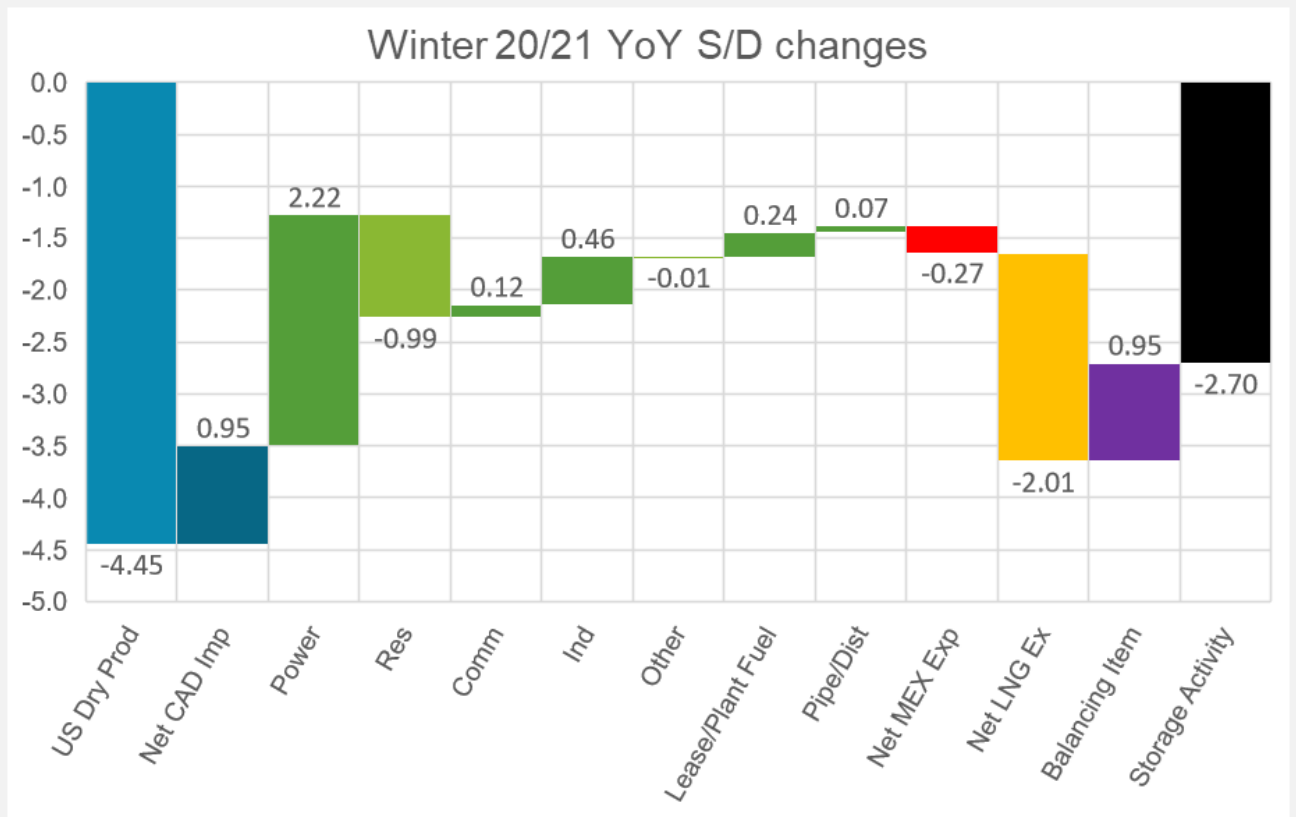


The EIA reported the March monthly supply and demand data last Friday before the long weekend, which now gives us a complete view of how the winter performed vs prior years. In today's report, we take a view of how winter looked versus past years. This was a unique year with the L48 being impacted by COVID restrictions (which change normal consumption patterns), lower production due to lower oil prices, and growing LNG capacity.

The winter was net tighter by 2.7 Bcf/d winter-on-winter. The two dominant factors leading to the tighter balances were supply and LNG. Domestic production dropped by 4.45 Bcf/d and net LNG exports increased by 2 Bcf/d.

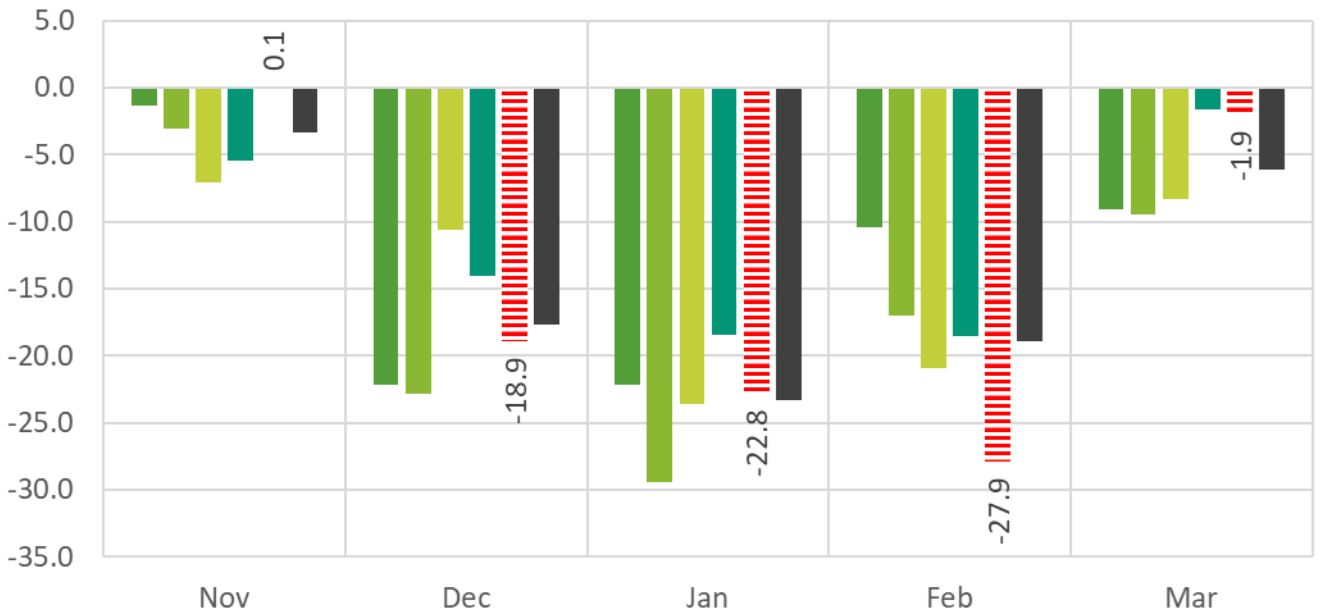
Despite the weather being cooler by an average of 0.9F per day on average this past winter, total consumption was lower mainly due to stronger pricing which reduced the power burns by 2.22 Bcf/d. On average Henry Hub settlements were stronger by \$0.61 YoY.



Below shows the storage activity month by month. Dec and Jan were close to the 5Yr average, with only Feb being the major outlier due to the extreme cold. Mar closed out the season flat to last year despite being 1.8F cooler on average.

