

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 2.71	▼ \$ (0.02)	▲ \$ 0.02

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 61.69	▼ \$ (0.75)	▼ \$ (1.4)

	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 65.63	▼ \$ (0.94)	▼ \$ (1.1)

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[Lower 48 Component Models](#)

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[Weather Model Storage Projection](#)

[Supply – Demand Trends](#)

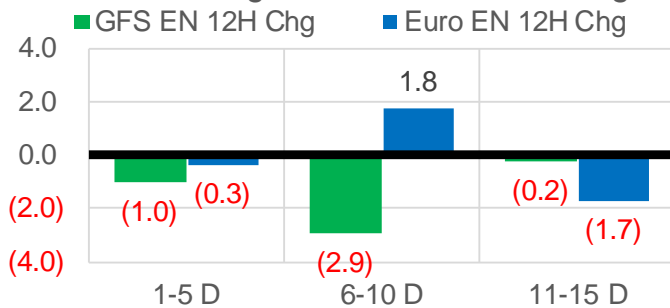
[Nat Gas Options Volume and Open Interest](#)

[Nat Gas Futures Open Interest](#)

[Price Summary](#)

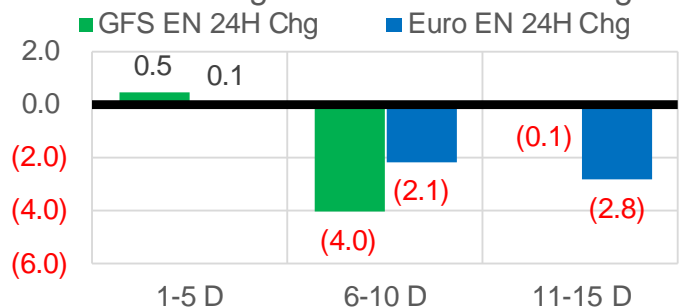
### Vs. 12H Ago

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	89.6	▼ -0.01	▼ -1.19

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	26.9	▲ 0.04	▲ 1.40

	Current	Δ from YD	Δ from 7D Avg
US ResComm	26.7	▲ 3.52	▲ 4.71

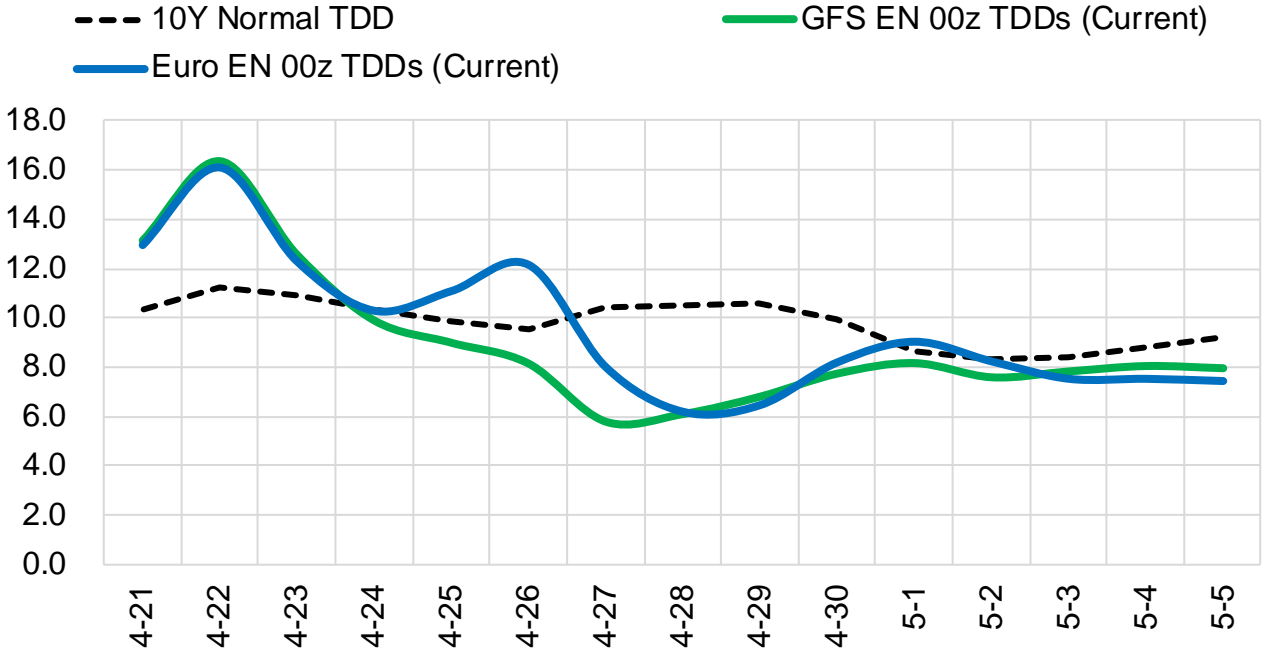
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	5.4	▼ -0.13	▲ 0.33

