4
<b>L48 Regional Gas Consumption</b>	<b>69.4</b>	<b>65.3</b>	<b>103.4</b>	<b>103.9</b>	<b>79.0</b>	<b>70.6</b>	<b>61.5</b>	▼ -9.1	▼ -42.4
<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>11.2</b>	▼ -0.3	▲ 2.8
<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>6.1</b>	▼ -0.6	▲ 0.4
Implied Daily Storage Activity	14.8	13.6	-23.4	-28.5	-1.9	5.1	13.7		
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	7.4	1.2	8.5	60
East	0.4	1.8	2.2	15
Midwest	2.9	-0.3	2.6	18
Mountain	3.7	-3.2	0.5	4
South Central	-1.0	3.5	2.5	18
Pacific	1.3	-0.7	0.7	5

\*Adjustment Factor is calculated based on historical regional deltas

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

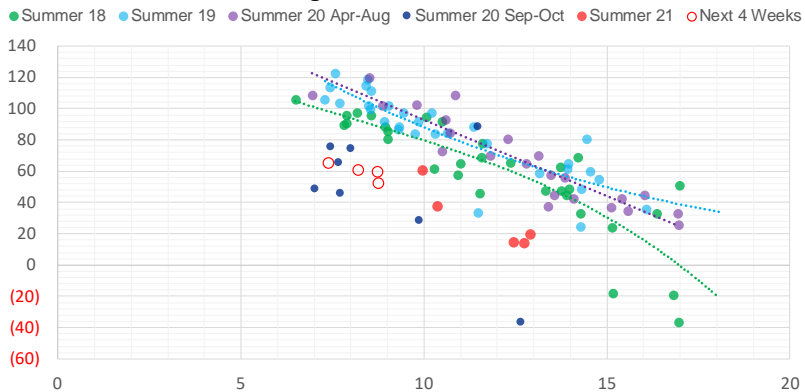


### Weather Model Storage Projection

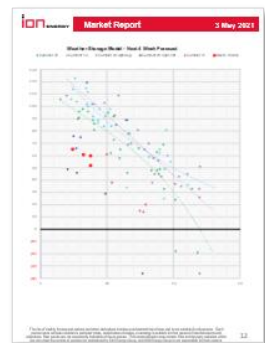
Next report  
and beyond

Week Ending	GWDDs	Week Storage Projection
30-Apr	8.8	60
07-May	8.2	61
14-May	8.8	52
21-May	7.4	65

