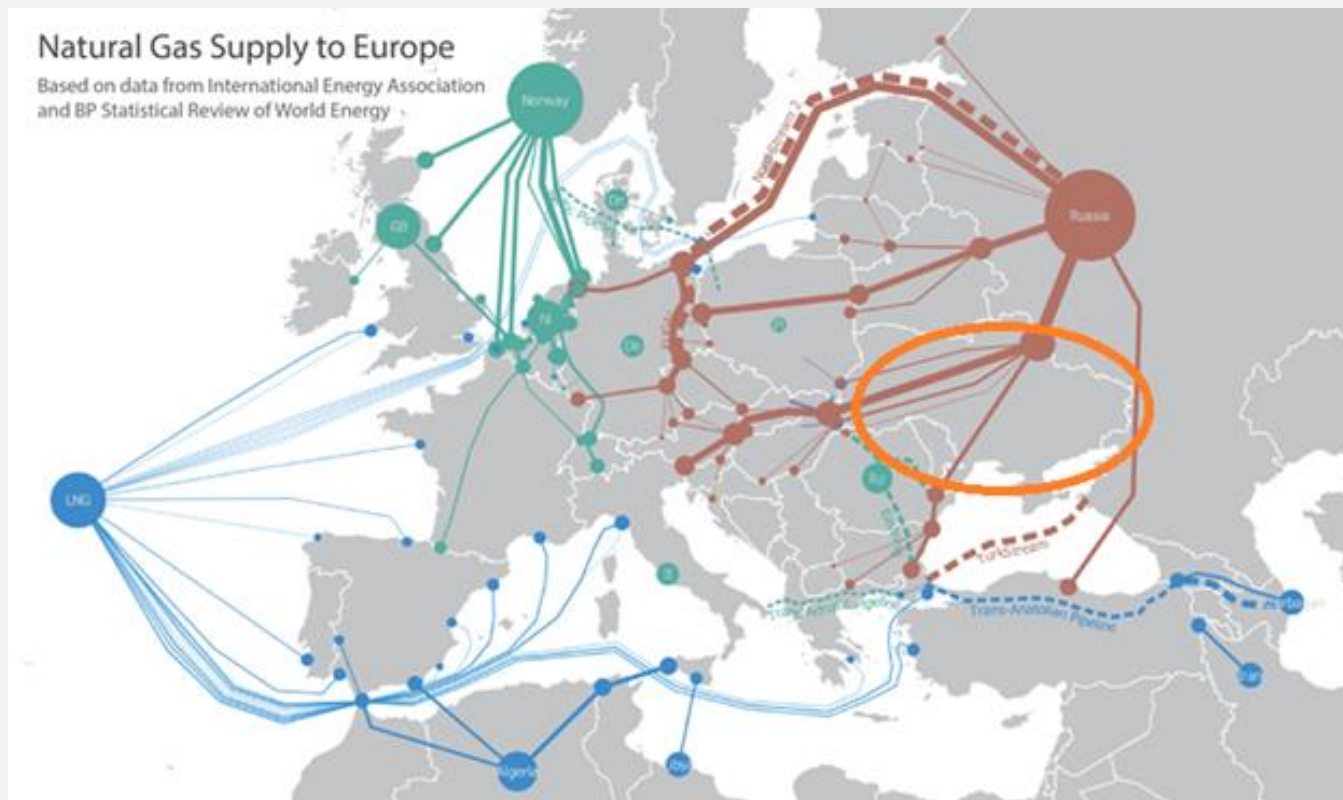


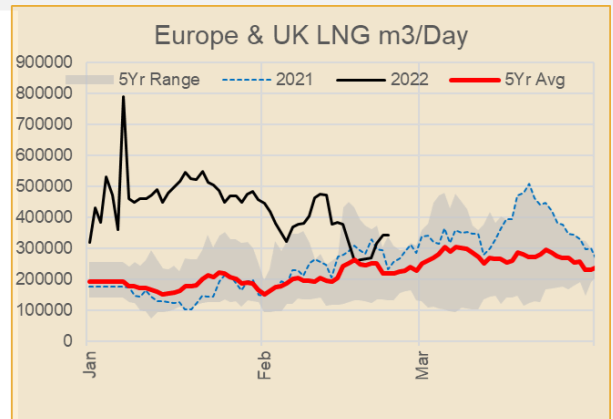
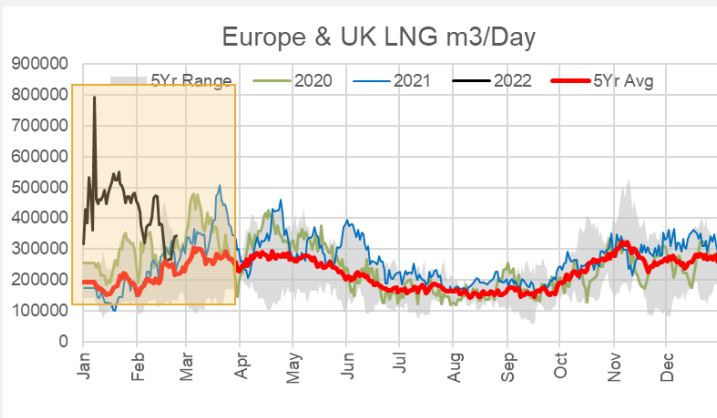
The Russian invasion into Ukraine this week sent energy markets soaring. It's well known that Europe has a high reliance on Russian energy through a vast network of pipelines. Here is a clear map showing the different supply routes into Europe from a Ukrainian Think Tank. With much of it transiting through Ukraine.