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	11.3	▼ -0.19	▼ -0.38

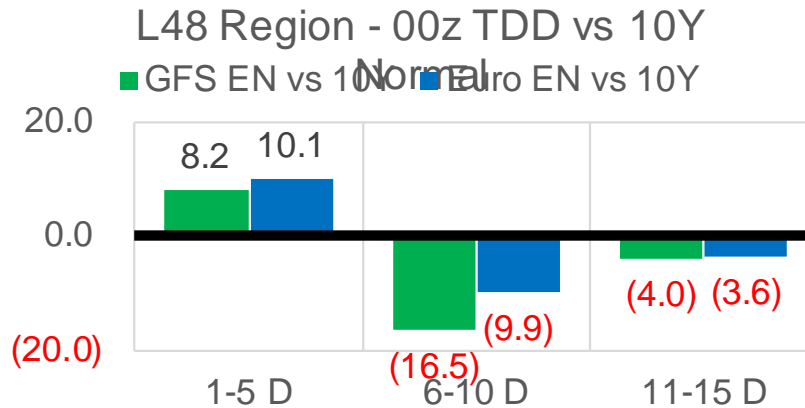
	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.8	▲ 0.05	▼ -0.26

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

### L48 Region



## Vs. 10Y Normal



Source: WSI , Bloomberg

## Lower 48 Component Models

### Daily Balances

	15-Apr	16-Apr	17-Apr	18-Apr	19-Apr	20-Apr	21-Apr	DoD	vs. 7D
<b>Lower 48 Dry Production</b>	<b>91.5</b>	<b>91.9</b>	<b>90.4</b>	<b>90.2</b>	<b>90.1</b>	<b>89.6</b>	<b>89.6</b>	▼ 0.0	▼ -1.0
<b>Canadian Imports</b>	<b>4.8</b>	<b>5.3</b>	<b>5.0</b>	<b>5.0</b>	<b>4.9</b>	<b>5.5</b>	<b>5.4</b>	▼ -0.1	▲ 0.3
L48 Power	26.1	24.9	24.5	24.8	25.4	26.8	26.9	▲ 0.0	▲ 1.5
L48 Residential & Commercial	23.6	24.4	22.3	19.2	20.1	23.1	26.7	▲ 3.5	▲ 4.5
L48 Industrial	19.5	19.3	18.7	18.2	18.2	18.8	19.3	▲ 0.5	▲ 0.6
L48 Lease and Plant Fuel	5.0	5.1	5.0	5.0	5.0	4.9	4.9	▼ 0.0	▼ -0.1
L48 Pipeline Distribution	2.4	2.4	2.3	2.2	2.2	2.5	2.6	▲ 0.2	▲ 0.3
<b>L48 Regional Gas Consumption</b>	<b>76.7</b>	<b>76.0</b>	<b>72.7</b>	<b>69.3</b>	<b>70.9</b>	<b>76.2</b>	<b>80.4</b>	▲ 4.3	▲ 6.8
<b>Net LNG Delivered</b>	<b>11.64</b>	<b>11.58</b>	<b>11.70</b>	<b>11.92</b>	<b>11.82</b>	<b>11.46</b>	<b>11.27</b>	▼ -0.2	▼ -0.4
<b>Total Mexican Exports</b>	<b>7.4</b>	<b>7.5</b>	<b>6.9</b>	<b>6.4</b>	<b>7.0</b>	<b>6.8</b>	<b>6.8</b>	▲ 0.0	▼ -0.2
<b>Implied Daily Storage Activity</b>	<b>0.6</b>	<b>2.1</b>	<b>4.2</b>	<b>7.5</b>	<b>5.2</b>	<b>0.7</b>	<b>-3.5</b>		
<b>EIA Reported Daily Storage Activity</b>									
<b>Daily Model Error</b>									