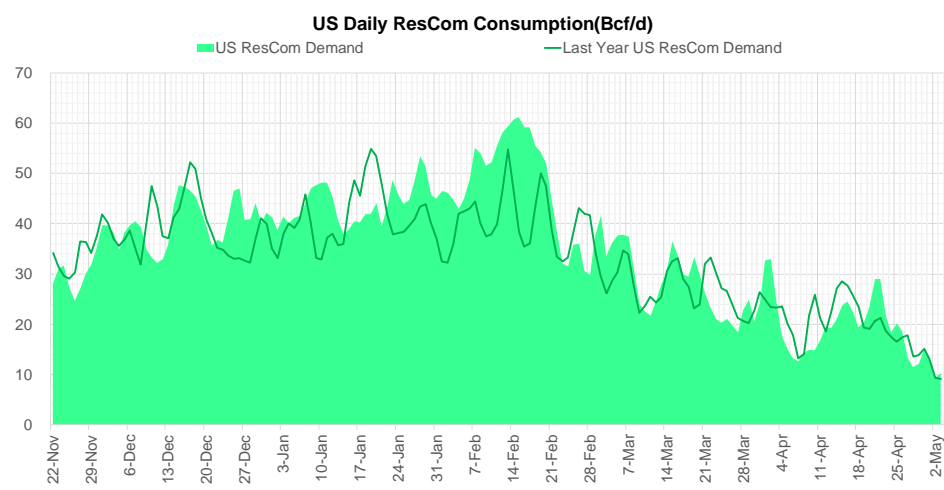
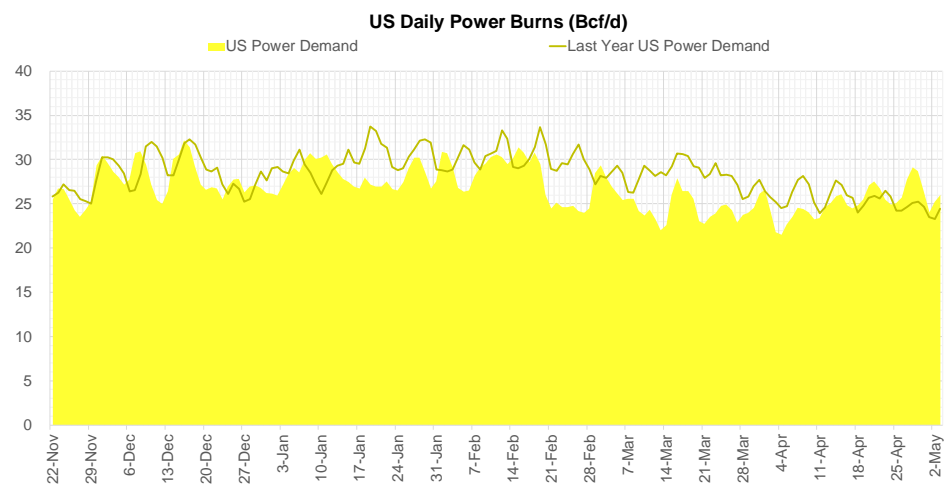
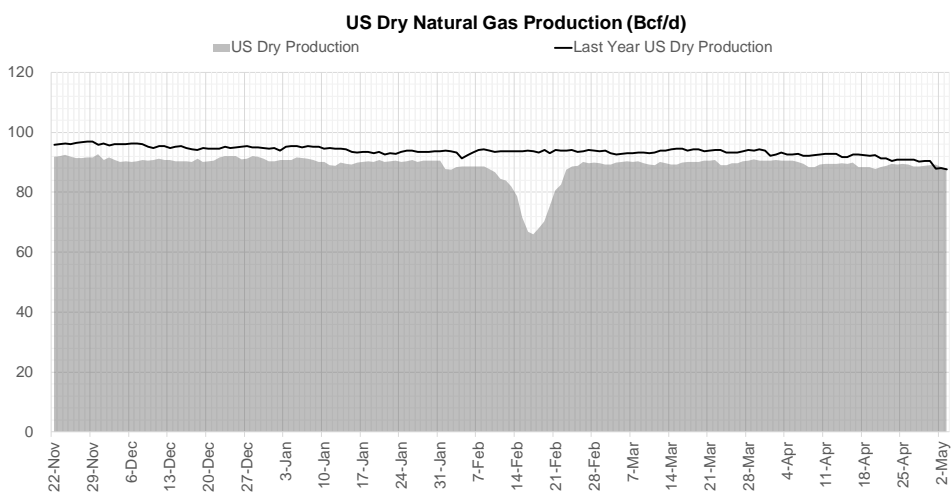
**Weather Storage Model - Next 4 Week Forecast**