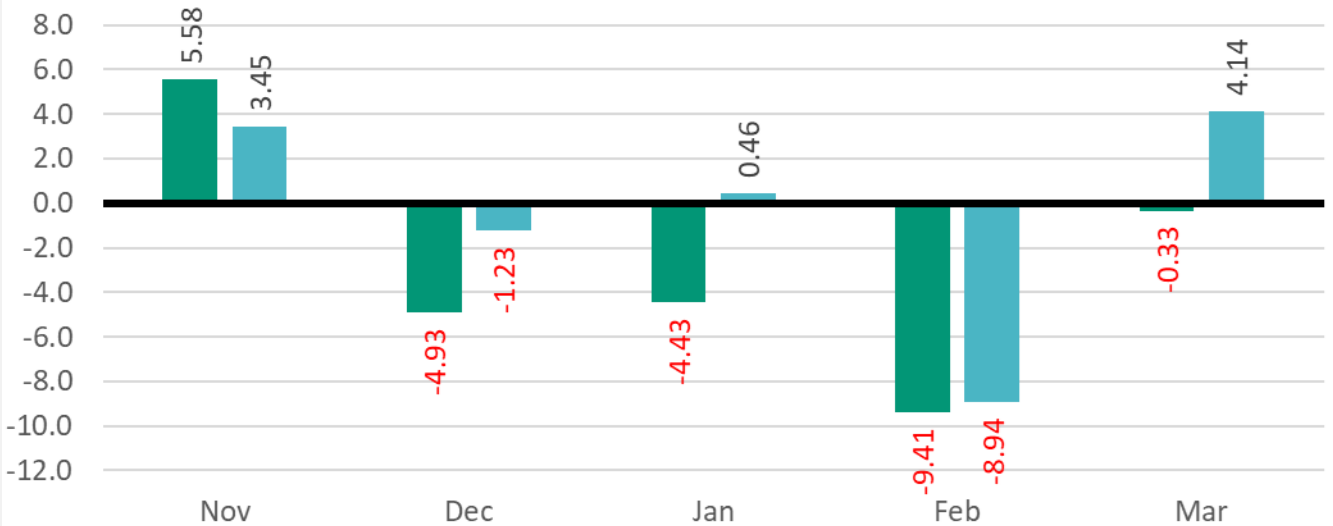
Average Daily L48 Storage Withdrawals

■ 2016/2017
 ■ 2017/2018
 ■ 2018/2019
■ 2019/2020
▨ 2020/2021
■ 5Yr Average

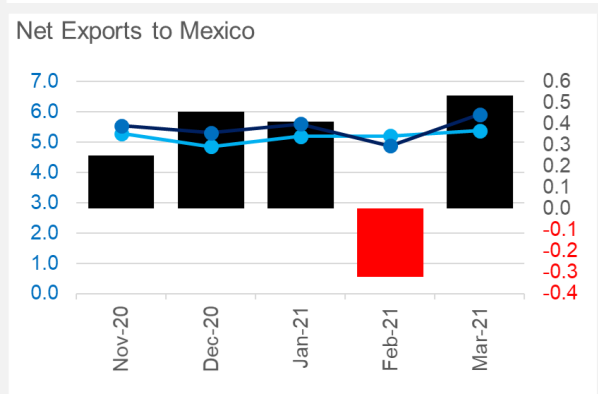
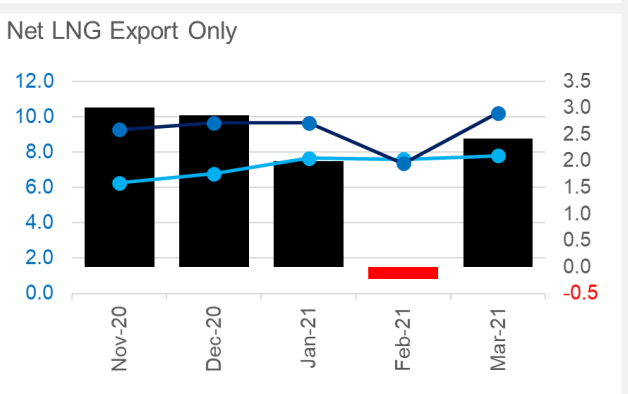
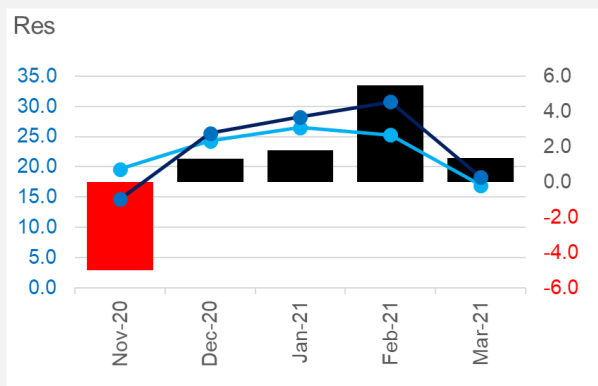
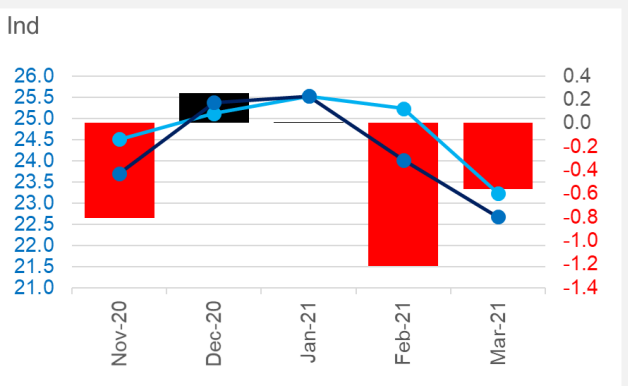
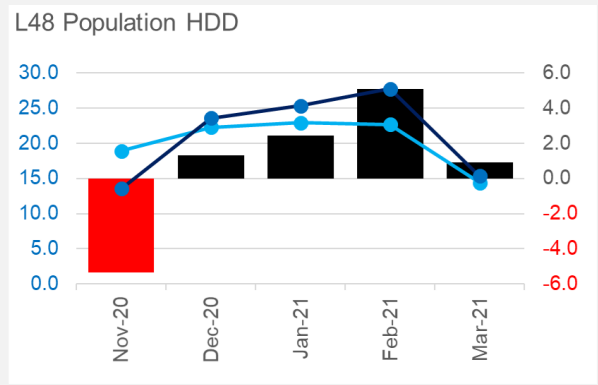
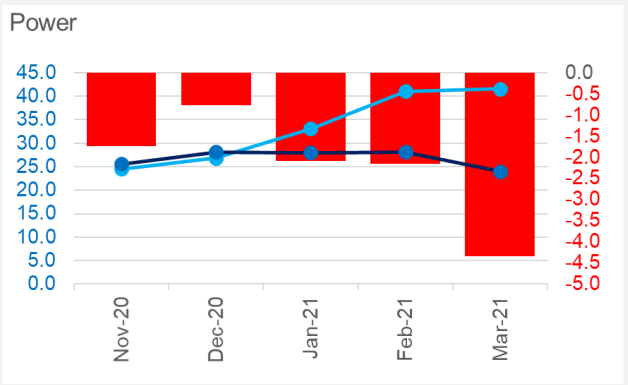
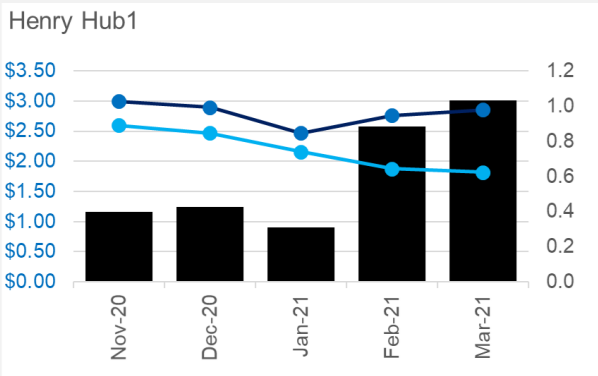
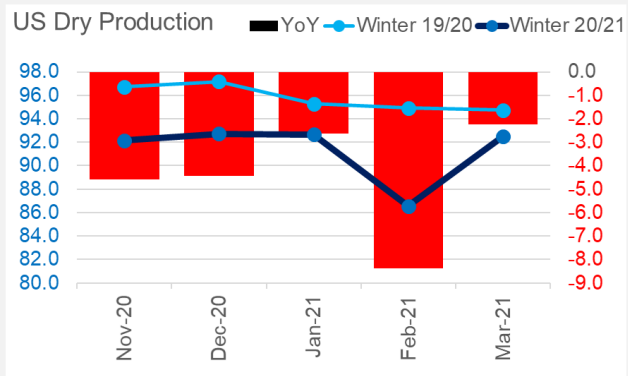


Winter 2020/21 Daily L48 Storage Activity vs Past Years

■ YoY
■ vs. 5Yr Average



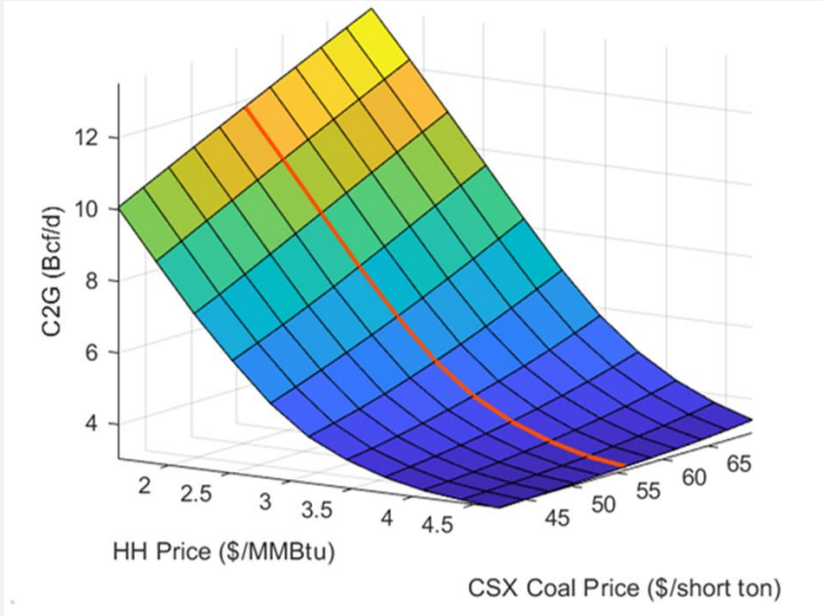
■ YoY ● Winter 19/20 ● Winter 20/21



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.