### EIA Storage Week Balances

	12-Mar	19-Mar	26-Mar	2-Apr	9-Apr	16-Apr	WoW	vs. 4W
<b>Lower 48 Dry Production</b>	<b>91.8</b>	<b>91.8</b>	<b>92.0</b>	<b>92.5</b>	<b>92.1</b>	<b>91.4</b>	▼ -0.7	▼ -0.7
<b>Canadian Imports</b>	<b>4.7</b>	<b>5.0</b>	<b>4.5</b>	<b>4.5</b>	<b>4.2</b>	<b>4.3</b>	▲ 0.1	▼ -0.3
L48 Power	24.9	24.9	24.1	24.6	23.2	24.6	▲ 1.4	▲ 0.4
L48 Residential & Commercial	30.2	30.3	24.9	23.2	18.5	18.4	▼ 0.0	▼ -5.8
L48 Industrial	18.6	21.2	20.3	21.2	22.1	19.9	▼ -2.2	▼ -1.3
L48 Lease and Plant Fuel	5.1	5.1	5.1	5.1	5.1	5.0	▼ 0.0	▼ 0.0
L48 Pipeline Distribution	2.6	2.6	2.3	2.3	2.1	2.1	▲ 0.1	▼ -0.2
<b>L48 Regional Gas Consumption</b>	<b>81.4</b>	<b>84.1</b>	<b>76.7</b>	<b>76.4</b>	<b>70.9</b>	<b>70.1</b>	▼ -0.8	▼ -6.9
<b>Net LNG Exports</b>	<b>10.6</b>	<b>11.2</b>	<b>11.6</b>	<b>11.7</b>	<b>11.5</b>	<b>11.4</b>	▼ -0.1	▼ -0.1
<b>Total Mexican Exports</b>	<b>6.5</b>	<b>6.3</b>	<b>6.6</b>	<b>6.4</b>	<b>6.2</b>	<b>7.3</b>	▲ 1.1	▲ 0.9
<b>Implied Daily Storage Activity</b>	<b>-1.9</b>	<b>-4.8</b>	<b>1.6</b>	<b>2.4</b>	<b>7.6</b>	<b>6.9</b>	<b>-0.7</b>	
<b>EIA Reported Daily Storage Activity</b>	<b>-1.6</b>	<b>-4.6</b>	<b>2.0</b>	<b>2.9</b>	<b>8.7</b>			
<b>Daily Model Error</b>	<b>-0.4</b>	<b>-0.2</b>	<b>-0.4</b>	<b>-0.4</b>	<b>-1.1</b>			

### Monthly Balances

	2Yr Ago Apr-19	LY Apr-20	Dec-20	Jan-21	Feb-21	Mar-21	MTD Apr-21	MoM	vs. LY
<b>Lower 48 Dry Production</b>	<b>89.1</b>	<b>91.9</b>	<b>91.0</b>	<b>90.5</b>	<b>85.1</b>	<b>92.0</b>	<b>91.4</b>	▼ -0.6	▲ 0.8
<b>Canadian Imports</b>	<b>4.6</b>	<b>4.0</b>	<b>5.8</b>	<b>6.3</b>	<b>6.4</b>	<b>4.7</b>	<b>4.6</b>	▼ -0.2	▼ -1.7
L48 Power	24.6	25.6	28.0	28.1	27.8	25.0	24.5	▼ -0.5	▼ -3.6
L48 Residential & Commercial	19.1	20.5	40.0	43.8	47.7	28.3	20.3	▼ -7.9	▼ -23.5
L48 Industrial	21.4	19.8	23.3	23.5	22.1	20.1	20.5	▲ 0.3	▼ -3.0
L48 Lease and Plant Fuel	4.9	5.1	5.0	5.1	4.7	5.1	5.0	▼ 0.0	▼ 0.0
L48 Pipeline Distribution	2.2	2.3	3.1	3.2	3.4	2.5	2.2	▼ -0.3	▼ -1.0
<b>L48 Regional Gas Consumption</b>	<b>72.3</b>	<b>73.2</b>	<b>99.4</b>	<b>103.7</b>	<b>105.7</b>	<b>81.0</b>	<b>72.5</b>	▼ -8.5	▼ -31.1
<b>Net LNG Exports</b>	<b>4.5</b>	<b>8.2</b>	<b>11.0</b>	<b>10.5</b>	<b>8.4</b>	<b>11.1</b>	<b>11.5</b>	▲ 0.4	▲ 1.0
<b>Total Mexican Exports</b>	<b>4.7</b>	<b>4.8</b>	<b>5.8</b>	<b>6.2</b>	<b>5.7</b>	<b>6.5</b>	<b>6.7</b>	▲ 0.3	▲ 0.6
<b>Implied Daily Storage Activity</b>	<b>12.3</b>	<b>9.6</b>	<b>-19.5</b>	<b>-23.5</b>	<b>-28.3</b>	<b>-1.9</b>	<b>5.1</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 16-Apr

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	6.6	1.1	7.7	54
East	0.8	2.2	3.1	21
Midwest	2.1	-0.1	2.0	14
Mountain	3.1	-2.8	0.3	2
South Central	-0.6	2.2	1.6	12
Pacific	1.2	-0.4	0.8	5