Go to larger image



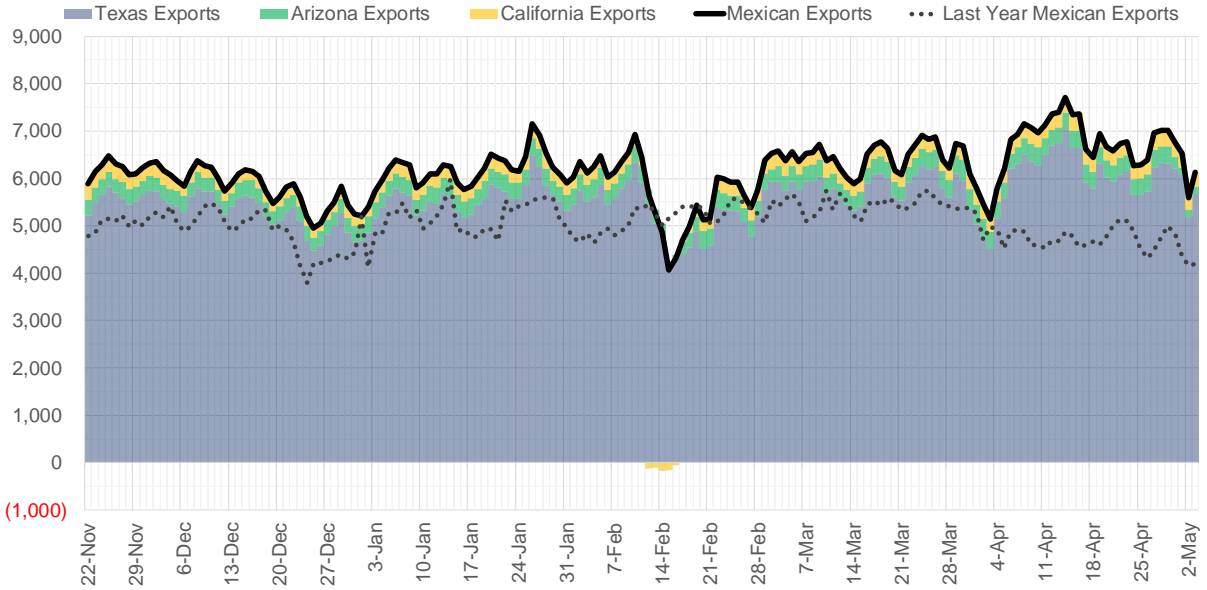
### Supply – Demand Trends



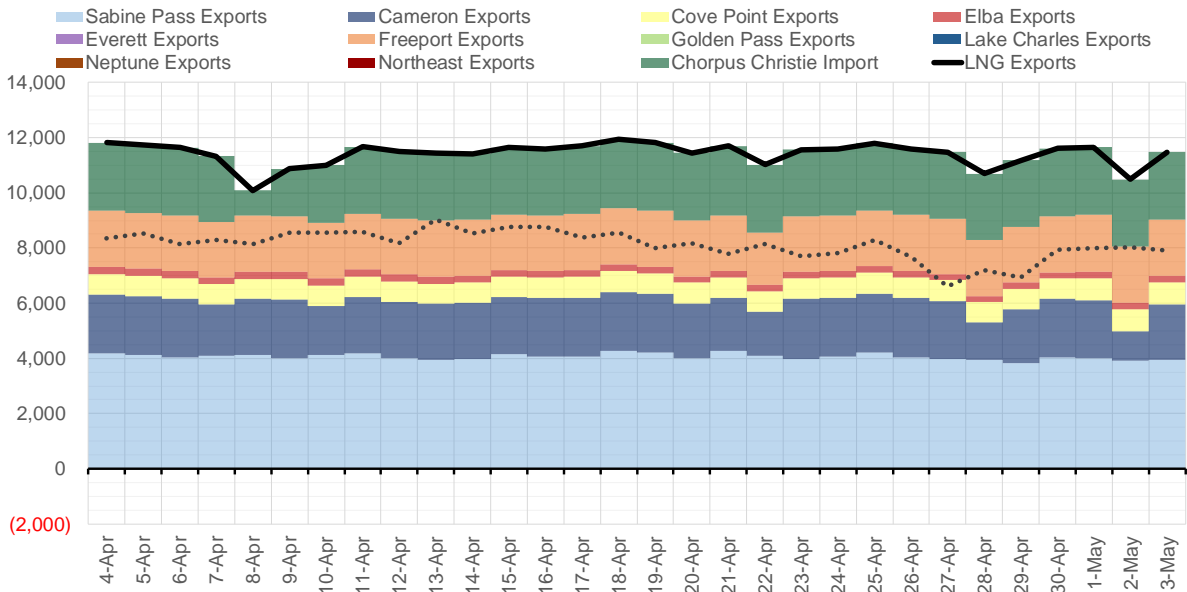
Source: Bloomberg

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

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

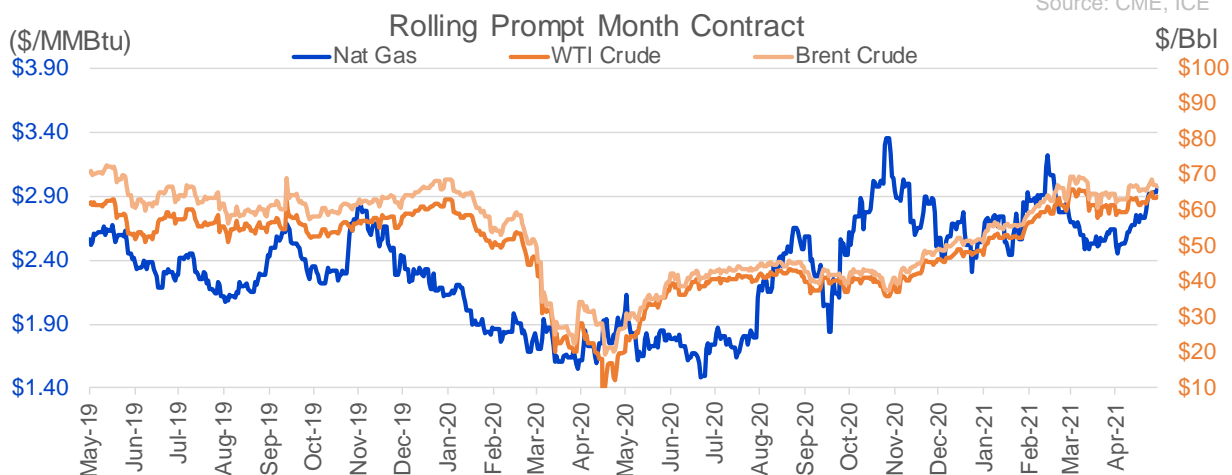
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
6	2021	C	3.25	3909	10	2021	C	4.00	39505
6	2021	C	3.00	3638	8	2021	C	4.00	32579
10	2021	P	2.50	3500	6	2021	C	3.00	32500
10	2021	C	3.50	3400	10	2021	C	3.25	31235
3	2022	P	2.50	3050	6	2021	P	2.50	29208
6	2021	P	2.70	2710	8	2021	C	3.50	28272
6	2021	P	2.80	2484	7	2021	C	4.00	28268
9	2021	C	4.00	2191	6	2021	C	3.25	27986
10	2021	C	3.15	2000	6	2021	C	4.00	27949
3	2022	P	2.00	2000	6	2021	P	2.65	27841
7	2021	C	3.70	1952	10	2021	C	5.00	26619
8	2021	C	3.70	1950	8	2021	C	3.25	25860
9	2021	C	3.70	1950	7	2021	C	3.25	25560
10	2021	C	3.70	1950	10	2021	P	2.50	24373
3	2022	C	3.00	1600	10	2021	C	3.50	23339
3	2022	P	2.85	1500	6	2021	C	3.50	22535
6	2021	C	3.50	1407	9	2021	C	3.50	20442
7	2021	C	3.25	1311	10	2021	C	3.00	20314
6	2021	P	2.65	1098	7	2021	C	3.50	20247
6	2021	P	2.55	1046	8	2021	P	2.50	19510
