

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 2.72	▼ \$ (0.03)	▲ \$ 0.05

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 63.55	▲ \$ 0.17	▲ \$ 0.8

	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 67.37	▲ \$ 0.32	▲ \$ 1.0

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[Lower 48 Component Models](#)

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

[Weather Model Storage Projection](#)

[Supply – Demand Trends](#)

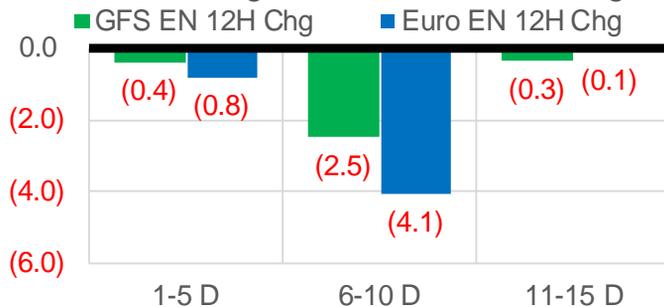
[Nat Gas Options Volume and Open Interest](#)

[Nat Gas Futures Open Interest](#)

[Price Summary](#)

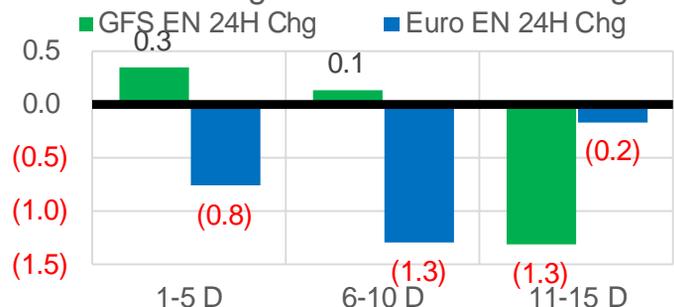
### Vs. 12H Ago

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	88.7	▼ -1.44	▼ -2.35

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	26.1	▲ 0.80	▲ 0.91

	Current	Δ from YD	Δ from 7D Avg
US ResComm	21.6	▲ 1.23	▲ 0.14

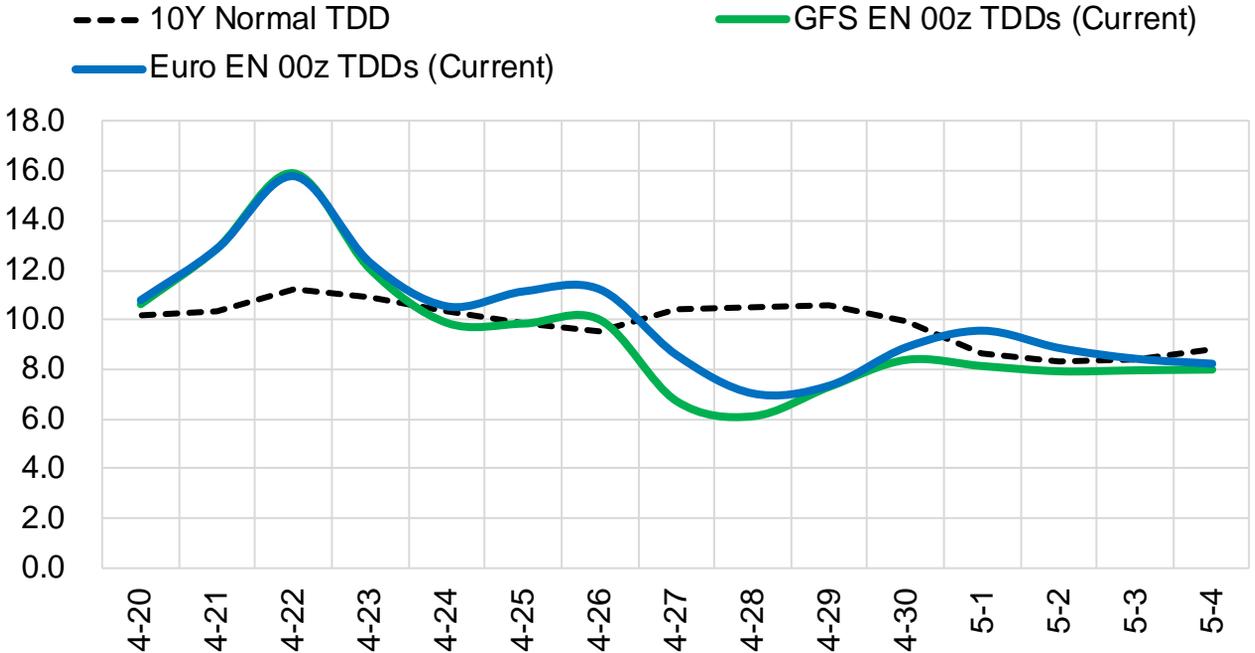
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	5.3	▲ 0.33	▲ 0.39