This week we're also including some charts dropped by Xin Tang for Refinitiv on enelyst this past Thursday.

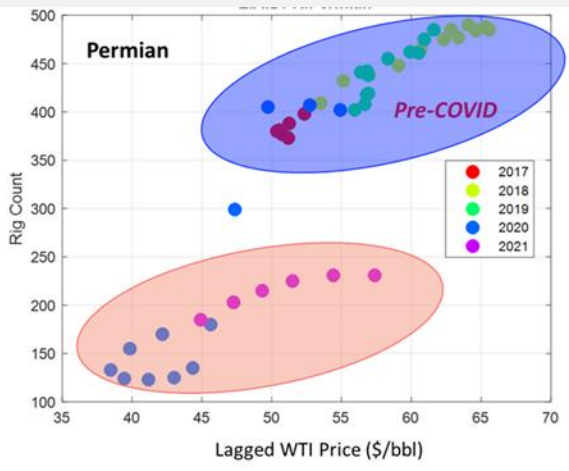
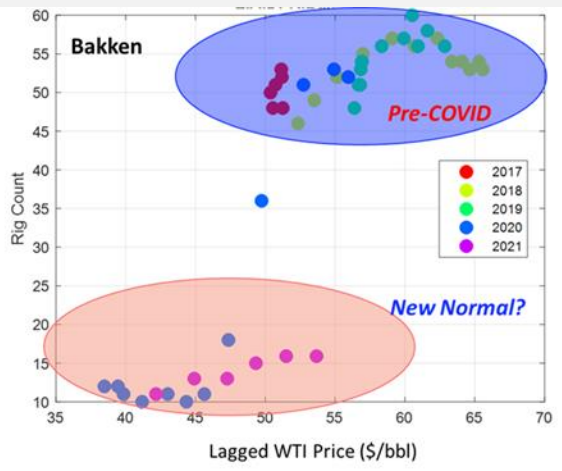
Here is a look at the C2G sensitivity:



Here is a look at the production sensitivity:

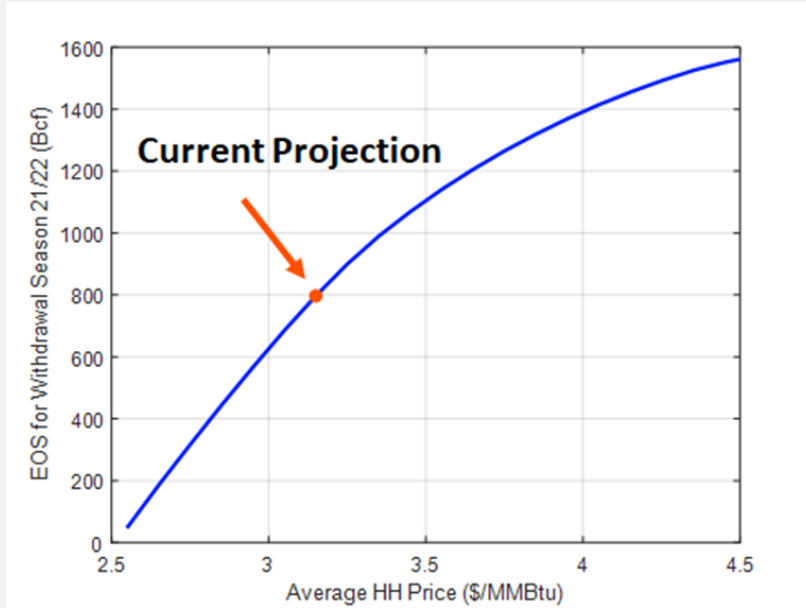
“The production elasticity is becoming a tricky but important part. The producers’ behaviors have significantly shifted after the pandemic began as shown in the rig vs. lagged price plots.”

“E&Ps are hesitant to add rigs even after the oil and gas prices recovered or even surpassed the pre-pandemic level. This will lead to lower price elasticity of the production.”



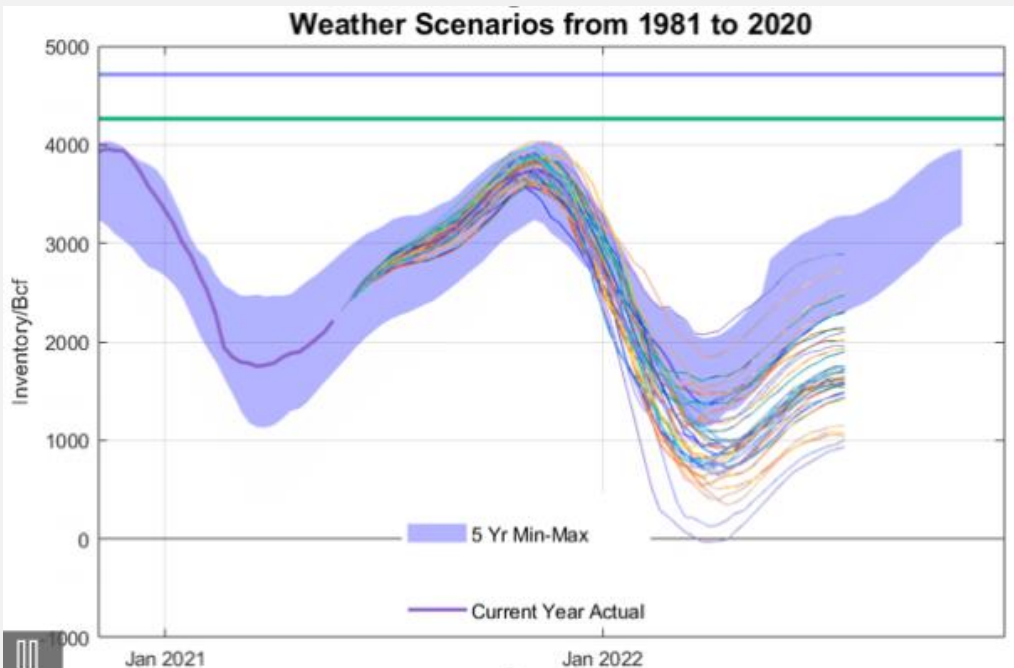
The risk of trading futures and options and other derivatives involves a substantial risk of loss and is not suitable for all persons. Each person must consider whether a particular trade, combination of trades, or strategy is suitable for that person's financial means and objectives. Past results are 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.

“This convexity is also reflected in price dependent EOS forecast assuming flatline production. Prices may have to go higher from here if there is no production growth”



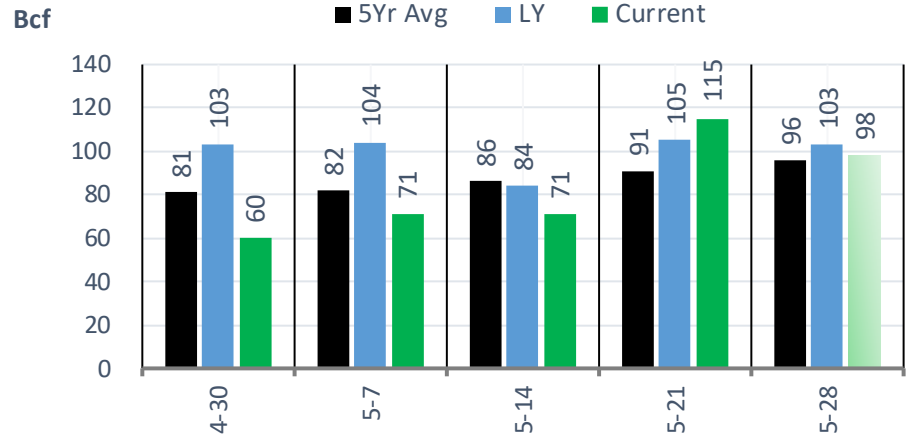
Finally, they showed EOS trajectories on differing weather scenarios.