7	2021	C	3.50	1042	12	2021	C	4.00	19465
7	2021	P	2.80	1034	4	2022	C	3.00	19174
6	2021	P	2.50	1024	10	2021	P	2.25	19077
6	2021	P	2.60	1002	6	2021	P	2.25	19056
7	2021	P	2.50	951	9	2021	C	4.00	18791
7	2021	P	2.65	947	8	2021	P	2.25	18275
8	2021	C	3.35	906	7	2021	P	2.50	18065
6	2021	C	3.05	787	6	2021	P	2.75	17825
7	2021	P	2.95	745	9	2021	P	2.00	17819
6	2021	P	2.40	709	6	2021	P	2.00	17060
11	2021	C	4.00	706	9	2021	C	3.25	16907
6	2021	C	3.15	705	11	2021	C	4.00	16726
11	2021	C	5.00	700	10	2021	P	2.00	16500
1	2022	P	2.50	700	7	2021	P	2.00	16035
6	2021	C	2.90	675	7	2021	C	3.00	15688
8	2021	C	3.75	638	6	2021	C	3.75	15656
6	2021	C	2.95	606	8	2021	C	3.00	15637
8	2021	C	3.25	593	8	2021	P	2.00	15295
10	2021	C	4.00	575	3	2022	C	4.00	14990
6	2021	C	3.20	540	9	2021	P	2.50	14836
8	2021	P	2.00	500	6	2021	C	2.75	14821
10	2021	P	2.00	500	10	2021	C	4.50	14034
1	2022	P	2.00	500	12	2021	P	2.00	14031
7	2021	C	3.00	408	9	2021	P	1.90	13733
7	2021	C	3.80	401	3	2022	C	5.00	13625
2	2022	C	5.50	400	10	2021	C	6.00	13182
6	2021	P	2.95	394	5	2022	C	3.00	13147
7	2021	P	2.75	392	6	2021	P	2.40	13025
8	2021	C	3.20	383	6	2021	P	2.55	12894
					6	2022	C	3	12886