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	11.4	▼ -0.44	▼ -0.26

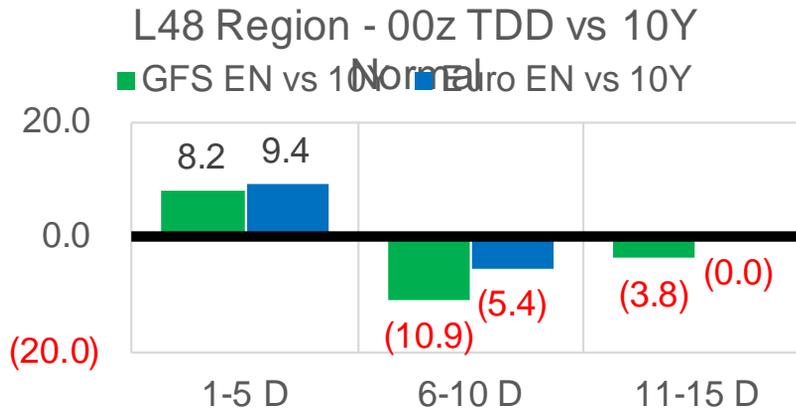
	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	7.2	▲ 0.03	▼ -0.07

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

### L48 Region



## Vs. 10Y Normal



Source: WSI , Bloomberg

## Lower 48 Component Models

### Daily Balances

	14-Apr	15-Apr	16-Apr	17-Apr	18-Apr	19-Apr	20-Apr	DoD	vs. 7D
<b>Lower 48 Dry Production</b>	<b>91.8</b>	<b>91.5</b>	<b>92.0</b>	<b>90.2</b>	<b>90.3</b>	<b>90.2</b>	<b>88.7</b>	▼ -1.4	▼ -2.3
<b>Canadian Imports</b>	<b>4.8</b>	<b>4.8</b>	<b>5.3</b>	<b>5.0</b>	<b>5.0</b>	<b>5.0</b>	<b>5.3</b>	▲ 0.3	▲ 0.3
L48 Power	25.9	26.1	24.9	24.4	24.8	25.3	26.1	▲ 0.8	▲ 0.9
L48 Residential & Commercial	20.8	23.7	24.4	22.2	19.3	20.3	21.6	▲ 1.2	▼ -0.2
L48 Industrial	19.6	19.6	19.4	18.9	18.6	18.6	19.0	▲ 0.3	▼ -0.2
L48 Lease and Plant Fuel	5.1	5.0	5.1	5.0	5.0	5.0	4.9	▼ -0.1	▼ -0.1
L48 Pipeline Distribution	2.3	2.5	2.4	2.3	2.2	2.2	2.3	▲ 0.1	▲ 0.0
<b>L48 Regional Gas Consumption</b>	<b>73.7</b>	<b>76.8</b>	<b>76.3</b>	<b>72.8</b>	<b>69.9</b>	<b>71.5</b>	<b>73.9</b>	▲ 2.4	▲ 0.4
<b>Net LNG Delivered</b>	<b>11.42</b>	<b>11.64</b>	<b>11.58</b>	<b>11.70</b>	<b>11.92</b>	<b>11.82</b>	<b>11.38</b>	▼ -0.4	▼ -0.3
<b>Total Mexican Exports</b>	<b>7.7</b>	<b>7.4</b>	<b>7.5</b>	<b>7.0</b>	<b>6.6</b>	<b>7.1</b>	<b>7.2</b>	▲ 0.0	▼ 0.0
<b>Implied Daily Storage Activity</b>	<b>3.9</b>	<b>0.4</b>	<b>1.8</b>	<b>3.8</b>	<b>6.9</b>	<b>4.6</b>	<b>1.6</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	23.3	18.5	18.5	▼ 0.0	▼ -5.8
L48 Industrial	18.6	21.3	20.3	21.1	21.8	19.7	▼ -2.0	▼ -1.4
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>70.7</b>	<b>70.0</b>	▼ -0.6	▼ -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>-2.0</b>	<b>-4.8</b>	<b>1.6</b>	<b>2.4</b>	<b>7.9</b>	<b>7.0</b>	<b>-0.9</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>-0.8</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>	▼ -0.5	▲ 0.9
<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>4.5</b>	▼ -0.2	▼ -1.8
L48 Power	24.6	25.6	28.0	28.1	27.8	25.0	24.4	▼ -0.6	▼ -3.8
L48 Residential & Commercial	19.1	20.5	40.0	43.8	47.7	28.3	20.0	▼ -8.3	▼ -23.8
L48 Industrial	21.4	19.8	23.3	23.5	22.1	20.1	20.4	▲ 0.3	▼ -3.1
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	▼ -0.4	▼ -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>72.0</b>	▼ -9.0	▼ -31.7
<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>6.8</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>5.7</b>		
<b>EIA Reported Daily Storage Activity</b>									
<b>Daily Model Error</b>									