“I will end this with the weather dependent inventory trajectory assuming no production growth. Again this highlights the risk for the withdrawal season in the absence of production growth.”

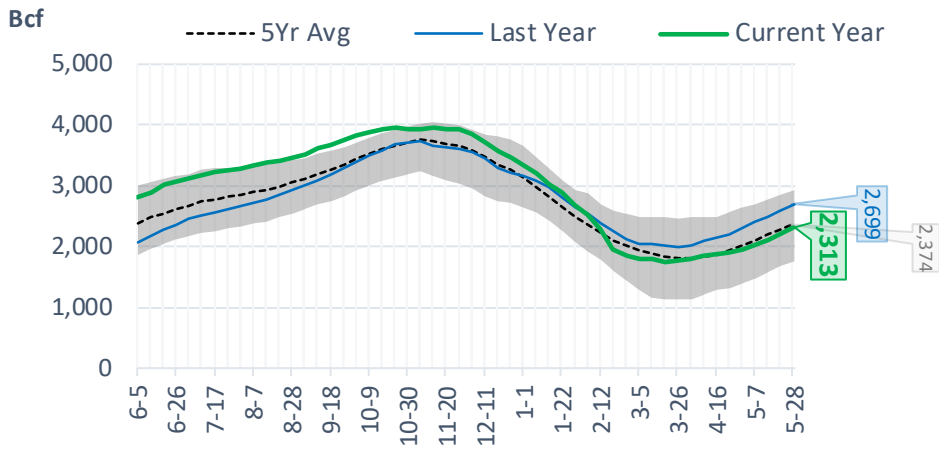


EIA Storage Report

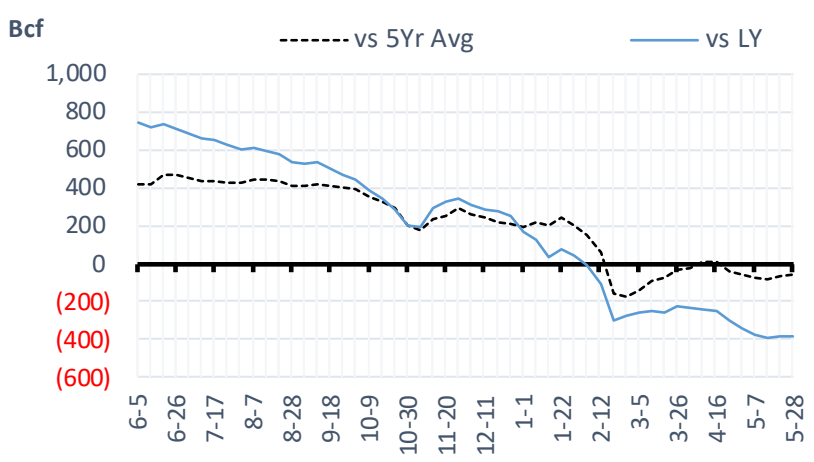
Total Lower 48 YoY Weekly Change



Total Lower 48 Storage Levels



Total Lower 48 LY Surplus/Deficit

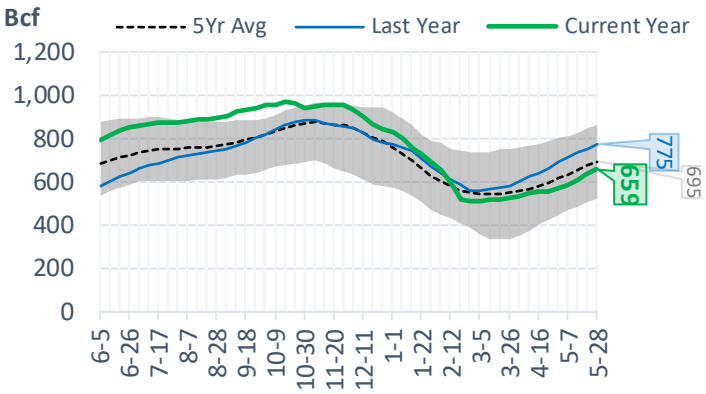


The risk of trading futures and options and other derivatives involves a substantial risk of loss and is not suitable for all persons. Each person must consider whether a particular trade, combination of trades, or strategy is suitable for that person's financial means and objectives. Past results are 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.

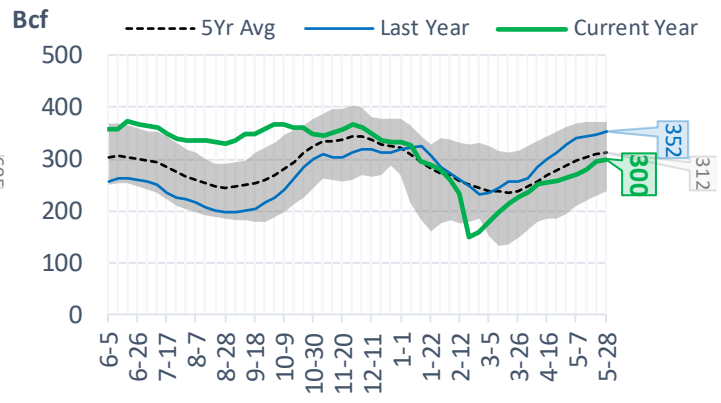
Natural Gas Storage Stats - Last 5 Weeks

Week Ending	Current 28-May	Week - 1 21-May	Week - 2 14-May	Week - 3 7-May	Week - 4 30-Apr	Week - 5 23-Apr
Total Lower 48 Storage Level	2313	2215	2100	2029	1958	1898
Weekly Change	+98	+115	+71	+71	+60	+15
vs LY	-386	-381	-391	-378	-345	-302
vs 5Yr Avg	-61	-63	-87	-72	-61	-40
S. Central Salt Storage Level	300	296	280	269	264	258
Weekly Change	+4	+16	+11	+5	+6	+2
vs LY	-52	-52	-64	-70	-65	-54
vs 5Yr Avg	-12	-12	-24	-28	-25	-20
S. Central NonSalt Storage Level	659	635	608	588	572	558
Weekly Change	+24	+27	+20	+16	+14	+4
vs LY	-116	-119	-126	-128	-119	-103
vs 5Yr Avg	-36	-40	-48	-49	-47	-41
Midwest Storage Level	522	499	472	458	442	427
Weekly Change	+23	+27	+14	+16	+15	+6
vs LY	-108	-103	-101	-93	-85	-77
vs 5Yr Avg	-4	+2	+1	+10	+13	+15
East Storage Level	413	385	358	347	332	319
Weekly Change	+28	+27	+11	+15	+13	-6
vs LY	-118	-114	-109	-101	-89	-85
vs 5Yr Avg	-35	-34	-34	-22	-14	-7
Mountain Storage Level	151	144	135	131	124	119
Weekly Change	+7	+9	+4	+7	+5	+1
vs LY	+12	+13	+12	+15	+14	+17
vs 5Yr Avg	+11	+10	+7	+9	+7	+6
Pacific Storage Level	268	256	247	235	224	217
Weekly Change	+12	+9	+12	+11	+7	+7
vs LY	-4	-6	-4	-3	-3	0
vs 5Yr Avg	+14	+11	+11	+8	+5	+7