\*Adjustment Factor is calculated based on historical regional deltas

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

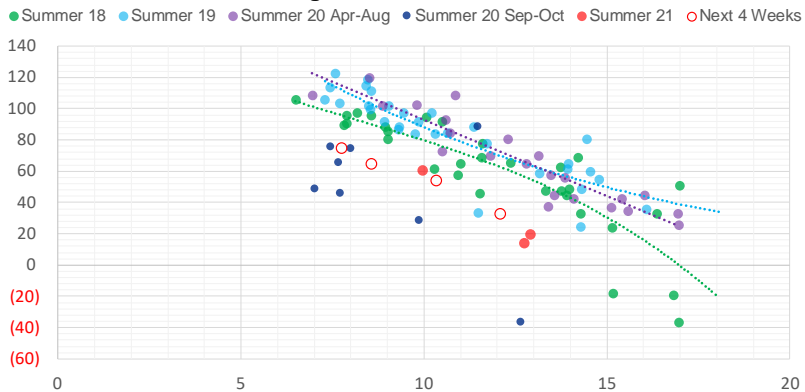


### Weather Model Storage Projection

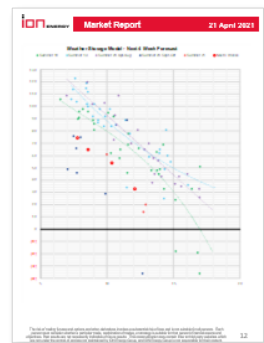
Next report  
and beyond

Week Ending	GWDDs	Week Storage Projection
16-Apr	10.4	54
23-Apr	12.1	33
30-Apr	8.6	65
07-May	7.8	74

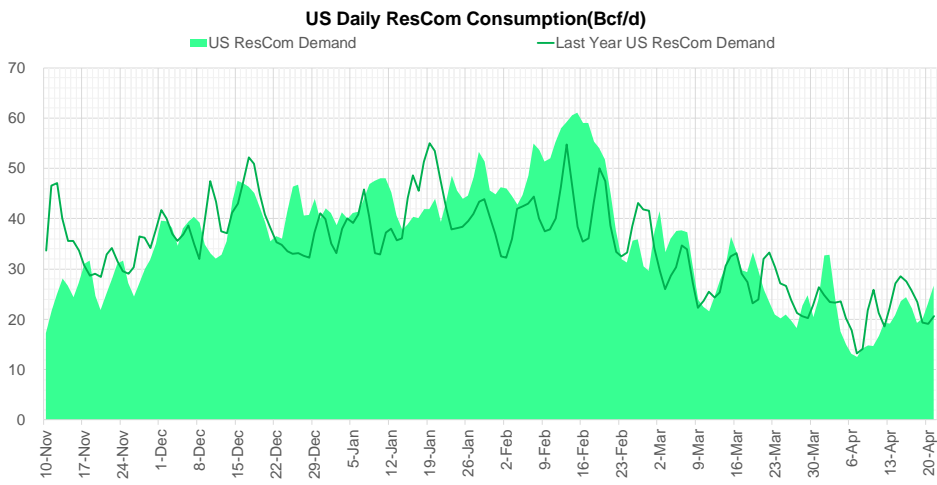
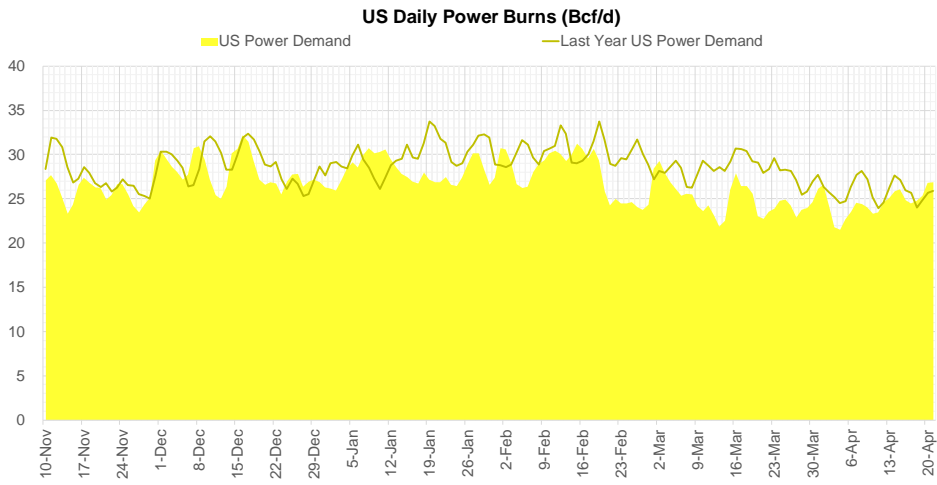
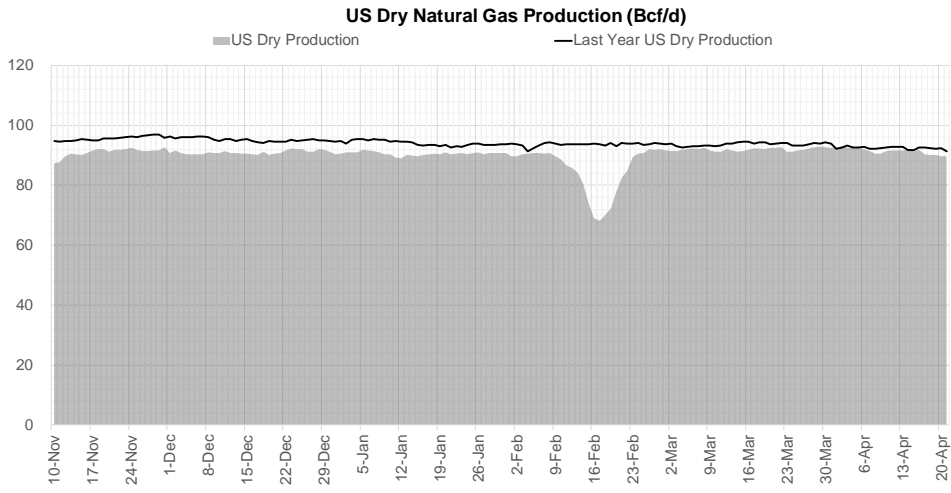
**Weather Storage Model - Next 4 Week Forecast**