Source: Bloomberg, analytix.ai

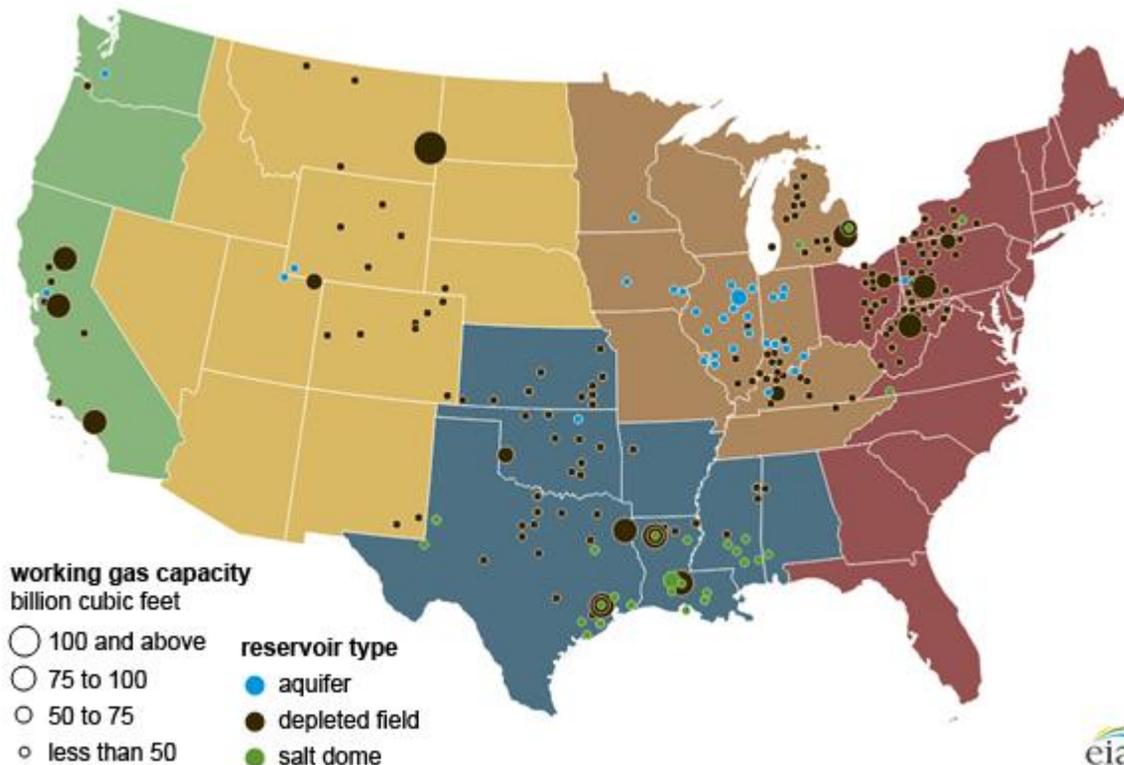
### Regional S/D Models Storage Projection

Week Ending 16-Apr

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	6.7	0.9	7.6	53
East	0.8	2.2	3.0	21
Midwest	2.1	-0.2	2.0	14
Mountain	3.1	-2.8	0.3	2
South Central	-0.5	2.2	1.6	11
Pacific	1.2	-0.5	0.7	5

\*Adjustment Factor is calculated based on historical regional deltas

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

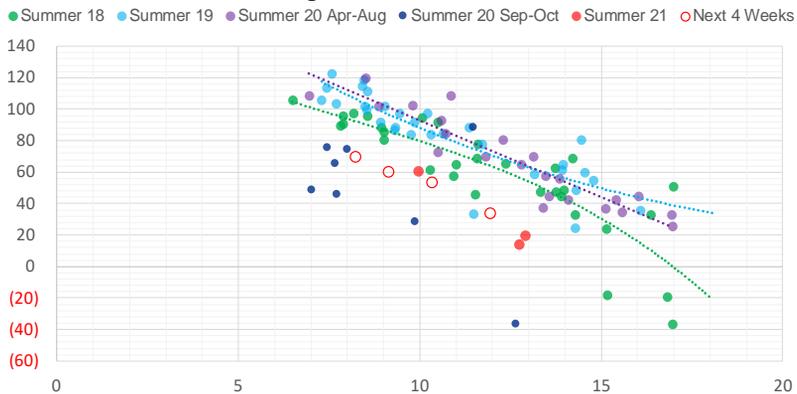


### Weather Model Storage Projection

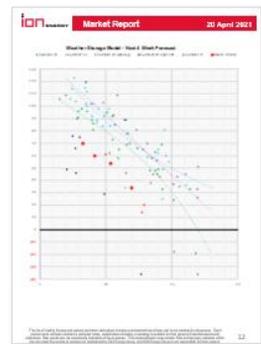
Next report  
and beyond

Week Ending	GWDDs	Week Storage Projection
16-Apr	10.4	53
23-Apr	12.0	34
30-Apr	9.2	60
07-May	8.3	70