“In the hours after the invasion of Ukraine, there were calls for Europe to punish Russia by ending energy purchases. But the immediate response of European energy companies was to buy more natural gas, much of it transported through Ukraine’s pipeline network.” - Bloomberg

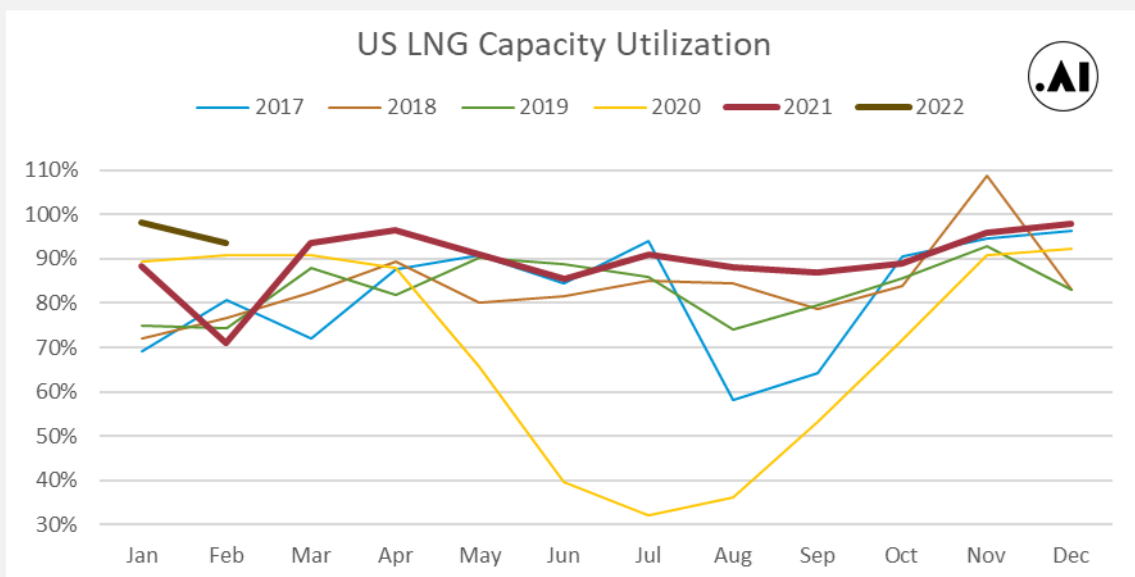
Can LNG simply replace the natural gas purchased from Russia? The simple answer is no. That being said, more US-origin LNG is headed to Europe. In December, approximately 62% of all LNG from the US went to Europe. This is the highest percentage since February 2020, as the Covid pandemic was just starting to impact European markets. According to Refinitiv, AIS ship-tracking data show that the European share of LNG has increased to 74% for January - a new high.

The chart below shows the total LNG send out into Europe and UK from all sources. As seen there was a big bump in Jan as European storage inventories dropped well below normal. Current inventories sit at 30% full, which is 8% behind last year. Ukraine inventories are also tracked, and those are sitting at 18% or 27% behind LY.

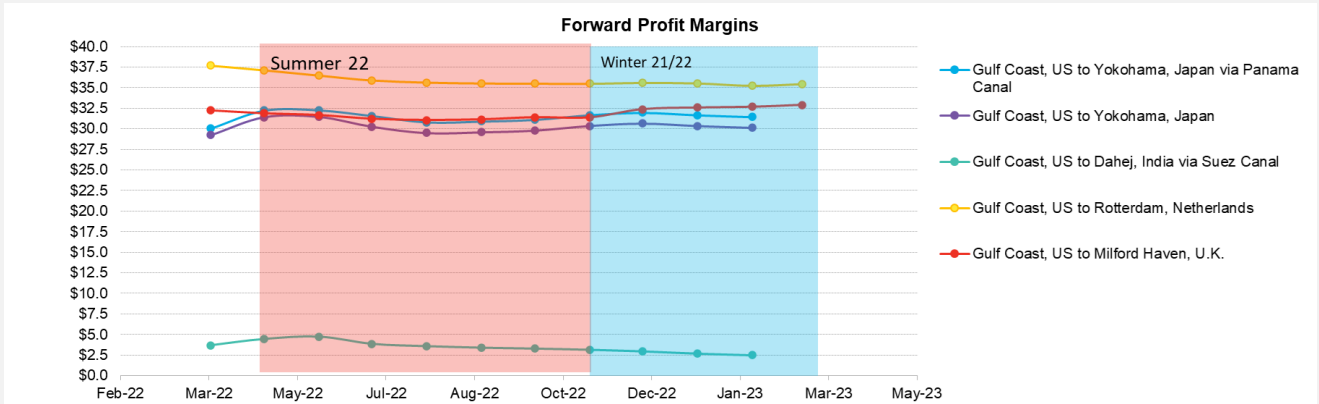


With US LNG helping break the reliance on Russian natural gas, there is not much more support we can offer as current export facilities are already near their maximum capacity.

LNG Utilization over the summer generally decreases. Generally, this is true because the majority of LNG travels to Northern hemisphere destinations which rely on LNG for space heating during the winter months. Last year we saw above normal utilization that averaged 90% through the summer due to a few reasons. The first being Europe and Asia had strong demand (post-COVID) and therefore priced higher to create wide arbs to attract every possible gas molecule. The second is less maintenance with most major maintenance occurring during the 2020 COVID months when no one wanted the LNG. The 90% utilization last year could have been higher, but hurricane season usually impacts plant utilization (lower due to power issues, facility/channel damage, or disruption of tanker traffic). Here is the historical LNG plant utilization since 2017.