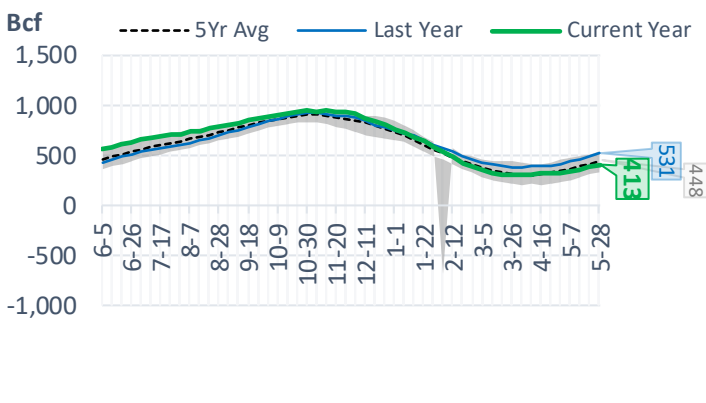
NonSalt Storage Levels



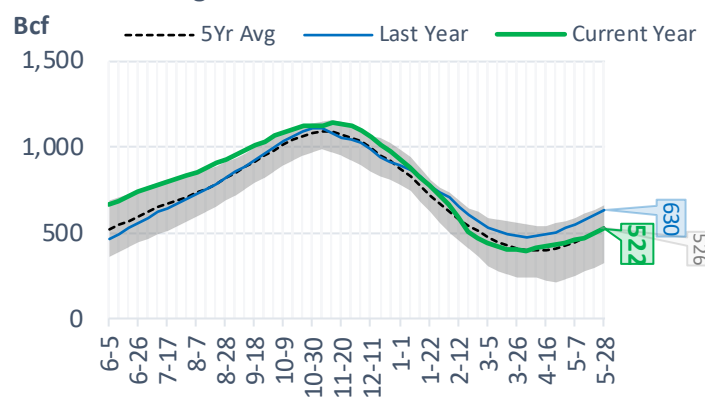
Salt Storage Levels



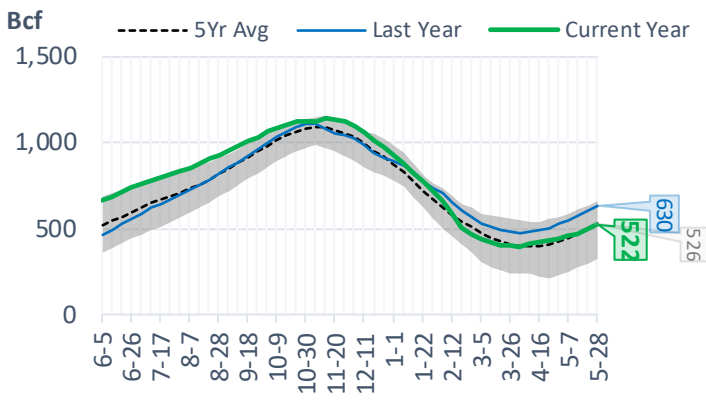
East Storage Levels



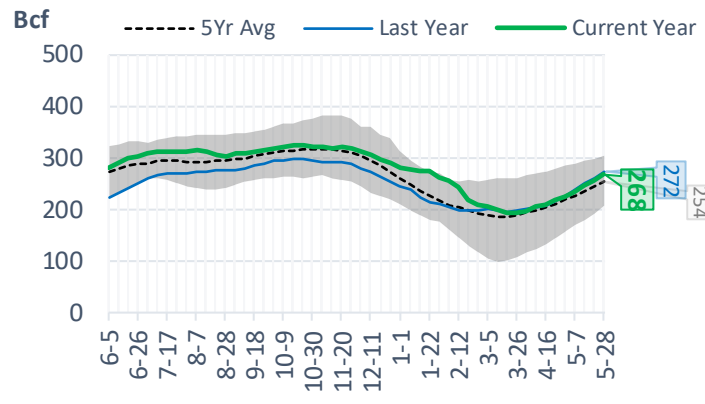
Midwest Storage Levels



Midwest Storage Levels



Pacific Storage Levels



EIA Storage Week Balances

	30-Apr	7-May	14-May	21-May	28-May	4-Jun	WoW	vs. 4W
Lower 48 Dry Production	91.2	91.3	91.5	91.4	92.1	91.7	▼-0.3	▲ 0.2
Canadian Imports	4.6	4.6	4.8	4.6	4.5	3.9	▼-0.6	▼-0.7
L48 Power	26.5	26.6	26.0	26.6	29.8	28.2	▼-1.6	▲ 0.9
L48 Residential & Commercial	16.7	13.9	18.2	10.5	9.4	11.7	▲ 2.4	▼-1.2
L48 Industrial	19.6	19.8	18.1	19.6	19.3	17.3	▼-2.0	▼-1.9
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	2.1	2.3	1.9	2.0	2.0	▲ 0.0	▼ 0.0
L48 Regional Gas Consumption	69.9	67.4	69.5	63.6	65.6	64.3	▼-1.3	▼-2.2
Net LNG Exports	11.4	11.3	11.0	10.4	10.5	11.0	▲ 0.5	▲ 0.2
Total Mexican Exports	6.7	6.7	6.8	6.8	6.7	7.2	▲ 0.4	▲ 0.5
Implied Daily Storage Activity	7.9	10.5	9.0	15.2	13.7	13.2	-0.6	
EIA Reported Daily Storage Activity	8.6	10.1	10.1	16.4	14.0			
Daily Model Error	-0.7	0.4	-1.1	-1.2	-0.3			

Monthly Balances

	2Yr Ago Jun-19	LY Jun-20	Feb-21	Mar-21	Apr-21	May-21	MTD Jun-21	MoM	vs. LY
Lower 48 Dry Production	91.5	87.7	85.2	91.8	91.4	91.6	91.6	▼ 0.0	▼-0.2
Canadian Imports	4.7	4.0	6.3	4.8	4.7	4.5	4.1	▼-0.4	▼-0.6
L48 Power	33.1	34.9	27.7	24.3	25.0	27.1	31.1	▲ 4.0	▲ 6.8
L48 Residential & Commercial	9.0	8.8	47.1	29.3	20.0	13.1	8.3	▼-4.8	▼-21.0
L48 Industrial	22.5	19.9	21.3	19.7	20.3	18.9	18.1	▼-0.8	▼-1.5
L48 Lease and Plant Fuel	5.0	4.8	4.7	5.0	5.0	5.0	5.1	▲ 0.0	▲ 0.0
L48 Pipeline Distribution	2.1	2.2	3.3	2.5	2.2	2.1	1.9	▼-0.1	▼-0.6
L48 Regional Gas Consumption	71.7	70.7	104.1	80.9	72.5	66.2	64.5	▼-1.6	▼-16.3
Net LNG Exports	5.5	4.0	8.6	11.1	11.5	10.8	10.7	▼-0.1	▼-0.4
Total Mexican Exports	5.2	5.5	5.8	6.5	6.7	6.8	7.4	▲ 0.7	▲ 1.0
Implied Daily Storage Activity	13.8	11.5	-27.0	-2.0	5.4	12.3	13.0		
EIA Reported Daily Storage Activity									
Daily Model Error									