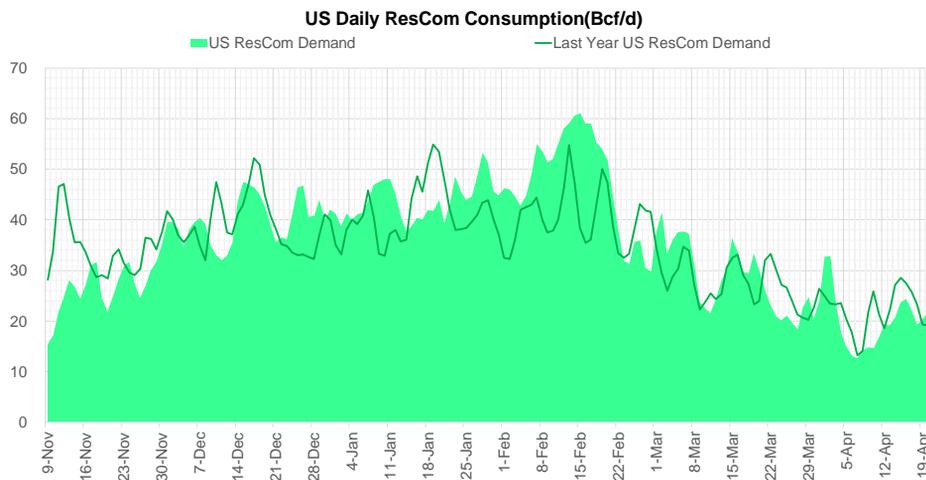
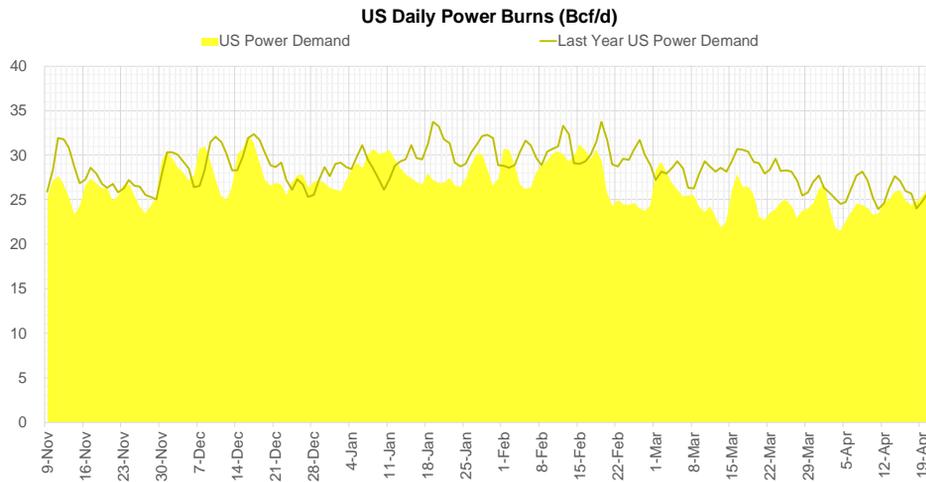
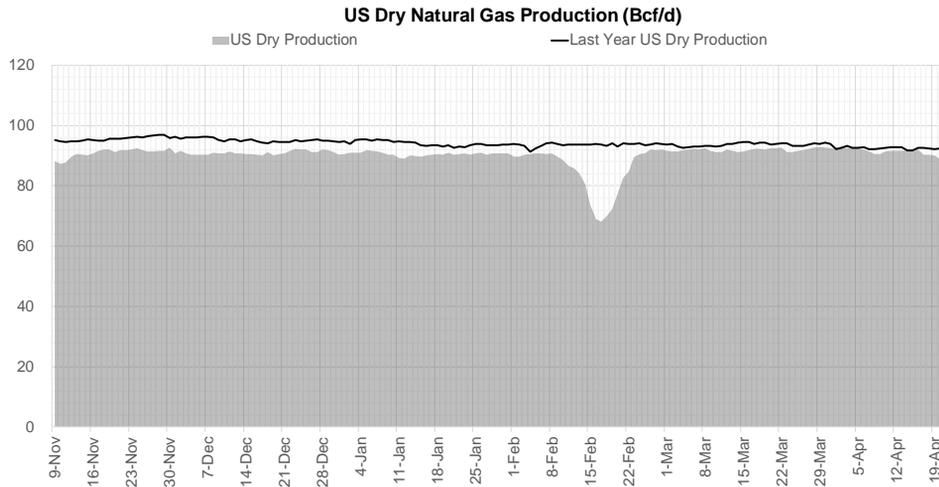
**Weather Storage Model - Next 4 Week Forecast**