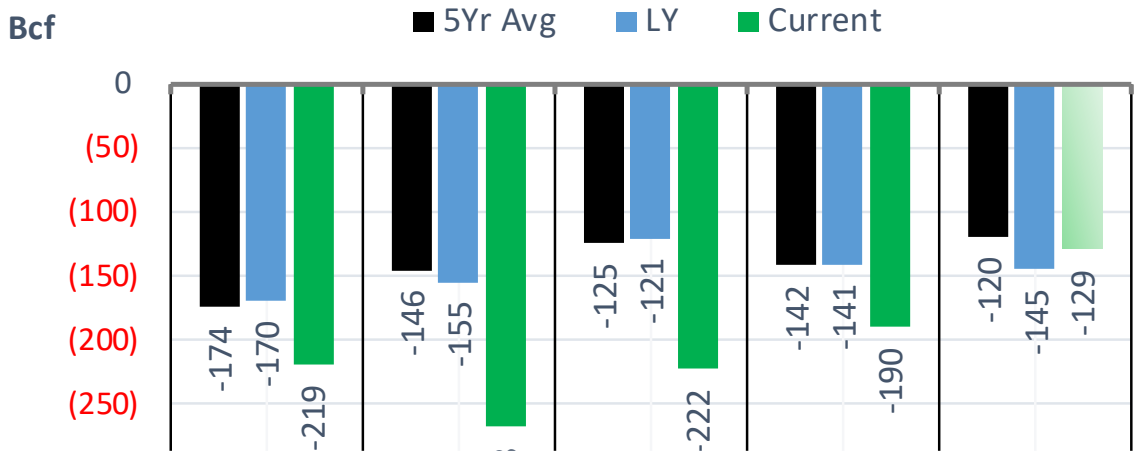


This coming summer, we are expecting utilization to be even higher than summer 2021. This is due to the extremely wide arbs between the US Gulf Coast and every downstream market. The Russia/Ukraine conflict has made Europe the most beneficial destination for US LNG this summer. Netback ranges from \$35 to \$37 for operators sending out LNG.

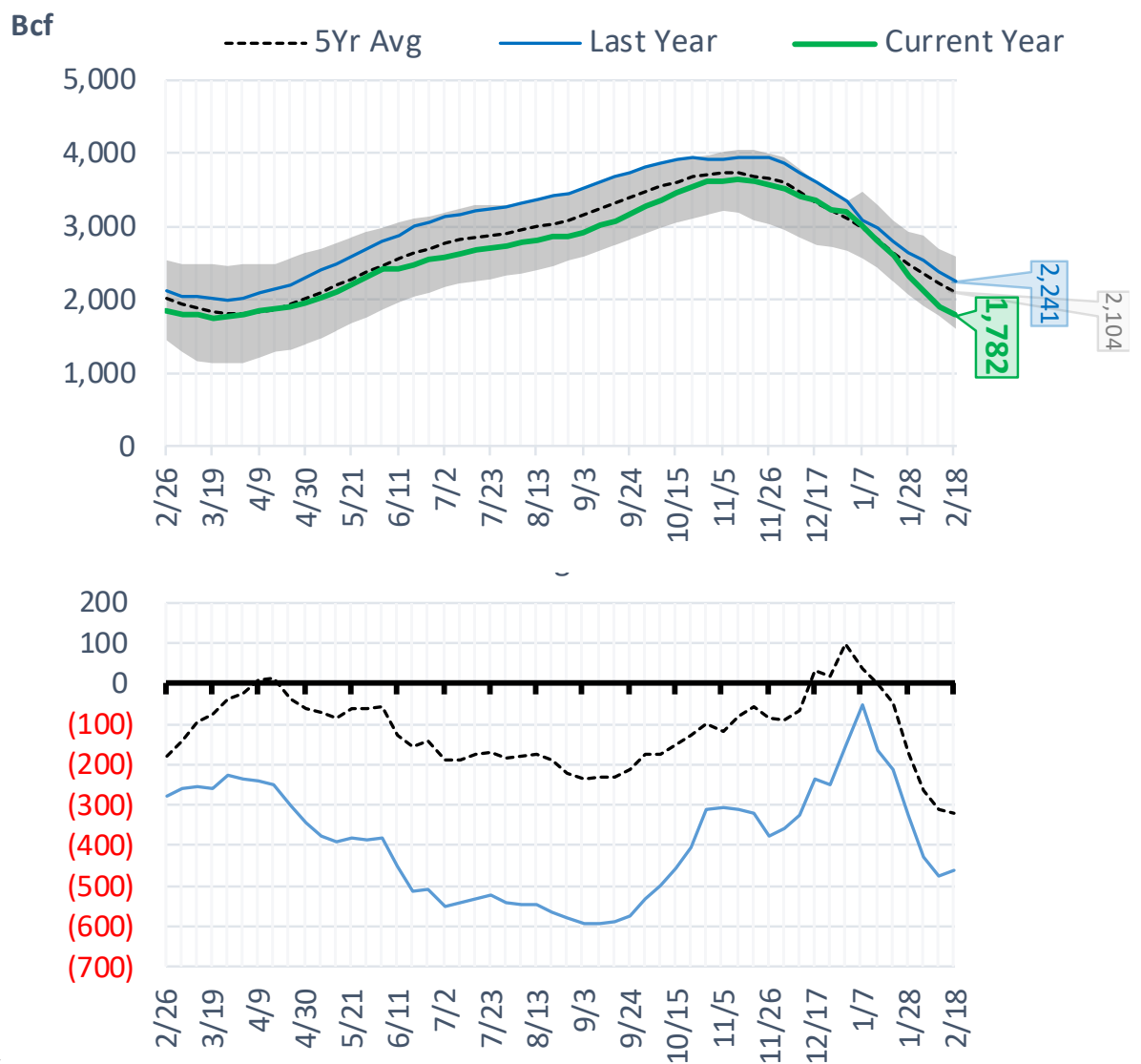


Assuming total LNG plant utilization sits at 92% this coming summer, we assume that total LNG deliveries will average 11.2 Bcf/d. With the added capacity for Sabine T6 (0.69 Bcf/d) and Calcasieu Pass (0.85 Bcf/d), this works out to deliveries being higher by 1.7 Bcf/d summer-on-summer.