Source: Bloomberg, analytix.ai

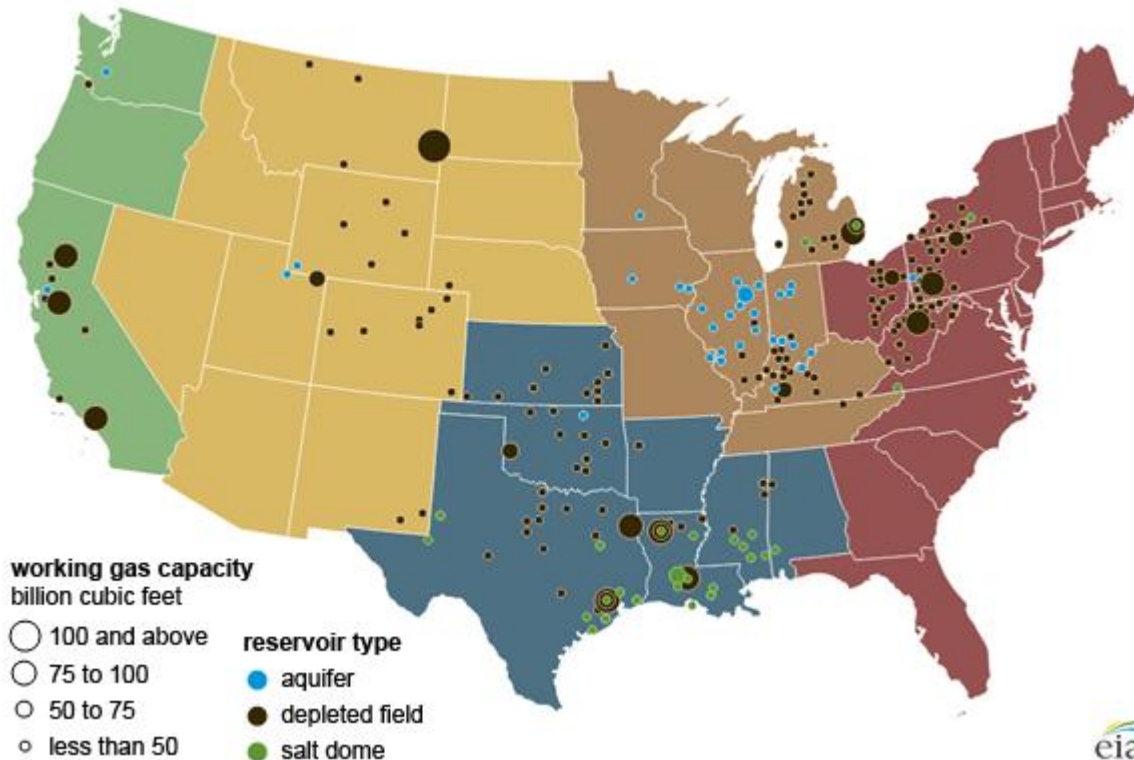
Regional S/D Models Storage Projection

Week Ending 4-Jun

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	12.8	0.9	13.8	96
East	3.3	0.7	4.0	28
Midwest	4.0	-0.9	3.1	22
Mountain	4.7	-3.3	1.4	10
South Central	-1.0	4.7	3.7	26
Pacific	1.8	-0.3	1.6	11

*Adjustment Factor is calculated based on historical regional deltas

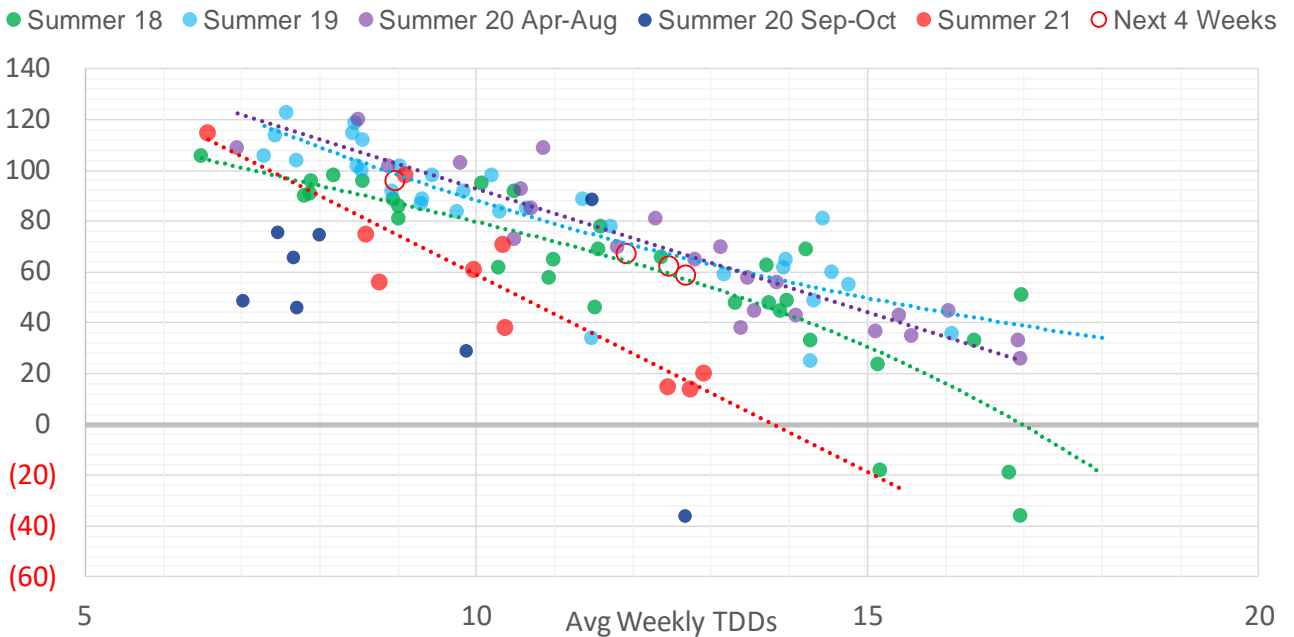
U.S. underground natural gas storage facilities by type (July 2015)



Weather Model Storage Projection

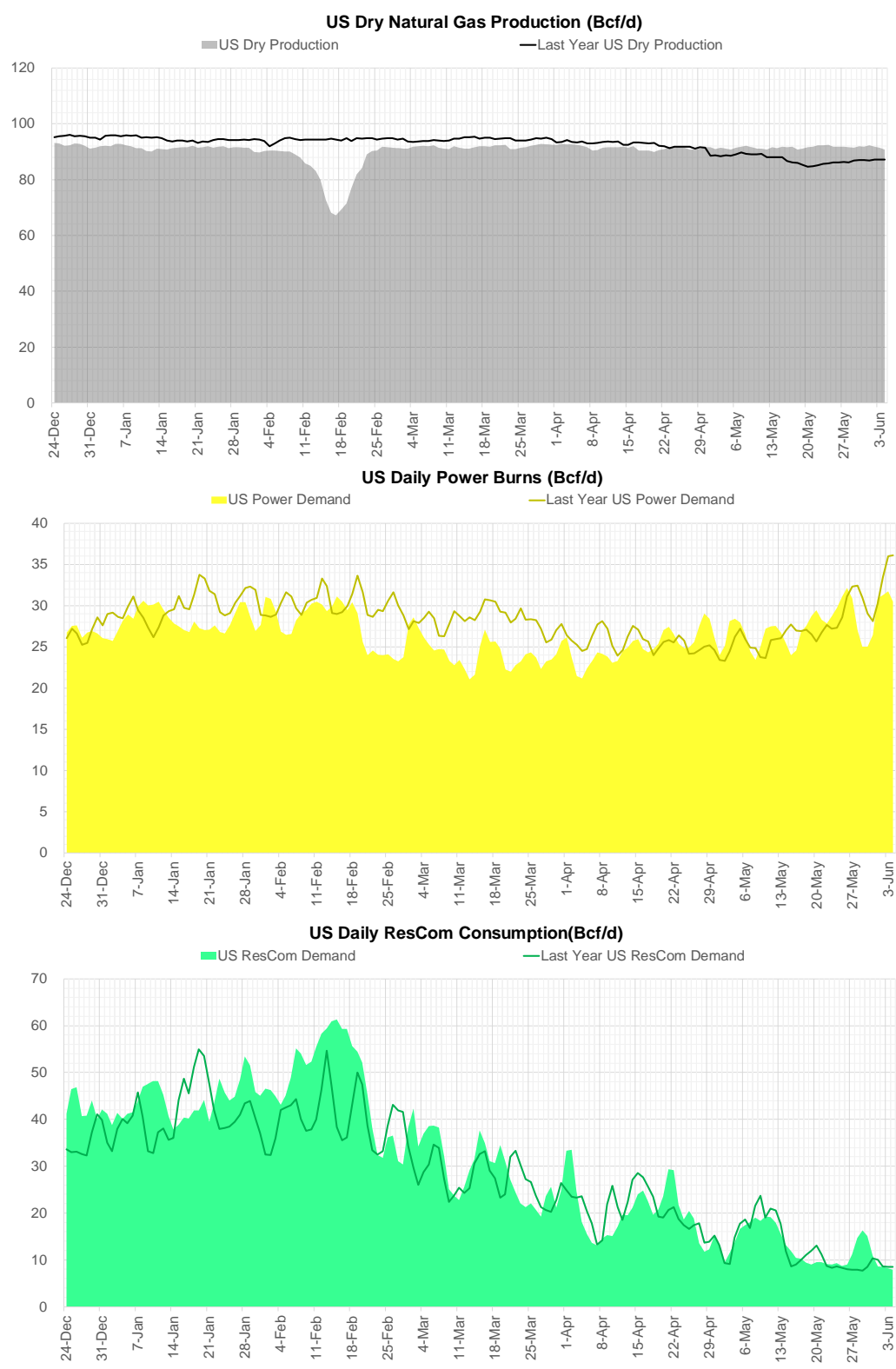
Next report and beyond		
Week Ending	Temp	Week Storage Projection
11-Jun	12.7	59
18-Jun	11.9	68
25-Jun	12.5	63