Go to larger image



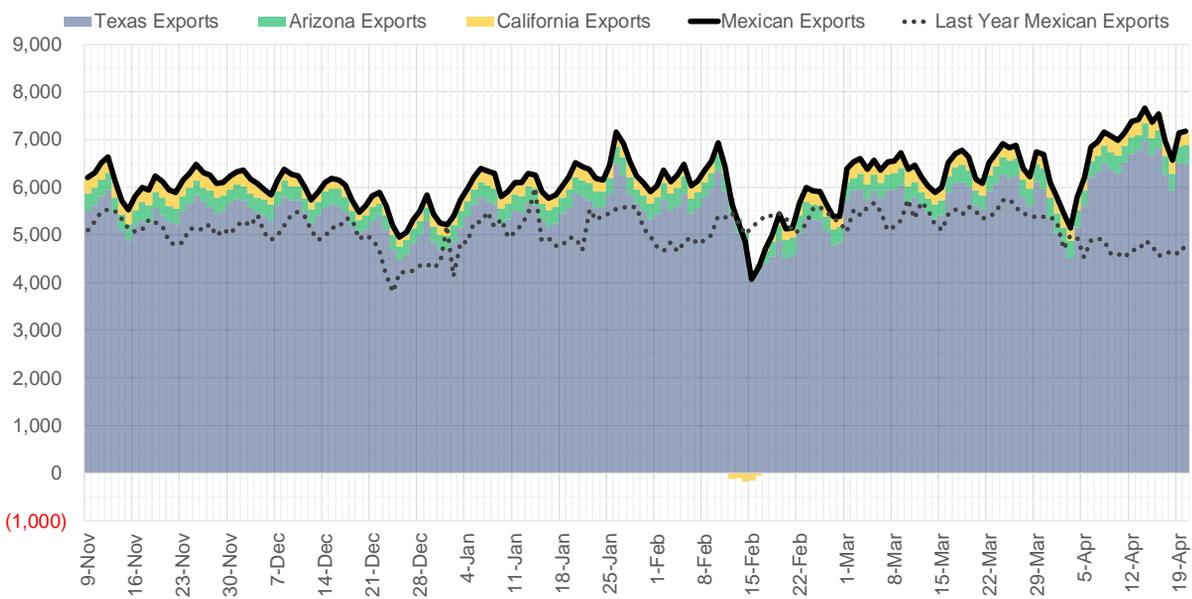
## Supply – Demand Trends



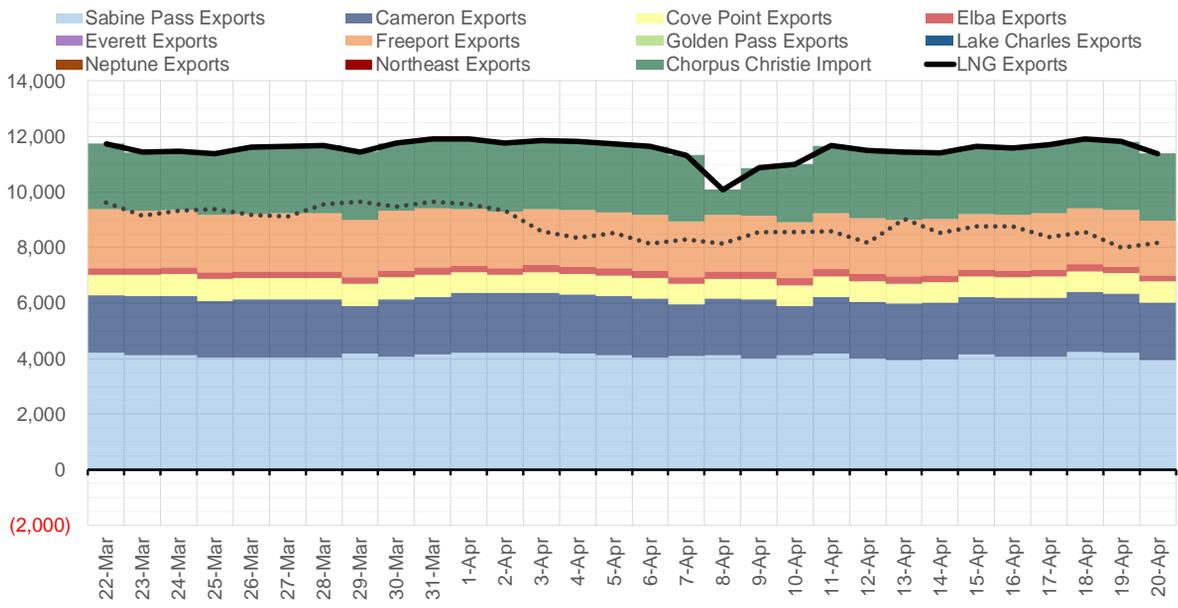
Source: Bloomberg

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.