Go to larger image



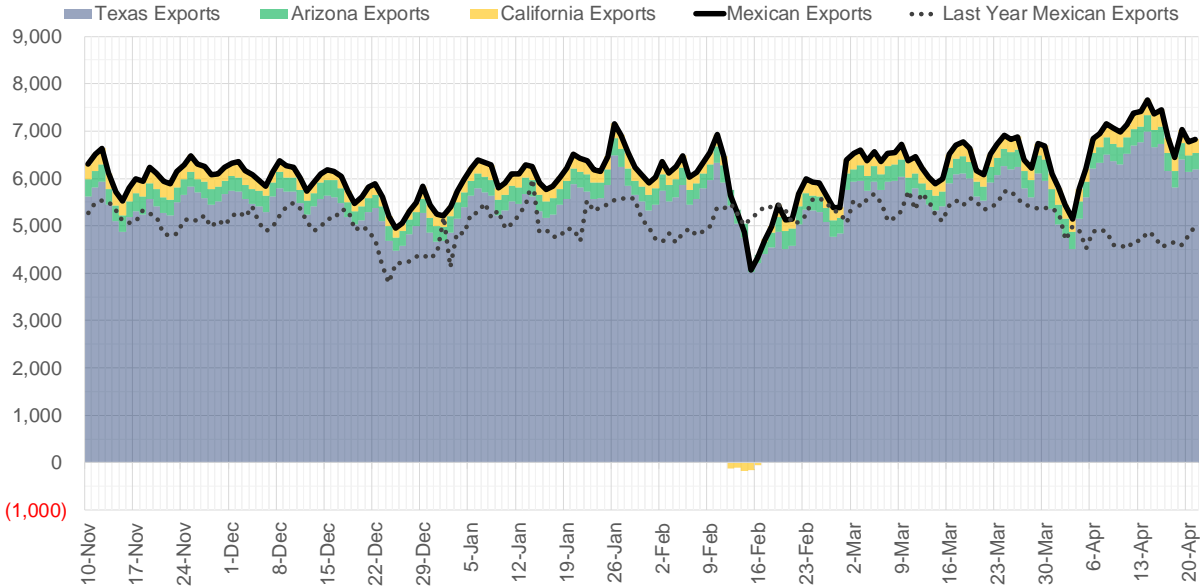
## Supply – Demand Trends



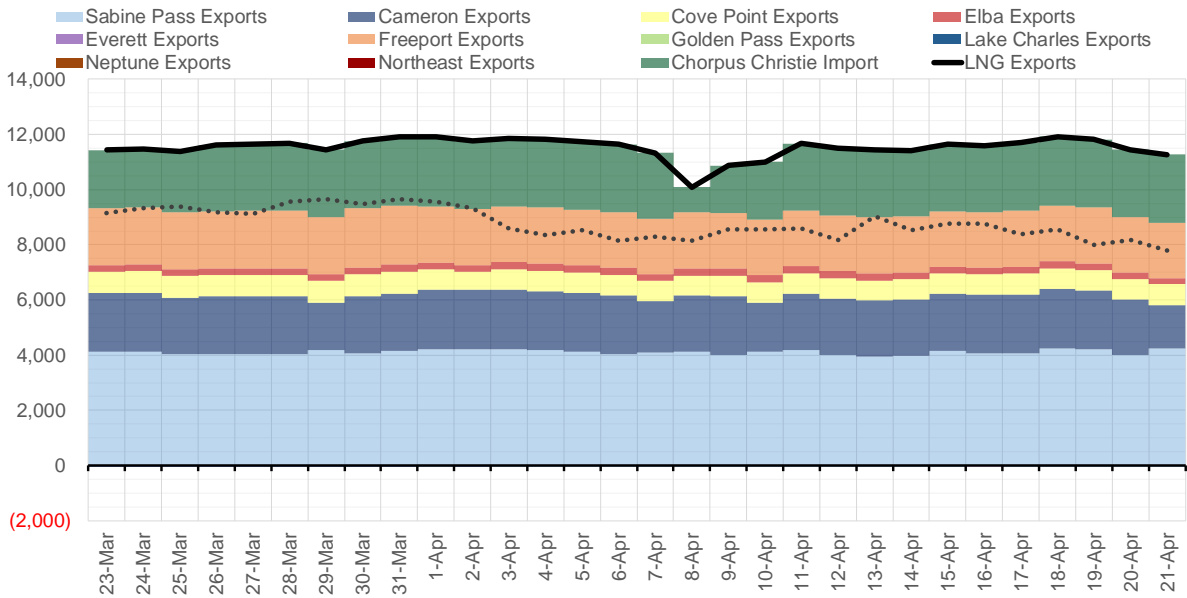
Source: Bloomberg

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

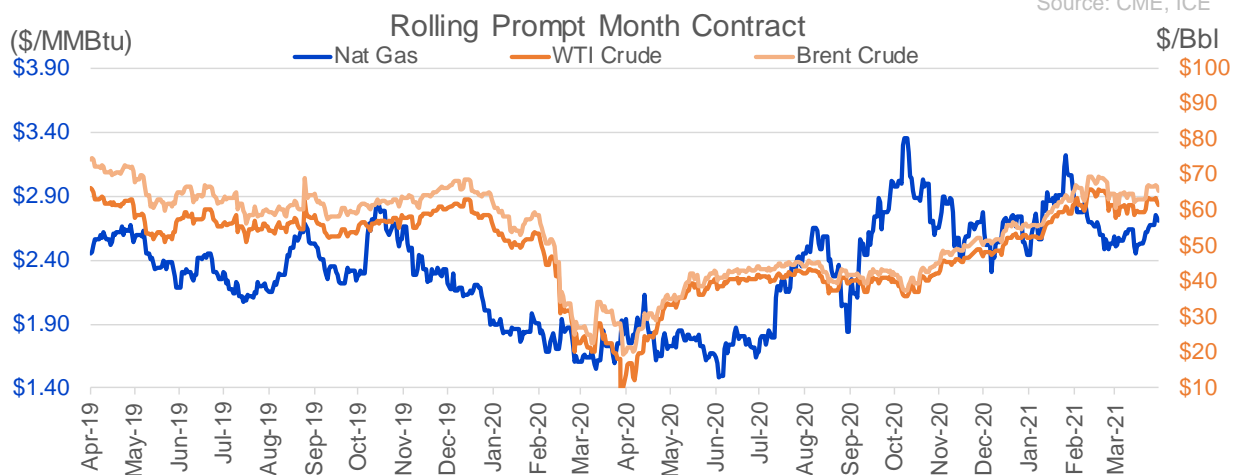
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
5	2021	C	2.80	4105	10	2021	C	4.00	38898
6	2021	P	2.50	3818	5	2021	C	3.00	34721
5	2021	P	2.70	3100	8	2021	C	4.00	33933
5	2021	P	2.60	2263	5	2021	P	2.50	31137
8	2021	C	3.50	2250	10	2021	C	3.25	29898
8	2021	P	2.25	2250	6	2021	P	2.50	28991
5	2021	C	2.75	2108	7	2021	C	4.00	28238
5	2021	P	2.55	2094	6	2021	C	4.00	27953
12	2021	P	2.75	2000	8	2021	C	3.50	26421
10	2021	P	2.50	1903	10	2021	C	5.00	26339
5	2021	P	2.65	1801	5	2021	C	3.50	25933
8	2021	C	3.25	1750	5	2021	P	2.00	25423
10	2021	P	2.25	1625	5	2021	C	3.25	25084
8	2021	C	3.00	1610	6	2021	C	3.00	24750
5	2021	C	2.90	1523	5	2021	C	4.00	24706
6	2021	P	2.65	1487	5	2021	P	2.25	24000
7	2021	P	2.25	1400	10	2021	C	3.50	23040
6	2021	C	3.00	1383	7	2021	C	3.25	22123
8	2021	P	2.50	1200	8	2021	C	3.25	21858
8	2021	P	2.75	1200	5	2021	C	2.75	21721
5	2021	P	2.50	1143	6	2021	C	3.25	20295