Total Lower 48 YoY Weekly Change



Total Lower 48 Storage Levels

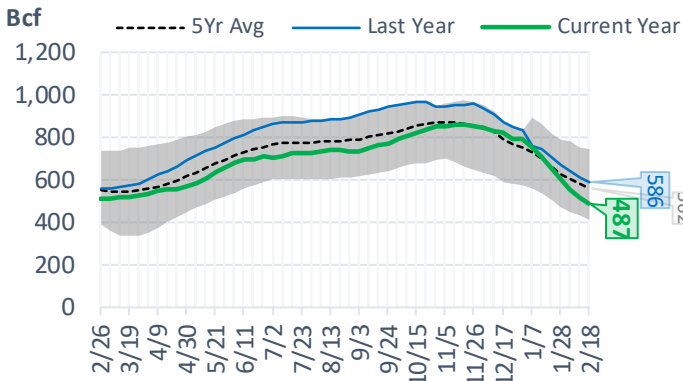


The risk person

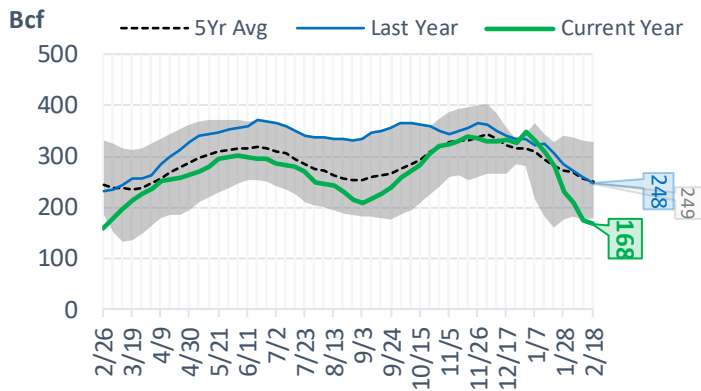
Natural Gas Storage Stats - Last 5 Weeks

Week Ending	Current 18-Feb	Week - 1 11-Feb	Week - 2 4-Feb	Week - 3 28-Jan	Week - 4 21-Jan	Week - 5 14-Jan
Total Lower 48 Storage Level	1782	1911	2101	2323	2591	2810
Weekly Change	-129	-190	-222	-268	-219	-206
vs LY	-459	-475	-426	-325	-212	-163
vs 5Yr Avg	-322	-313	-265	-168	-46	-1
S. Central Salt Storage Level	168	173	207	231	279	308
Weekly Change	-5	-34	-24	-48	-29	-22
vs LY	-80	-87	-65	-55	-27	-18
vs 5Yr Avg	-81	-85	-62	-41	-1	+15
S. Central NonSalt Storage Level	487	516	556	606	658	711
Weekly Change	-29	-40	-50	-52	-53	-48
vs LY	-99	-97	-85	-65	-51	-31
vs 5Yr Avg	-75	-63	-48	-23	-4	+12
Midwest Storage Level	450	496	552	616	701	770
Weekly Change	-46	-56	-64	-85	-69	-65
vs LY	-155	-159	-151	-119	-75	-55
vs 5Yr Avg	-87	-82	-74	-54	-17	-3
East Storage Level	396	435	485	541	609	669
Weekly Change	-39	-50	-56	-68	-60	-61
vs LY	-100	-104	-92	-68	-46	-33
vs 5Yr Avg	-44	-47	-40	-21	+4	+16
Mountain Storage Level	105	114	121	133	143	151
Weekly Change	-9	-7	-12	-10	-8	-8
vs LY	-6	-6	-8	-5	-2	-3
vs 5Yr Avg	-14	-11	-11	-7	-5	-5
Pacific Storage Level	176	177	181	196	201	201
Weekly Change	-1	-4	-15	-5	0	-3
vs LY	-21	-22	-23	-14	-12	-23
vs 5Yr Avg	-21	-26	-28	-22	-24	-35