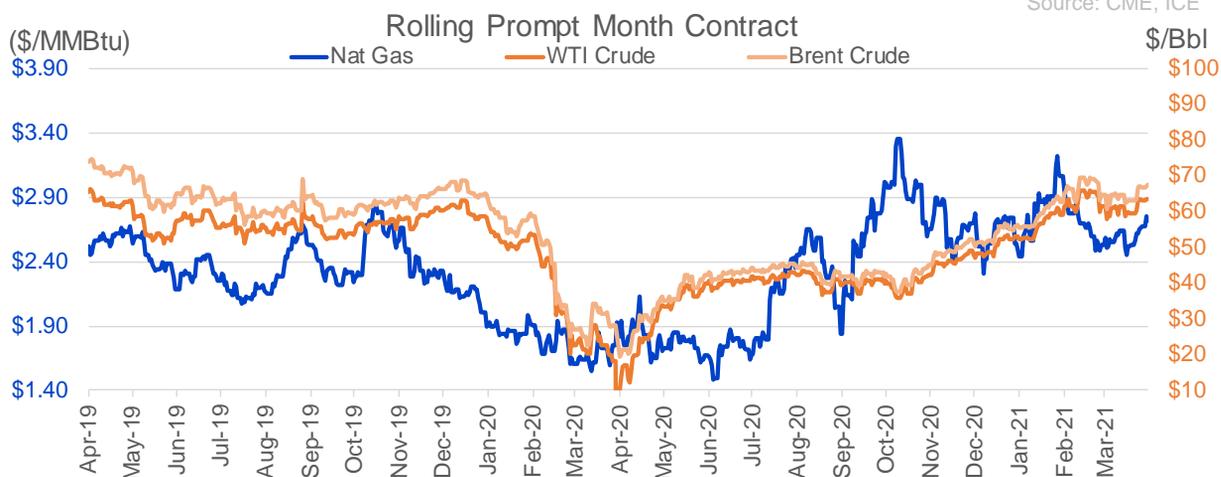
## Nat Gas Options Volume and Open Interest CME, ICE and Nasdaq Combined

CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
6	2021	P	2.50	8523	10	2021	C	4.00	38945
6	2021	P	2.40	5163	5	2021	C	3.00	34506
5	2021	P	2.60	4697	8	2021	C	4.00	33718
5	2021	P	2.65	4126	5	2021	P	2.50	31145
6	2021	P	2.60	3367	10	2021	C	3.25	29947
5	2021	P	2.55	3195	7	2021	C	4.00	28238
6	2021	C	3.10	2889	6	2021	C	4.00	27953
5	2021	P	2.70	2879	6	2021	P	2.50	27846
5	2021	C	2.75	2239	10	2021	C	5.00	26539
6	2021	P	2.65	2194	5	2021	C	3.50	25933
7	2021	P	2.50	2177	8	2021	C	3.50	25693
5	2021	C	2.85	2109	5	2021	P	2.00	25423
5	2021	C	2.80	2000	5	2021	C	3.25	25084
6	2021	C	3.00	1859	5	2021	C	4.00	24706
5	2021	P	2.50	1793	6	2021	C	3.00	24182
10	2021	C	5.50	1700	5	2021	P	2.25	24000
6	2021	P	2.25	1683	10	2021	C	3.50	22988
8	2021	P	2.40	1584	5	2021	C	2.75	22143
7	2021	P	2.40	1577	8	2021	C	3.25	21842
5	2021	C	2.95	1568	7	2021	C	3.25	21142
5	2021	C	2.65	1557	6	2021	C	3.25	20214
7	2021	C	3.25	1541	10	2021	C	3.00	19736
5	2021	C	3.00	1368	5	2021	P	2.40	19580
10	2021	P	2.50	1314	8	2021	P	2.25	19413
7	2021	P	2.75	1290	6	2021	C	3.50	19266
5	2021	C	2.70	1282	6	2021	P	2.25	19075
5	2021	P	2.45	1270	9	2021	C	3.50	18939
6	2021	P	2.75	1211	4	2022	C	3.00	18762
9	2021	P	2.50	1141	7	2021	P	2.50	18442
7	2021	C	3.10	1128	7	2021	C	3.50	18432
8	2021	C	3.10	1127	10	2021	P	2.00	18110
8	2021	P	2.50	1127	10	2021	P	2.50	17892
6	2021	C	3.25	1091	9	2021	P	2.00	17768
6	2021	C	3.05	1068	8	2021	P	2.50	17482
6	2021	C	2.95	1029	8	2021	C	3.00	17369
10	2021	P	2.75	975	6	2021	P	2.00	17058
7	2021	P	2.25	916	10	2021	P	2.25	16950
6	2021	C	2.90	846	12	2021	C	4.00	16640
8	2021	C	3.50	809	11	2021	C	4.00	16625
9	2021	P	2.75	800	6	2021	C	2.75	16130
8	2021	C	3.75	750	7	2021	C	3.00	15956
8	2021	P	2.75	750	6	2021	C	3.75	15649
6	2021	P	2.70	603	7	2021	P	2.00	15556
7	2021	P	2.60	568	5	2021	P	2.60	15461
5	2021	C	2.90	552	8	2021	P	2.00	14830
6	2021	C	2.85	506	9	2021	C	4.00	14220
7	2021	P	2.55	471	12	2021	P	2.00	13951
5	2021	P	2.75	462	9	2021	C	3.25	13801
5	2021	P	2.40	450	9	2021	P	1.90	13733
					3	2022	C	5	13675