Weather Storage Model - Next 4 Week Forecast



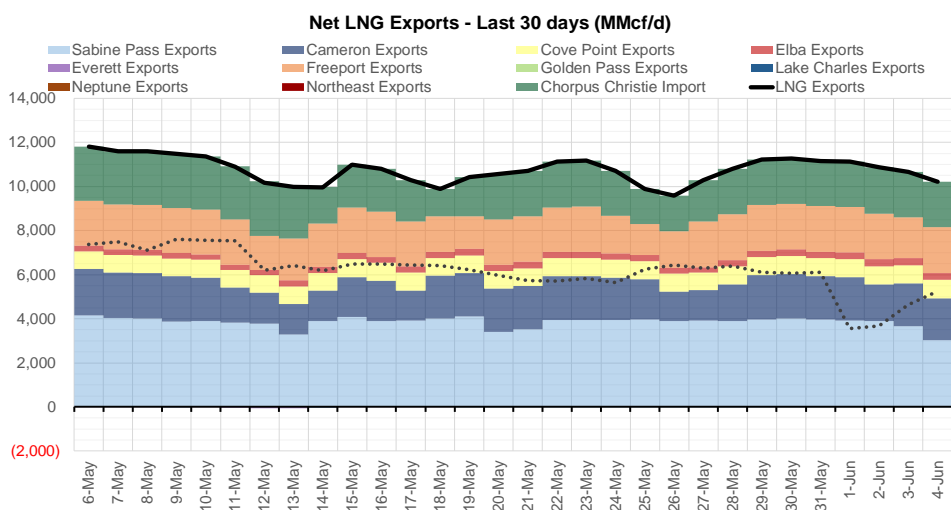
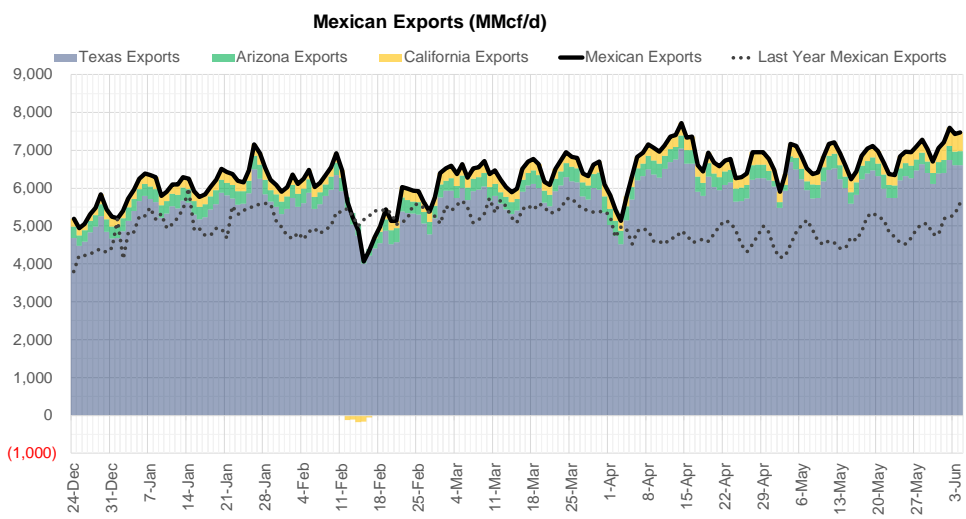
Note: this is not our official end of season forecast. This chart signifies where storage levels end with 10-year normal weather and current market tightness relative to last year

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.



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

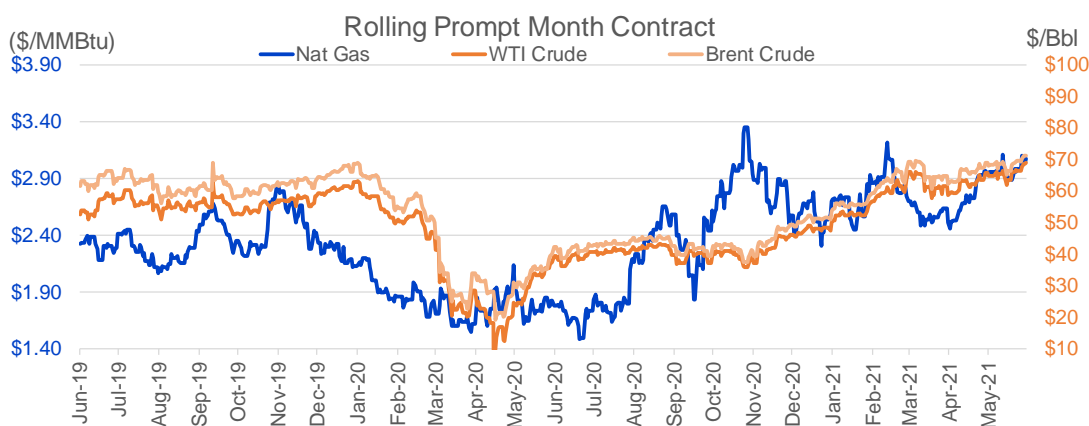
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
7	2021	C	3.50	8958	8	2021	C	3.50	45040
7	2021	P	2.90	3865	10	2021	C	4.00	40578
7	2021	P	2.85	3713	8	2021	C	3.25	34294
7	2021	C	3.10	3344	9	2021	C	4.00	32534
7	2021	C	3.25	3281	7	2021	C	3.25	30925
7	2021	P	2.80	3190	10	2021	C	3.25	30522
7	2021	C	3.15	3137	10	2021	P	2.50	30384
7	2021	P	3.00	3077	10	2021	C	3.50	29042
9	2021	C	4.00	2068	7	2021	P	2.50	28691
7	2021	P	2.75	2041	7	2021	C	3.50	28090
1	2022	P	2.75	1850	10	2021	C	5.00	27241
10	2021	P	2.50	1824	7	2021	C	4.00	26126
4	2023	P	2.25	1775	8	2021	P	2.50	25512
5	2023	P	2.25	1775	8	2021	C	4.00	25259
6	2023	P	2.25	1775	7	2021	P	2.75	25147
7	2023	P	2.25	1775	9	2021	C	3.50	23597
8	2023	P	2.25	1775	10	2021	P	2.00	23046
9	2023	P	2.25	1775	9	2021	P	2.50	22311
10	2023	P	2.25	1775	7	2021	C	3.75	22241
4	2023	P	2.00	1675	7	2021	C	3.00	22116
5	2023	P	2.00	1675	7	2021	P	2.90	21699
6	2023	P	2.00	1675	12	2021	C	4.00	20874
7	2023	P	2.00	1675	7	2021	P	3.00	20741
8	2023	P	2.00	1675	9	2021	P	2.00	20423
9	2023	P	2.00	1675	7	2021	P	2.80	20022
10	2023	P	2.00	1675	9	2021	C	3.25	19983
8	2021	C	3.50	1630	4	2022	C	3.00	19790
4	2023	C	3.00	1625	8	2021	P	2.00	19664
5	2023	C	3.00	1625	8	2021	P	2.25	19585
6	2023	C	3.00	1625	8	2021	C	3.75	19006
7	2023	C	3.00	1625	10	2021	C	3.00	18721
8	2023	C	3.00	1625	11	2021	C	4.00	18161
9	2023	C	3.00	1625	10	2021	P	2.25	17794
10	2023	C	3.00	1625	7	2021	P	2.70	16906
7	2021	C	3.30	1427	3	2022	C	4.00	16900
2	2022	P	2.75	1250	7	2021	P	2.00	16035
3	2022	P	2.25	1250	8	2021	C	3.00	16016
3	2022	P	2.50	1250	10	2021	P	2.75	15770
3	2022	P	2.75	1250	8	2021	P	2.75	15732
7	2021	C	3.20	1221	11	2021	P	2.50	15467
4	2022	C	3.25	1150	7	2021	P	2.85	14924
5	2022	C	3.25	1150	3	2022	C	3.00	14544
6	2022	C	3.25	1150	3	2022	C	5.00	14200
7	2022	C	3.25	1150	10	2022	C	6.00	13996
8	2022	C	3.25	1150	12	2021	P	2.00	13884
9	2022	C	3.25	1150	10	2021	C	4.50	13870
10	2022	C	3.25	1150	9	2021	P	1.90	13732
4	2022	P	2.00	1100	7	2021	P	2.25	13530
4	2022	P	2.00	1100	1	2022	C	4.00	13516
4	2022	P	2.25	1100	5	2022	C	3	13450