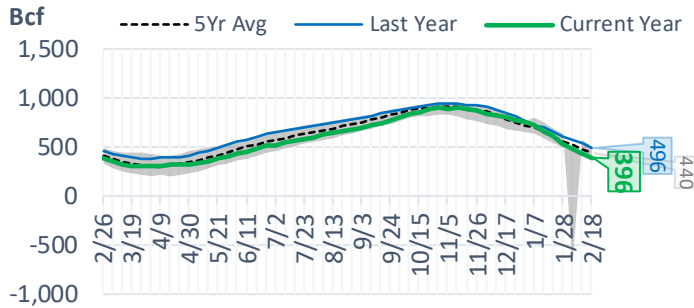
NonSalt Storage Levels



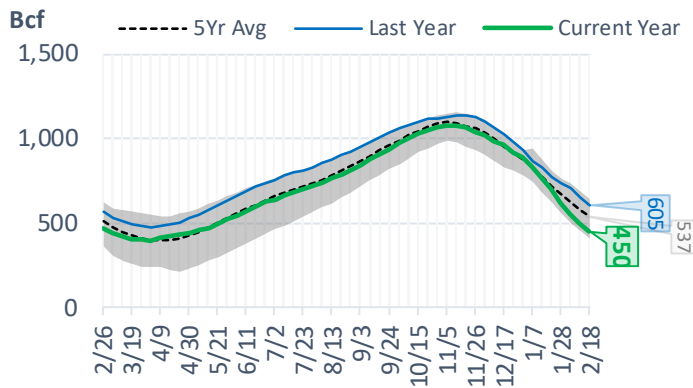
Salt Storage Levels



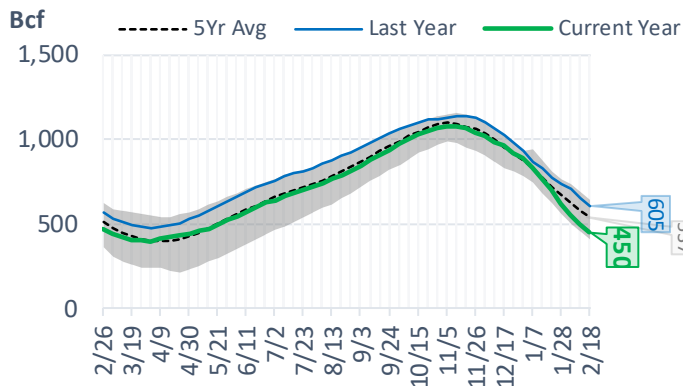
East Storage Levels



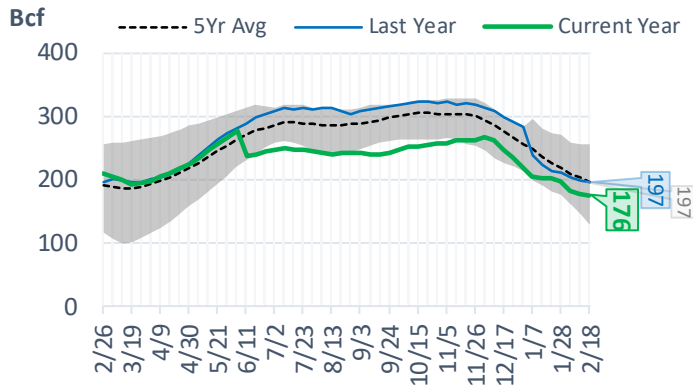
Midwest Storage Levels



Midwest Storage Levels



Pacific Storage Levels



EIA Storage Week Balances

	21-Jan	28-Jan	4-Feb	11-Feb	18-Feb	25-Feb	WoW	vs. 4W
Lower 48 Dry Production	94.2	94.1	94.0	91.6	95.6	94.3	▼ -1.3	▲ 0.5
Canadian Imports	7.0	7.1	7.1	7.1	6.2	6.3	▲ 0.0	▼ -0.6
L48 Power	30.3	32.1	29.8	29.4	26.8	27.1	▲ 0.3	▼ -2.5
L48 Residential & Commercial	47.1	52.8	48.2	45.1	39.6	40.5	▲ 0.9	▼ -5.9
L48 Industrial	28.0	27.6	28.2	25.4	26.8	25.6	▼ -1.3	▼ -1.4
L48 Lease and Plant Fuel	5.2	5.2	5.2	5.0	5.2	5.2	▼ -0.1	▲ 0.0
L48 Pipeline Distribution	3.8	4.1	3.7	3.5	3.1	3.2	▲ 0.1	▼ -0.4
L48 Regional Gas Consumption	114.3	121.7	115.1	108.4	101.6	101.5	▼ -0.1	▼ -10.2
Net LNG Exports	12.9	12.5	12.1	12.4	13.0	11.7	▼ -1.3	▼ -0.8
Total Mexican Exports	6.4	6.5	6.4	6.1	6.0	6.1	▲ 0.1	▼ -0.1
Implied Daily Storage Activity	-32.4	-39.5	-32.5	-28.2	-18.8	-18.7	0.1	
EIA Reported Daily Storage Activity	-31.3	-38.3	-31.7	-27.1	-18.4			
Daily Model Error	-1.1	-1.2	-0.8	-1.1	-0.4			

Monthly Balances

	2Yr Ago Feb-20	LY Feb-21	Oct-21	Nov-21	Dec-21	Jan-22	MTD Feb-22	MoM	vs. LY
Lower 48 Dry Production	94.2	84.3	94.3	95.6	96.5	94.4	93.6	▼ -0.9	▲ 9.3
Canadian Imports	5.3	6.4	5.4	5.3	4.8	6.7	6.6	▼ -0.1	▲ 0.2
L48 Power	30.2	27.6	30.5	29.1	28.4	30.8	27.9	▼ -2.8	▲ 0.3
L48 Residential & Commercial	40.6	48.1	12.4	27.1	32.6	48.3	42.1	▼ -6.2	▼ -6.0
L48 Industrial	25.1	21.1	21.1	24.3	25.1	27.7	26.1	▼ -1.5	▲ 5.1
L48 Lease and Plant Fuel	5.1	4.6	5.2	5.2	5.3	5.2	5.1	▼ -0.1	▲ 0.5
L48 Pipeline Distribution	3.5	3.6	2.4	2.9	3.0	3.8	3.3	▼ -0.5	▼ -0.3
L48 Regional Gas Consumption	104.5	104.9	71.6	88.7	94.4	115.8	104.6	▼ -11.2	▼ -0.4
Net LNG Exports	8.5	8.4	10.6	11.4	12.1	12.4	12.4	▼ 0.0	▲ 3.9
Total Mexican Exports	5.2	5.7	6.6	6.1	6.2	6.3	6.1	▼ -0.2	▲ 0.4
Implied Daily Storage Activity	-18.7	-28.4	10.9	-5.3	-11.4	-33.3	-22.9		
EIA Reported Daily Storage Activity									
Daily Model Error									