Source: CME, ICE

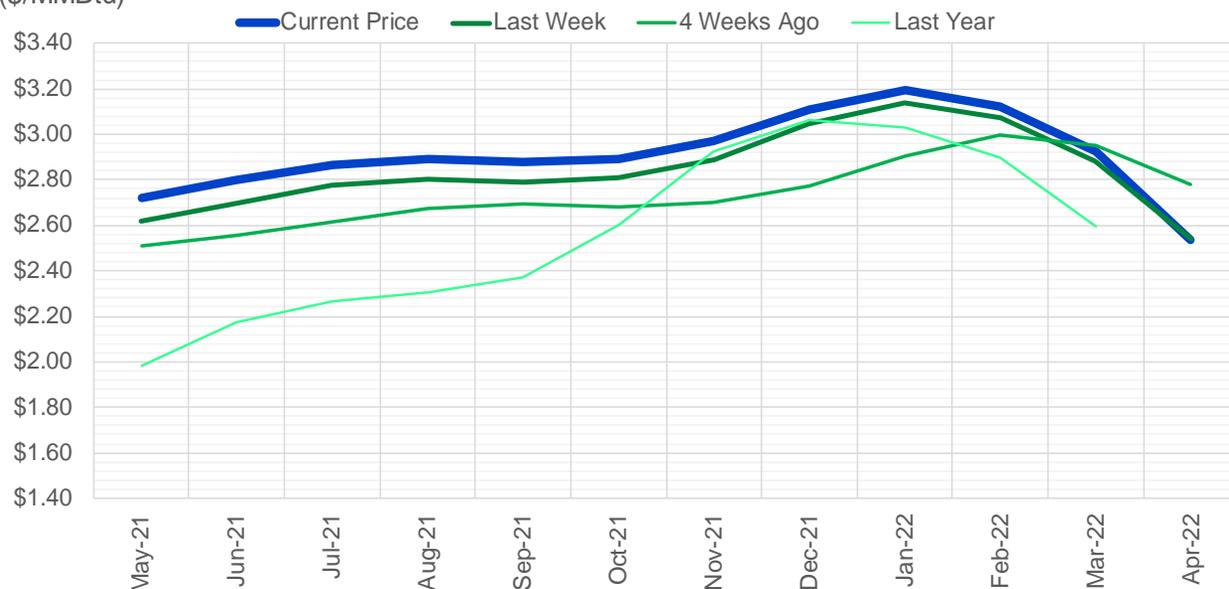
### Nat Gas Futures Open Interest CME, and ICE Combined

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	101604	110149	-8545	MAY 21	78074	79009	-935
JUN 21	173665	164666	8999	JUN 21	79825	79018	808
JUL 21	184603	184730	-127	JUL 21	86600	86664	-64
AUG 21	72129	69777	2352	AUG 21	78165	78010	156
SEP 21	103990	102058	1932	SEP 21	68841	69109	-268
OCT 21	126570	128413	-1843	OCT 21	83958	83446	512
NOV 21	64799	65177	-378	NOV 21	60263	60504	-241
DEC 21	45414	45826	-412	DEC 21	59051	59295	-244
JAN 22	65811	64636	1175	JAN 22	62274	62117	157
FEB 22	22602	22220	382	FEB 22	45879	45489	390
MAR 22	42395	42457	-62	MAR 22	50733	50612	121
APR 22	49417	49396	21	APR 22	47001	47179	-178
MAY 22	26786	26441	345	MAY 22	40402	40513	-112
JUN 22	14522	14678	-156	JUN 22	38981	38989	-8
JUL 22	9230	9194	36	JUL 22	38626	38595	31
AUG 22	8617	8657	-40	AUG 22	37951	37923	28
SEP 22	9053	9123	-70	SEP 22	38805	38794	11
OCT 22	20988	20985	3	OCT 22	44170	44176	-6
NOV 22	10277	10158	119	NOV 22	34607	34592	16
DEC 22	9419	9329	90	DEC 22	39011	38941	70
JAN 23	5718	5666	52	JAN 23	21372	21121	251
FEB 23	2424	2452	-28	FEB 23	20102	19833	269
MAR 23	5435	5364	71	MAR 23	21703	21688	16
APR 23	5422	5561	-139	APR 23	18056	17958	98
MAY 23	4456	4196	260	MAY 23	17927	17841	86
JUN 23	1016	1019	-3	JUN 23	16463	16410	53
JUL 23	1081	1102	-21	JUL 23	16422	16399	23
AUG 23	751	751	0	AUG 23	16824	16793	31
SEP 23	613	613	0	SEP 23	15965	15883	83
OCT 23	1705	1678	27	OCT 23	16950	16888	62