6	2021	P	2.70	1143	10	2021	C	3.00	19738
9	2021	P	2.50	1119	8	2021	P	2.25	19563
9	2021	P	2.75	1119	5	2021	P	2.40	19440
7	2021	P	2.35	1105	6	2021	C	3.50	19266
10	2021	C	3.25	1080	9	2021	C	3.50	18939
10	2021	C	3.75	1000	6	2021	P	2.25	18936
6	2021	C	3.25	885	4	2022	C	3.00	18762
5	2021	P	2.75	854	7	2021	P	2.50	18505
7	2021	C	3.25	797	7	2021	C	3.50	18305
6	2021	P	2.25	780	10	2021	P	2.50	18206
6	2021	C	2.80	668	8	2021	P	2.50	18182
5	2021	C	3.00	638	10	2021	P	2.00	18110
6	2021	P	2.75	635	9	2021	P	2.00	17769
7	2021	C	3.00	561	8	2021	C	3.00	17370
5	2021	C	2.85	532	6	2021	P	2.00	17058
10	2021	C	6.00	506	10	2021	P	2.25	16950
5	2021	C	2.50	500	12	2021	C	4.00	16790
8	2021	C	4.00	500	11	2021	C	4.00	16626
10	2021	P	2.75	500	5	2021	P	2.60	16217
6	2021	P	2.55	437	6	2021	C	2.75	16107
10	2021	C	3.00	401	7	2021	C	3.00	15954
5	2021	P	2.45	400	6	2021	C	3.75	15649
6	2021	C	3.35	400	7	2021	P	2.00	15536
1	2022	C	4.20	400	8	2021	P	2.00	14855
1	2022	P	2.85	400	9	2021	C	4.00	14220
5	2021	P	2.40	386	12	2021	P	2.00	13951
2	2022	C	4.35	360	9	2021	C	3.25	13801
2	2022	P	2.80	360	9	2021	P	1.90	13733
					3	2022	C	5	13675