Source: Bloomberg, analytix.ai

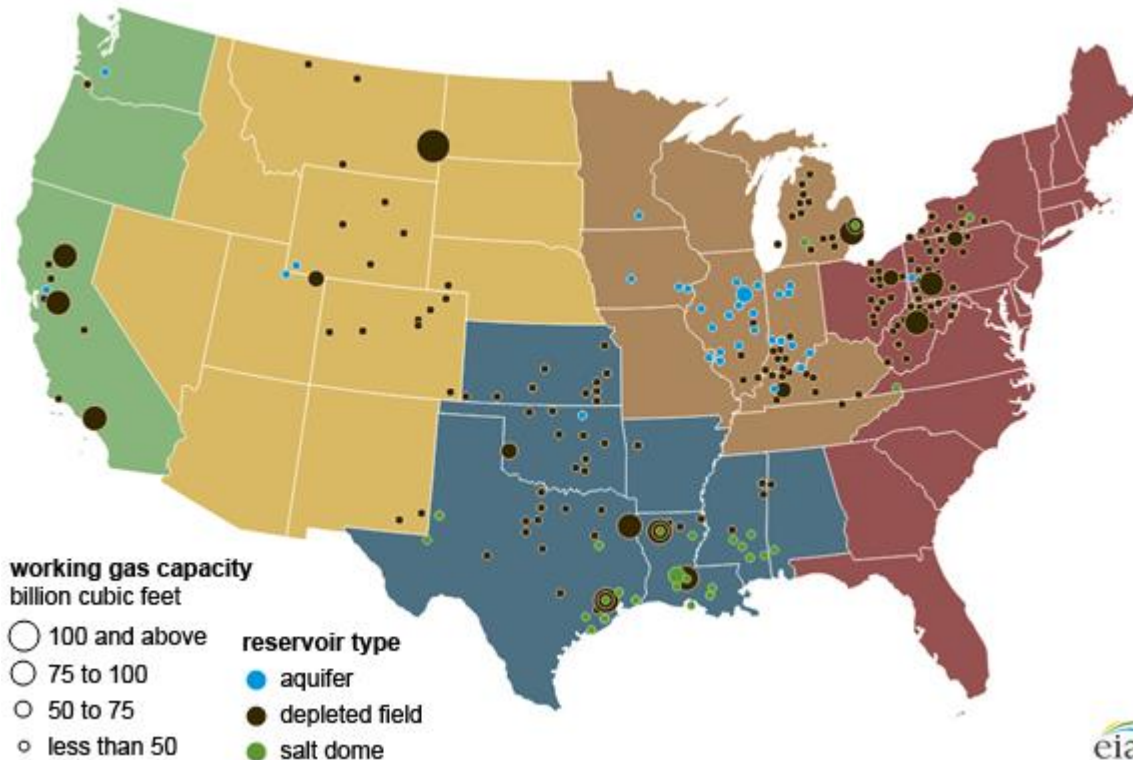
Regional S/D Models Storage Projection

Week Ending 25-Feb

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	-18.6	0.6	-18.0	-126
East	-6.2	2.3	-3.9	-28
Midwest	-6.4	-0.3	-6.7	-47
Mountain	2.5	-3.4	-0.9	-7
South Central	-7.5	2.8	-4.6	-32
Pacific	-1.0	-0.7	-1.8	-12

*Adjustment Factor is calculated based on historical regional deltas

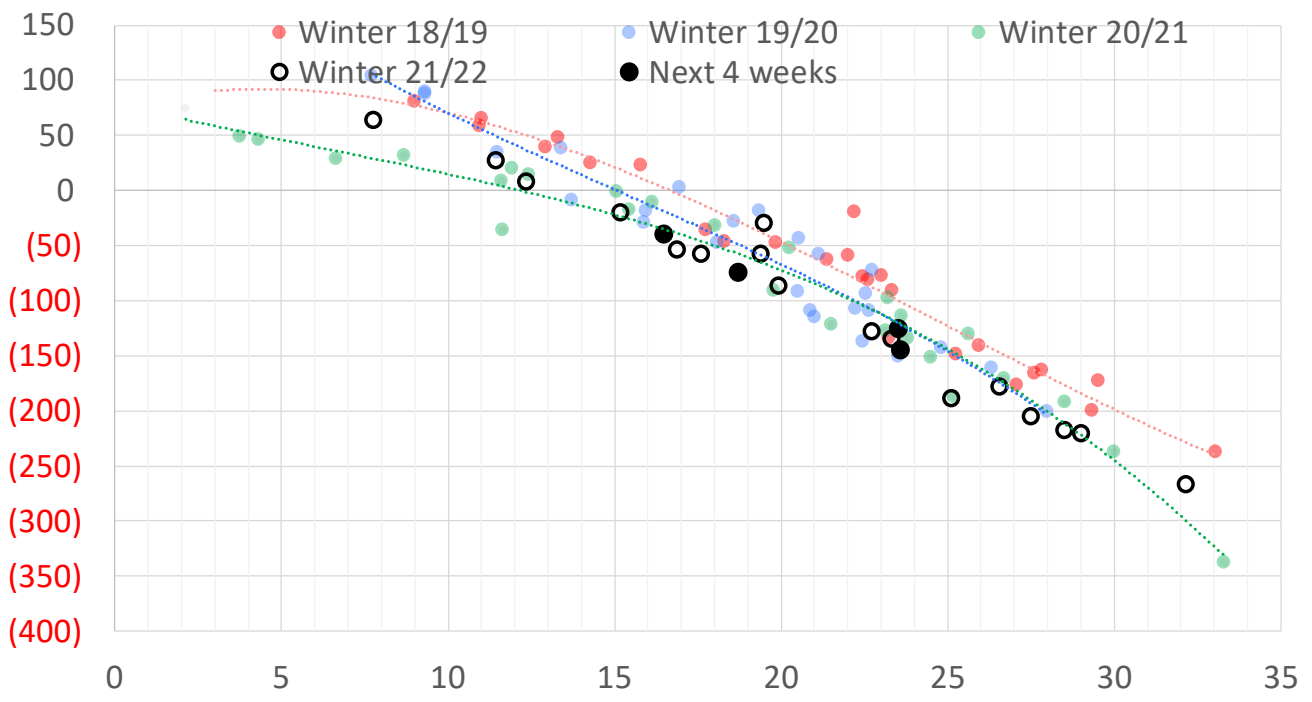
U.S. underground natural gas storage facilities by type (July 2015)