(\$/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>\$2.723</b>	<b>\$2.797</b>	<b>\$2.868</b>	<b>\$2.894</b>	<b>\$2.878</b>	<b>\$2.895</b>	<b>\$2.969</b>	<b>\$3.111</b>	<b>\$3.198</b>	<b>\$3.124</b>	<b>\$2.926</b>	<b>\$2.539</b>
Last Week	\$2.619	\$2.696	\$2.779	\$2.805	\$2.791	\$2.809	\$2.889	\$3.044	\$3.136	\$3.071	\$2.882	\$2.537
vs. Last Week	\$0.104	\$0.101	\$0.089	\$0.089	\$0.087	\$0.086	\$0.080	\$0.067	\$0.062	\$0.053	\$0.044	\$0.002
4 Weeks Ago	\$2.508	\$2.554	\$2.615	\$2.674	\$2.692	\$2.683	\$2.698	\$2.770	\$2.904	\$2.999	\$2.948	\$2.777
vs. 4 Weeks Ago	\$0.215	\$0.243	\$0.253	\$0.220	\$0.186	\$0.212	\$0.271	\$0.341	\$0.294	\$0.125	-\$0.022	-\$0.238
Last Year	\$1.821	\$1.984	\$2.175	\$2.266	\$2.307	\$2.374	\$2.603	\$2.926	\$3.065	\$3.029	\$2.899	\$2.596
vs. Last Year	\$0.902	\$0.813	\$0.693	\$0.628	\$0.571	\$0.521	\$0.366	\$0.185	\$0.133	\$0.095	\$0.027	-\$0.057

	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	2.50	2.11	-0.39
TETCO M3	\$/MMBtu	2.29	2.04	-0.25
FGT Zone 3	\$/MMBtu	2.36	2.67	0.31
Zone 6 NY	\$/MMBtu	2.36	2.04	-0.32
Chicago Citygate	\$/MMBtu	2.71	2.54	-0.17
Michcon	\$/MMBtu	2.60	2.53	-0.07
Columbia TCO Pool	\$/MMBtu	2.28	2.16	-0.12
Ventura	\$/MMBtu	2.71	2.46	-0.25
Rockies/Opal	\$/MMBtu	2.67	2.39	-0.28
El Paso Permian Basin	\$/MMBtu	2.60	2.47	-0.13
Socal Citygate	\$/MMBtu	3.30	2.73	-0.57
Malin	\$/MMBtu	2.69	2.61	-0.08
Houston Ship Channel	\$/MMBtu	2.80	2.67	-0.13
Henry Hub Cash	\$/MMBtu	2.68	2.49	-0.19
AECO Cash	C\$/GJ	2.31	2.17	-0.14
Station2 Cash	C\$/GJ	2.25	2.47	0.22
Dawn Cash	C\$/GJ	2.62	2.53	-0.09

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks Ago	vs. Last Year
NatGas Jul21/Oct21	\$/MMBtu	0.027	▼ -0.003	▲ 0.003	▲ 0.041
NatGas Oct21/Nov21	\$/MMBtu	0.074	▼ -0.006	▲ 0.002	▲ 0.039
NatGas Oct21/Jan22	\$/MMBtu	0.303	▼ -0.024	▲ 0.002	▲ 0.044
NatGas Apr22/Oct22	\$/MMBtu	0.038	▲ 0.004	▼ -0.017	▼ -0.004
WTI Crude	\$/Bbl	63.55	▲ 3.370	▲ 5.790	▲ 53.540
Brent Crude	\$/Bbl	67.37	▲ 3.700	▲ 6.580	▲ 48.040
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18	▲ 0.000	▲ 0.000	▲ 0.000
Heating Oil	cents/Gallon	189.46	▲ 8.010	▲ 14.570	▲ 116.770
Propane, Mt. Bel	cents/Gallon	0.80	▼ -0.024	▼ -0.120	▲ 0.480
Ethane, Mt. Bel	cents/Gallon	0.23	▲ 0.000	▲ 0.016	▲ 0.106
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