Source: CME, ICE



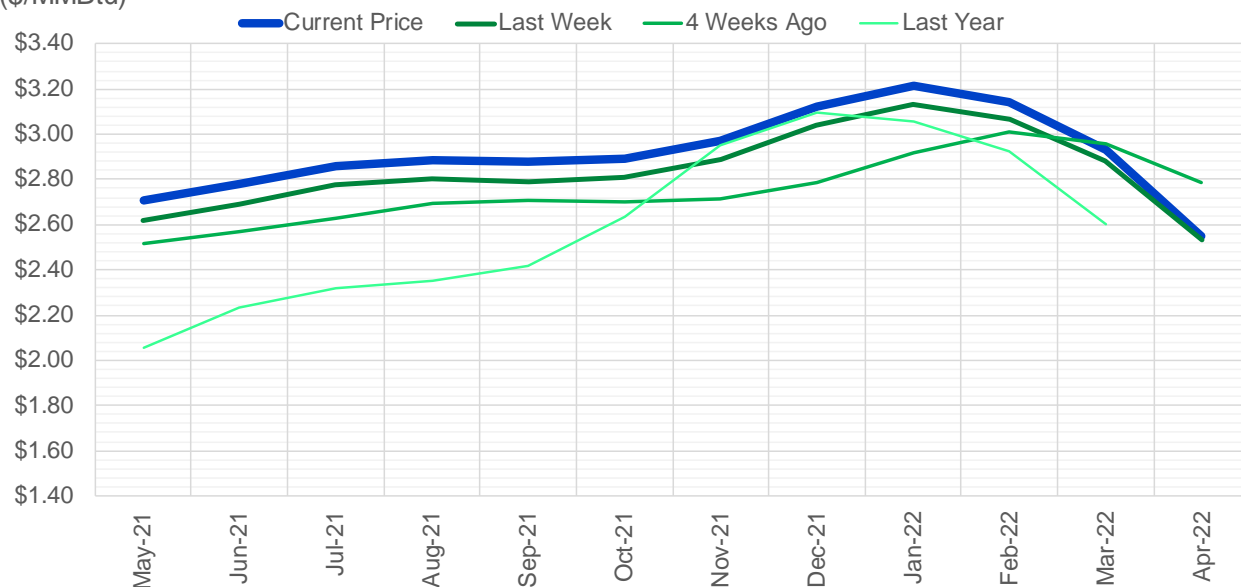
## Nat Gas Futures Open Interest CME, and ICE Combined

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
MAY 21	85922	101505	-15583	MAY 21	79753	78074	1679
JUN 21	169791	168735	1056	JUN 21	79021	79825	-805
JUL 21	184873	184603	270	JUL 21	87913	86600	1312
AUG 21	72353	70698	1655	AUG 21	78145	78165	-20
SEP 21	105983	103990	1993	SEP 21	68480	68841	-361
OCT 21	125725	126568	-843	OCT 21	84516	83958	558
NOV 21	65117	64799	318	NOV 21	60585	60263	322
DEC 21	45410	45414	-4	DEC 21	59091	59051	41
JAN 22	68067	65809	2258	JAN 22	62329	62274	55
FEB 22	22556	22602	-46	FEB 22	45868	45879	-11
MAR 22	42621	42395	226	MAR 22	50798	50733	65
APR 22	49020	49417	-397	APR 22	46844	47001	-158
MAY 22	26498	26786	-288	MAY 22	40409	40402	8
JUN 22	14246	14522	-276	JUN 22	39033	38981	53
JUL 22	9242	9230	12	JUL 22	38603	38626	-23
AUG 22	8668	8617	51	AUG 22	38001	37951	49
SEP 22	9145	9053	92	SEP 22	38857	38805	53
OCT 22	21289	20988	301	OCT 22	44224	44170	54
NOV 22	10372	10277	95	NOV 22	34757	34607	150
DEC 22	9457	9419	38	DEC 22	39096	39011	85
JAN 23	5145	5718	-573	JAN 23	21599	21372	227
FEB 23	2422	2424	-2	FEB 23	20315	20102	213
MAR 23	4840	5435	-595	MAR 23	21812	21703	109
APR 23	5477	5422	55	APR 23	18312	18056	256
MAY 23	4432	4456	-24	MAY 23	17914	17927	-13
JUN 23	951	1016	-65	JUN 23	16464	16463	2
JUL 23	1080	1081	-1	JUL 23	16453	16422	31
AUG 23	754	751	3	AUG 23	16602	16824	-223
SEP 23	619	613	6	SEP 23	16062	15965	97
OCT 23	1715	1705	10	OCT 23	16761	16950	-189