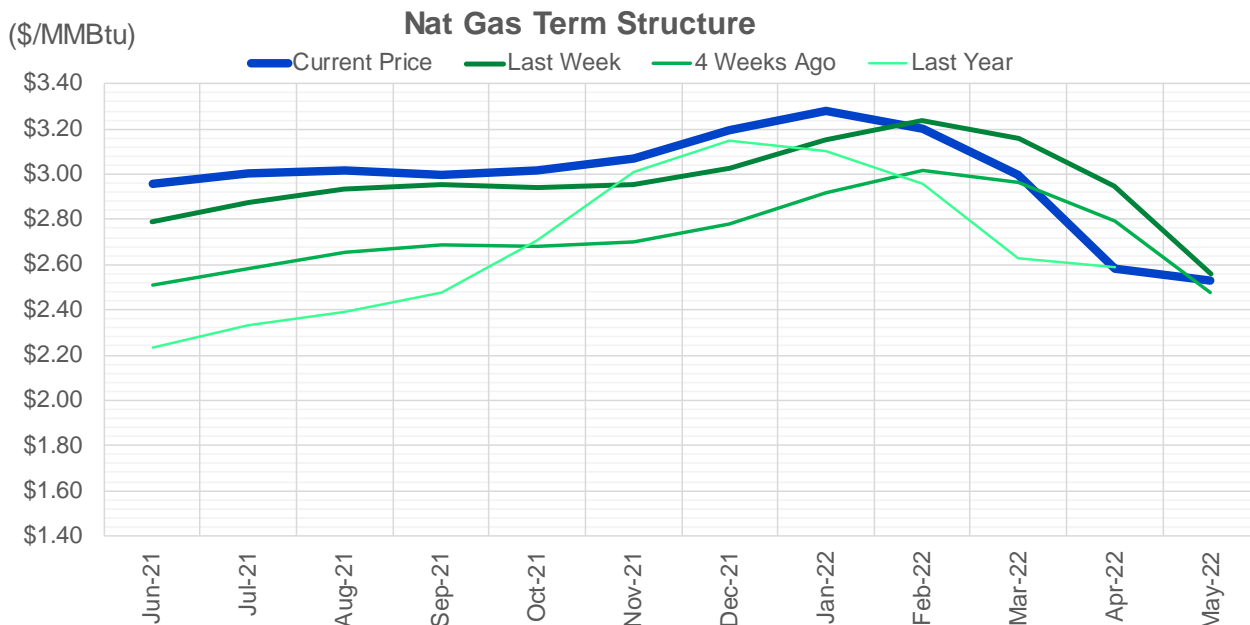
Source: CME, ICE



## 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	204957	203565	1392	JUN 21	87301	87973	-672
JUL 21	197442	193985	3457	JUL 21	85341	86995	-1654
AUG 21	70960	73678	-2718	AUG 21	79313	79719	-406
SEP 21	108285	109198	-913	SEP 21	69378	69462	-84
OCT 21	128668	127496	1172	OCT 21	88538	86948	1591
NOV 21	67359	66098	1261	NOV 21	61465	61236	229
DEC 21	46153	45986	167	DEC 21	59490	59284	207
JAN 22	74664	72544	2120	JAN 22	65732	65548	184
FEB 22	23150	22954	196	FEB 22	47416	47245	171
MAR 22	47266	46702	564	MAR 22	52707	52398	310
APR 22	49539	48466	1073	APR 22	47755	47440	315
MAY 22	28959	28107	852	MAY 22	43132	41924	1209
JUN 22	16461	16295	166	JUN 22	40320	40142	178
JUL 22	9984	9926	58	JUL 22	40494	40417	77
AUG 22	8822	8848	-26	AUG 22	38971	38877	94
SEP 22	9245	9242	3	SEP 22	39769	39538	231
OCT 22	22155	22101	54	OCT 22	44976	45988	-1012
NOV 22	10590	10769	-179	NOV 22	35602	35427	175
DEC 22	10102	10114	-12	DEC 22	39679	39723	-44
JAN 23	5215	4997	218	JAN 23	22598	22467	131
FEB 23	2548	2714	-166	FEB 23	21023	20897	126
MAR 23	5068	4968	100	MAR 23	22675	22584	91
APR 23	5718	5669	49	APR 23	18593	18496	97
MAY 23	4411	4412	-1	MAY 23	18659	18567	92
JUN 23	955	957	-2	JUN 23	17069	16973	97
JUL 23	1077	1079	-2	JUL 23	17147	17032	114
AUG 23	754	753	1	AUG 23	17290	17176	114
SEP 23	763	762	1	SEP 23	16691	16581	111
OCT 23	1754	1753	1	OCT 23	17473	17405	68
NOV 23	608	616	-8	NOV 23	16839	16780	58