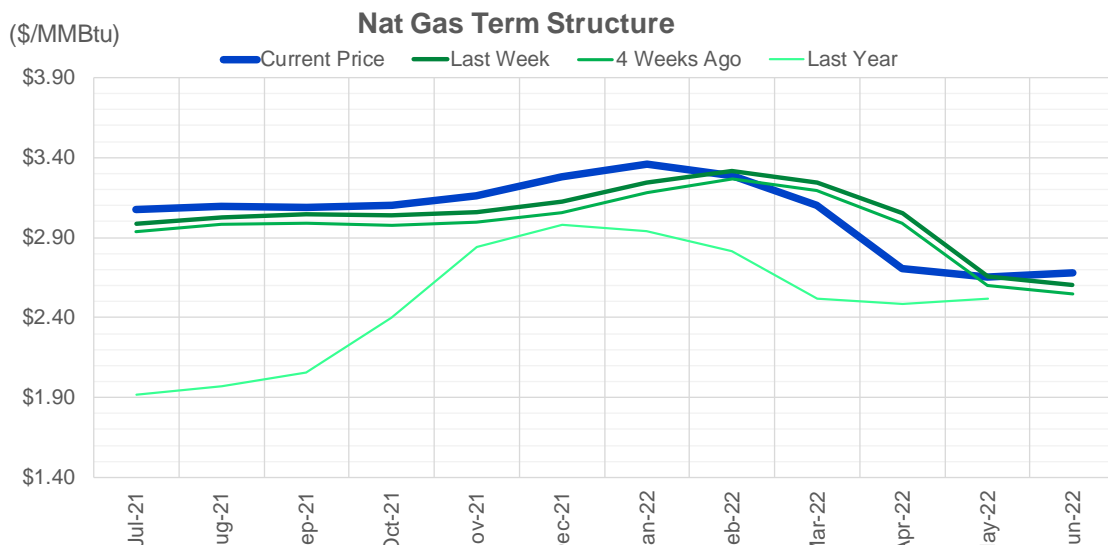
Source: CME, Nasdaq, ICE

Nat Gas Futures Open Interest CME, ICE and Nasdaq Combined

CME Henry Hub Futures (10,000 MMBtu)				ICE Henry Hub Futures Contract Equivalent (10,000 MM			
	Current	Prior	Daily Change		Current	Prior	Daily Change
JUL 21	294019	302859	-8840	JUL 21	99630	99478	152
AUG 21	102754	99985	2769	AUG 21	79864	79334	530
SEP 21	149163	151073	-1910	SEP 21	81208	80845	363
OCT 21	139076	137951	1125	OCT 21	93168	92788	380
NOV 21	77081	76517	564	NOV 21	70590	70820	-230
DEC 21	52835	53258	-423	DEC 21	66066	65689	376
JAN 22	81402	82413	-1011	JAN 22	71949	71649	300
FEB 22	31143	30856	287	FEB 22	58741	58145	596
MAR 22	52905	52862	43	MAR 22	60204	60132	72
APR 22	62200	62297	-97	APR 22	54050	53619	431
MAY 22	39653	40790	-1137	MAY 22	48204	47964	240
JUN 22	20680	21302	-622	JUN 22	44954	44782	173
JUL 22	12521	12311	210	JUL 22	45070	44950	120
AUG 22	11410	11190	220	AUG 22	43293	43114	178
SEP 22	12041	12160	-119	SEP 22	44003	43838	165
OCT 22	31022	30694	328	OCT 22	49232	49455	-223
NOV 22	12614	12133	481	NOV 22	38822	38642	180
DEC 22	11625	11626	-1	DEC 22	43410	43264	146
JAN 23	5952	5636	316	JAN 23	24616	24587	29
FEB 23	2858	2860	-2	FEB 23	22535	22521	15
MAR 23	6340	6345	-5	MAR 23	24801	24756	45
APR 23	7183	7307	-124	APR 23	20656	20616	40
MAY 23	4604	4516	88	MAY 23	20279	20238	41
JUN 23	970	968	2	JUN 23	18810	18770	40
JUL 23	1121	1119	2	JUL 23	18726	18686	41
AUG 23	804	812	-8	AUG 23	18823	18769	54
SEP 23	778	778	0	SEP 23	18263	18221	42
OCT 23	1911	1722	189	OCT 23	19149	19040	109
NOV 23	686	684	2	NOV 23	18473	18432	42
DEC 23	1042	1040	2	DEC 23	19008	18965	43

Source: CME, ICE






	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22
Current Price	\$3.075	\$3.094	\$3.086	\$3.102	\$3.159	\$3.281	\$3.360	\$3.289	\$3.101	\$2.709	\$2.652	\$2.682
Last Week	\$2.984	\$3.027	\$3.045	\$3.040	\$3.057	\$3.122	\$3.241	\$3.319	\$3.246	\$3.051	\$2.656	\$2.606
vs. Last Week	\$0.091	\$0.067	\$0.041	\$0.062	\$0.102	\$0.159	\$0.119	-\$0.030	-\$0.145	-\$0.342	-\$0.004	\$0.076
4 Weeks Ago	\$2.938	\$2.982	\$2.992	\$2.978	\$2.995	\$3.056	\$3.184	\$3.264	\$3.193	\$2.991	\$2.602	\$2.546
vs. 4 Weeks Ago	\$0.137	\$0.112	\$0.094	\$0.124	\$0.164	\$0.225	\$0.176	\$0.025	-\$0.092	-\$0.282	\$0.050	\$0.136
Last Year	\$1.821	\$1.915	\$1.969	\$2.053	\$2.396	\$2.840	\$2.981	\$2.941	\$2.817	\$2.515	\$2.484	\$2.521
vs. Last Year	\$1.254	\$1.179	\$1.117	\$1.049	\$0.763	\$0.441	\$0.379	\$0.348	\$0.284	\$0.194	\$0.168	\$0.161

	Units	Current Price	vs. Last Week	vs. 4 Weeks Ago	vs. Last Year
NatGas Jul21/Oct21	\$/MMBtu	0.030	▼ -0.003	▲ 0.014	▲ 0.027
NatGas Oct21/Nov21	\$/MMBtu	0.062	▼ -0.004	▲ 0.000	▲ 0.016
NatGas Oct21/Jan22	\$/MMBtu	0.269	▲ 0.000	▼ -0.004	▼ -0.015
NatGas Apr22/Oct22	\$/MMBtu	0.035	▼ -0.006	▲ 0.013	▼ -0.022
WTI Crude	\$/Bbl	68.81	▲ 1.960	▲ 4.100	▲ 31.400
Brent Crude	\$/Bbl	71.31	▲ 1.850	▲ 3.220	▲ 31.320
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18	▲ 0.000	▲ 0.000	▲ 0.000
Heating Oil	cents/Gallon	210.17	▲ 4.530	▲ 11.220	▲ 102.760
Propane, Mt. Bel	cents/Gallon	0.91	▲ 0.083	▲ 0.103	▲ 0.406
Ethane, Mt. Bel	cents/Gallon	0.27	▲ 0.007	▲ 0.010	▲ 0.029
Coal, PRB	\$/MTon	12.30	▲ 0.000	▲ 0.000	▲ 0.000
Coal, PRB	\$/MMBtu	0.70			

Source: CME, Bloomberg

Baker Hughes Rig Counts

Rotary Rig Count					
6/4/2021					
Baker Hughes 					
U.S. Breakout Information	This Week	+/-	Last Week	+/-	Year Ago
Oil	359	0	359	153	206
Gas	97	-1	98	21	76
Miscellaneous	0	0	0	-2	2
Directional	25	-2	27	1	24
Horizontal	415	0	415	162	253
Vertical	16	1	15	9	7
Canada Breakout	This Week	+/-	Last Week	+/-	Year Ago
Oil	43	15	28	36	7
Gas	34	0	34	20	14
Major Basin Variances	This Week	+/-	Last Week	+/-	Year Ago
Ardmore Woodford	2	1	1	1	1
Arkoma Woodford	1	0	1	0	1
Barnett	1	0	1	-1	2
Cana Woodford	15	0	15	10	5
DJ-Niobrara	6	0	6	1	5
Eagle Ford	33	0	33	20	13
Granite Wash	1	-2	3	0	1
Haynesville	48	1	47	17	31
Marcellus	28	0	28	0	28
Permian	232	-1	233	91	141
Utica	10	0	10	1	9
Williston	16	0	16	4	12