(\$/MMBtu)

### Nat Gas Term Structure



	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22
<b>Current Price</b>	<b>\$2.707</b>	<b>\$2.783</b>	<b>\$2.856</b>	<b>\$2.887</b>	<b>\$2.877</b>	<b>\$2.891</b>	<b>\$2.974</b>	<b>\$3.124</b>	<b>\$3.213</b>	<b>\$3.140</b>	<b>\$2.931</b>	<b>\$2.548</b>
Last Week	\$2.618	\$2.693	\$2.775	\$2.803	\$2.790	\$2.809	\$2.890	\$3.038	\$3.130	\$3.066	\$2.879	\$2.534
vs. Last Week	\$0.089	\$0.090	\$0.081	\$0.084	\$0.087	\$0.082	\$0.084	\$0.086	\$0.083	\$0.074	\$0.052	\$0.014
4 Weeks Ago	\$2.518	\$2.568	\$2.630	\$2.691	\$2.708	\$2.698	\$2.714	\$2.787	\$2.919	\$3.013	\$2.960	\$2.788
vs. 4 Weeks Ago	\$0.189	\$0.215	\$0.226	\$0.196	\$0.169	\$0.193	\$0.260	\$0.337	\$0.294	\$0.127	-\$0.029	-\$0.240
Last Year	\$1.939	\$2.053	\$2.236	\$2.320	\$2.354	\$2.419	\$2.637	\$2.953	\$3.093	\$3.057	\$2.922	\$2.605
vs. Last Year	\$0.768	\$0.730	\$0.620	\$0.567	\$0.523	\$0.472	\$0.337	\$0.171	\$0.120	\$0.083	\$0.009	-\$0.057

	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	2.70	2.13	-0.57
TETCO M3	\$/MMBtu	2.44	2.03	-0.42
FGT Zone 3	\$/MMBtu	2.58	2.67	0.09
Zone 6 NY	\$/MMBtu	2.58	1.91	-0.67
Chicago Citygate	\$/MMBtu	2.77	2.54	-0.23
Michcon	\$/MMBtu	2.64	2.53	-0.11
Columbia TCO Pool	\$/MMBtu	2.36	2.16	-0.20
Ventura	\$/MMBtu	2.71	2.47	-0.24
Rockies/Opal	\$/MMBtu	2.71	2.41	-0.31
El Paso Permian Basin	\$/MMBtu	2.54	2.47	-0.07
Socal Citygate	\$/MMBtu	3.45	2.73	-0.72
Malin	\$/MMBtu	2.73	2.61	-0.12
Houston Ship Channel	\$/MMBtu	2.82	2.67	-0.15
Henry Hub Cash	\$/MMBtu	2.69	2.49	-0.20
AECO Cash	C\$/GJ	2.30	2.16	-0.14
Station2 Cash	C\$/GJ	2.27	2.46	0.19
Dawn Cash	C\$/GJ	2.65	2.53	-0.12

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks Ago	vs. Last Year
NatGas Jul21/Oct21	\$/MMBtu	0.035	▲ 0.001	▲ 0.012	▲ 0.044
NatGas Oct21/Nov21	\$/MMBtu	0.083	▲ 0.002	▲ 0.010	▲ 0.046
NatGas Oct21/Jan22	\$/MMBtu	0.322	▲ 0.001	▲ 0.023	▲ 0.059
NatGas Apr22/Oct22	\$/MMBtu	0.037	▲ 0.005	▼ -0.010	▼ -0.007
WTI Crude	\$/Bbl	61.69	▼ -1.460	▲ 0.510	▲ 47.910
Brent Crude	\$/Bbl	65.63	▼ -0.950	▲ 1.220	▲ 45.260
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18	▲ 0.000	▲ 0.000	▲ 0.000
Heating Oil	cents/Gallon	185.60	▼ -3.400	▲ 3.040	▲ 112.490
Propane, Mt. Bel	cents/Gallon	0.80	▼ -0.019	▼ -0.127	▲ 0.465
Ethane, Mt. Bel	cents/Gallon	0.23	▲ 0.001	▲ 0.016	▲ 0.104
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