Weather Model Storage Projection

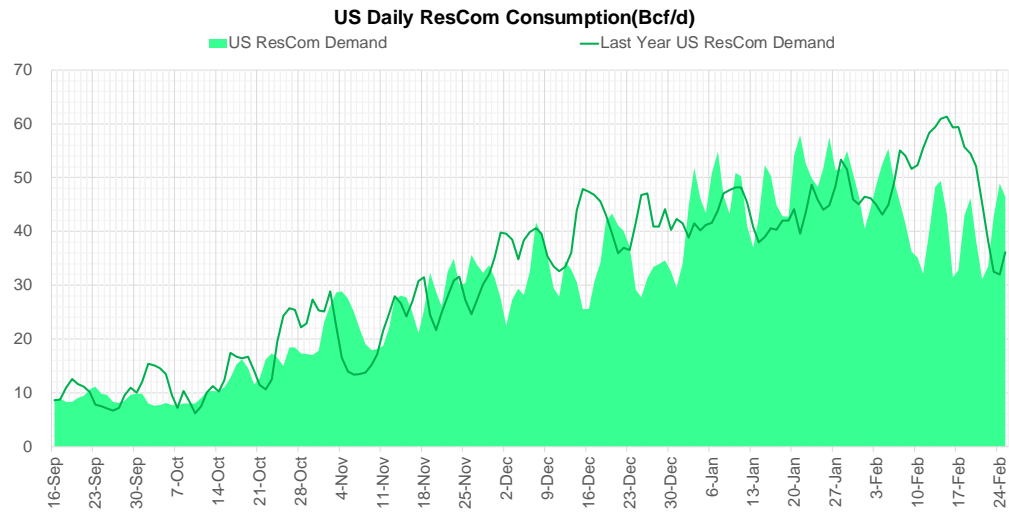
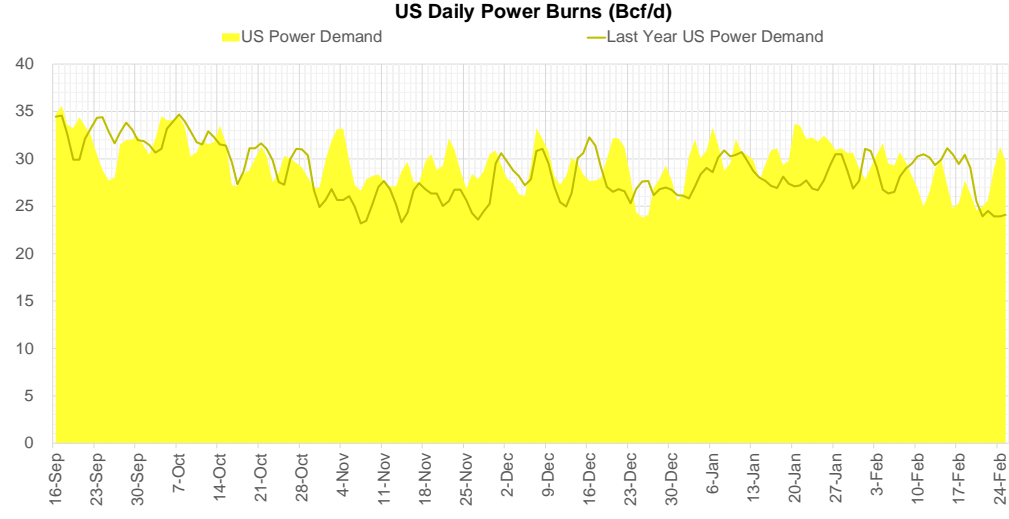
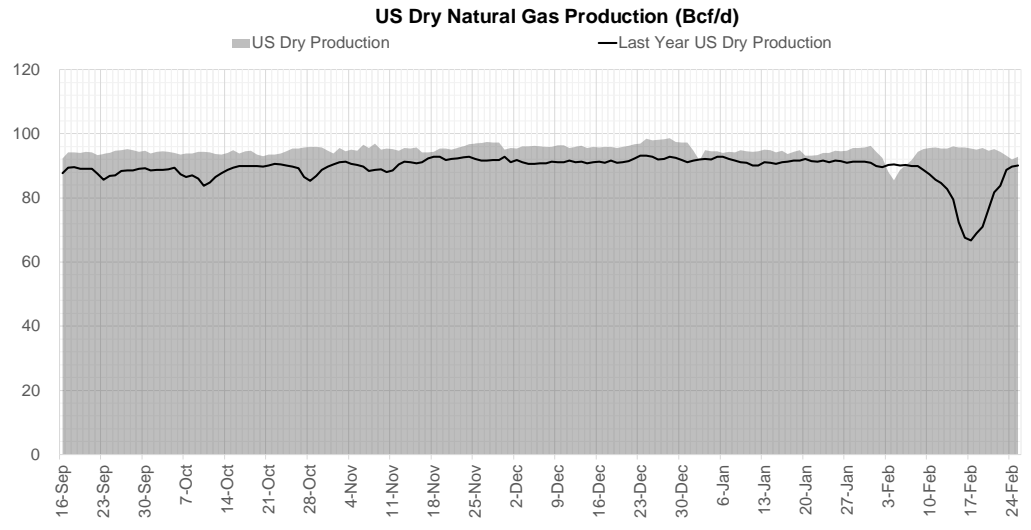
Next report and beyond		
Week Ending	GWDDs	Week Storage Projection
25-Feb	24	-126
04-Mar	24	-145
11-Mar	19	-74
18-Mar	16	-40