	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>\$2.960</b>	<b>\$3.007</b>	<b>\$3.015</b>	<b>\$2.997</b>	<b>\$3.014</b>	<b>\$3.069</b>	<b>\$3.196</b>	<b>\$3.281</b>	<b>\$3.200</b>	<b>\$2.999</b>	<b>\$2.584</b>	<b>\$2.529</b>
Last Week	\$2.790	\$2.874	\$2.935	\$2.954	\$2.939	\$2.955	\$3.025	\$3.154	\$3.238	\$3.160	\$2.950	\$2.556
vs. Last Week	\$0.170	\$0.133	\$0.080	\$0.043	\$0.075	\$0.114	\$0.171	\$0.127	-\$0.038	-\$0.161	-\$0.366	-\$0.027
4 Weeks Ago	\$2.511	\$2.582	\$2.657	\$2.688	\$2.681	\$2.702	\$2.782	\$2.921	\$3.014	\$2.961	\$2.794	\$2.479
vs. 4 Weeks Ago	\$0.449	\$0.425	\$0.358	\$0.309	\$0.333	\$0.367	\$0.414	\$0.360	\$0.186	\$0.038	-\$0.210	\$0.050
Last Year	\$1.993	\$2.230	\$2.330	\$2.390	\$2.479	\$2.707	\$3.010	\$3.146	\$3.101	\$2.956	\$2.627	\$2.590
vs. Last Year	\$0.967	\$0.777	\$0.685	\$0.607	\$0.535	\$0.362	\$0.186	\$0.135	\$0.099	\$0.043	-\$0.043	-\$0.061

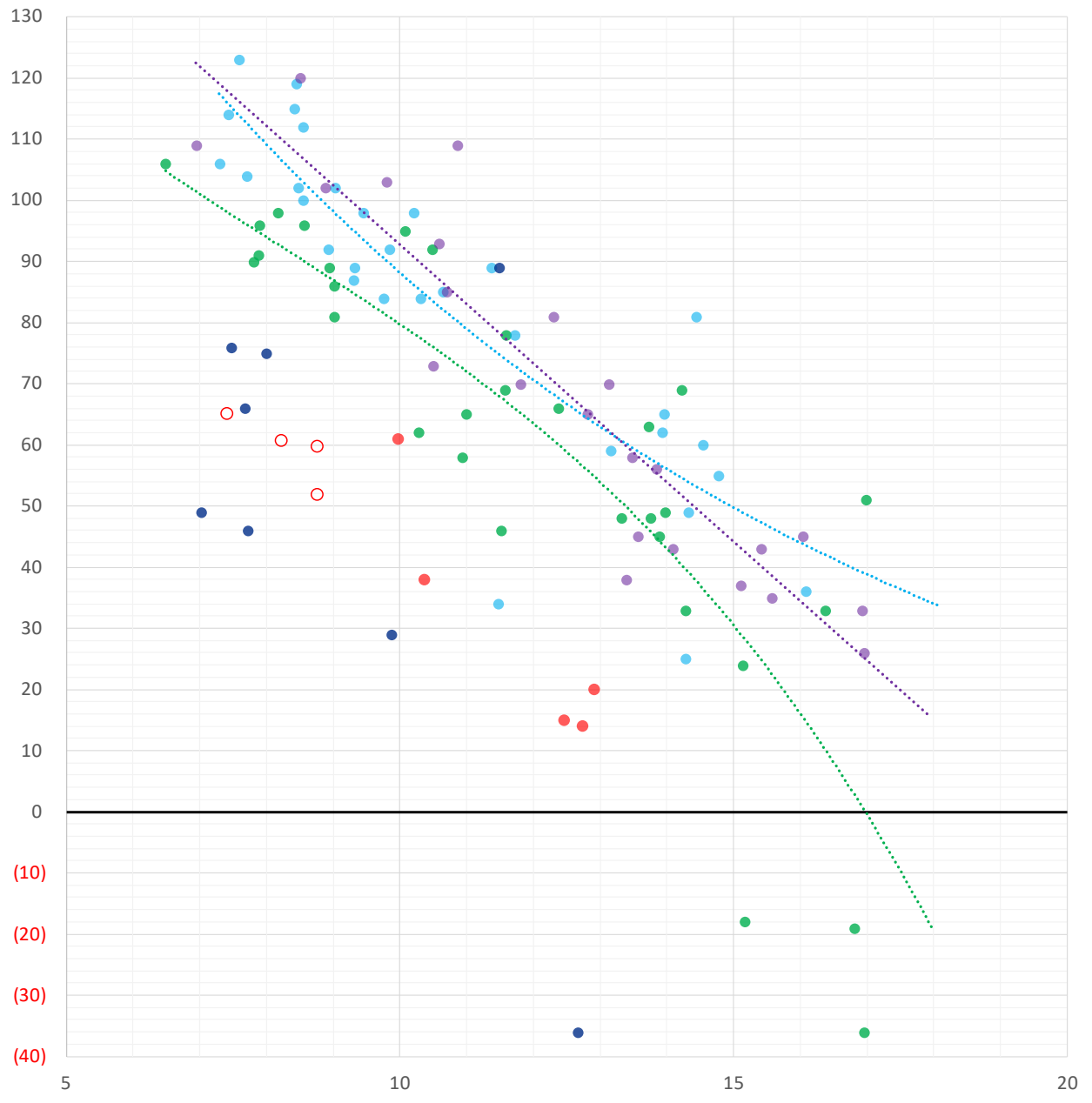
	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	1.80	2.17	0.37
TETCO M3	\$/MMBtu	1.87	2.08	0.21
FGT Zone 3	\$/MMBtu	2.00	2.85	0.85
Zone 6 NY	\$/MMBtu	2.00	1.94	-0.06
Chicago Citygate	\$/MMBtu	2.64	2.74	0.10
Michcon	\$/MMBtu	2.68	2.68	-0.01
Columbia TCO Pool	\$/MMBtu	2.41	2.31	-0.11
Ventura	\$/MMBtu	2.56	2.66	0.10
Rockies/Opal	\$/MMBtu	2.67	2.59	-0.08
El Paso Permian Basin	\$/MMBtu	2.59	2.63	0.04
Socal Citygate	\$/MMBtu	3.22	3.02	-0.20
Malin	\$/MMBtu	2.80	2.77	-0.03
Houston Ship Channel	\$/MMBtu	2.84	2.87	0.03
Henry Hub Cash	\$/MMBtu	2.87	2.65	-0.22
AECO Cash	C\$/GJ	2.37	2.27	-0.11
Station2 Cash	C\$/GJ	2.34	2.66	0.32
Dawn Cash	C\$/GJ	2.69	2.69	0.00

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks Ago	vs. Last Year
NatGas Jul21/Oct21	\$/MMBtu	0.007	▼ -0.013	▼ -0.038	▲ 0.011
NatGas Oct21/Nov21	\$/MMBtu	0.055	▼ -0.015	▼ -0.025	▲ 0.017
NatGas Oct21/Jan22	\$/MMBtu	0.267	▼ -0.016	▼ -0.045	▼ -0.003
NatGas Apr22/Oct22	\$/MMBtu	0.012	▼ -0.015	▼ -0.028	▼ -0.036
WTI Crude	\$/Bbl	63.75	▲ 1.840	▲ 5.100	▲ 43.360
Brent Crude	\$/Bbl	66.77	▲ 1.120	▲ 4.620	▲ 39.570
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18	▲ 0.000	▲ 0.000	▲ 0.000
Heating Oil	cents/Gallon	192.62	▲ 4.770	▲ 15.380	▲ 112.310
Propane, Mt. Bel	cents/Gallon	0.82	▲ 0.006	▼ -0.142	▲ 0.477
Ethane, Mt. Bel	cents/Gallon	0.24	▲ 0.002	▲ 0.019	▲ 0.041
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.