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

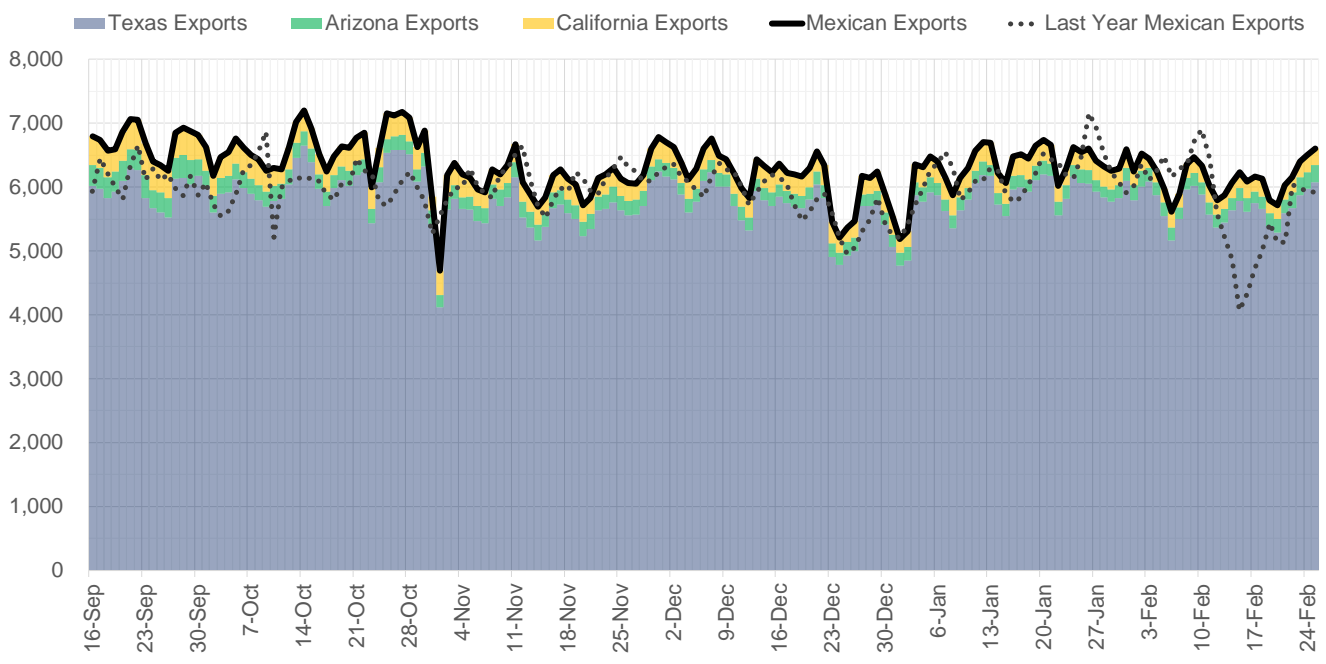
Supply – Demand Trends



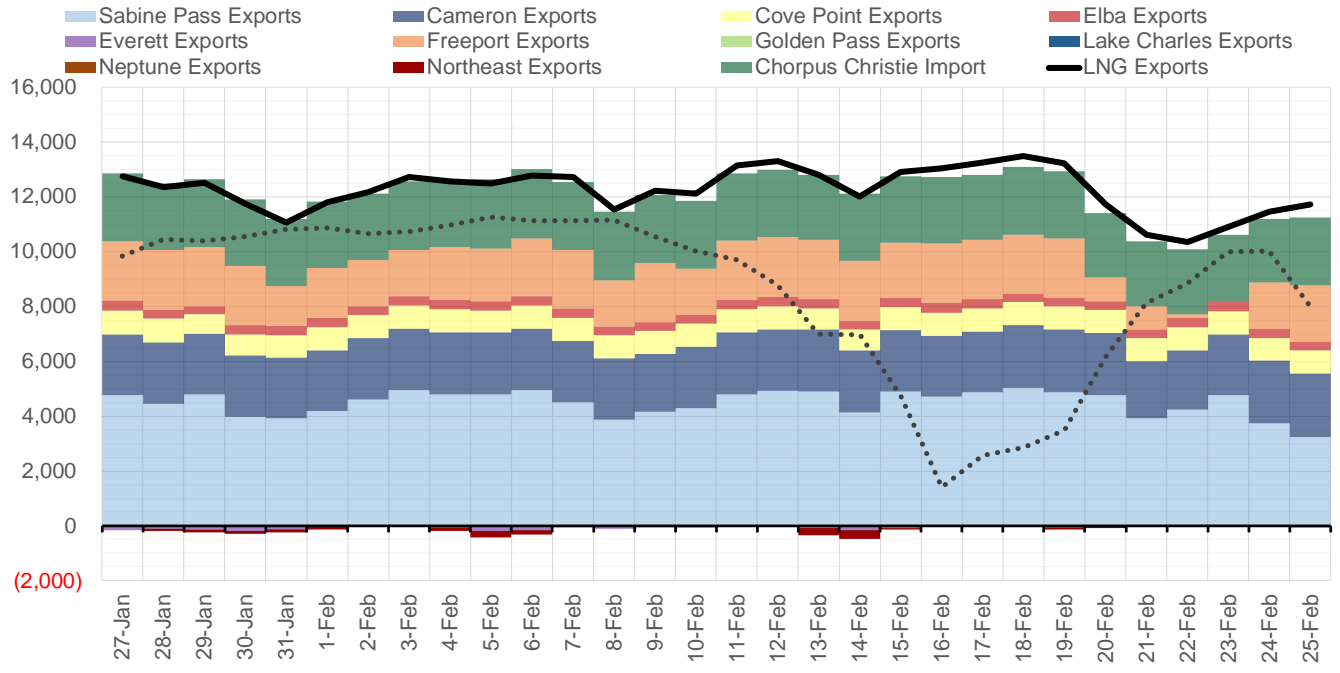
Source: Bloomberg

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.

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

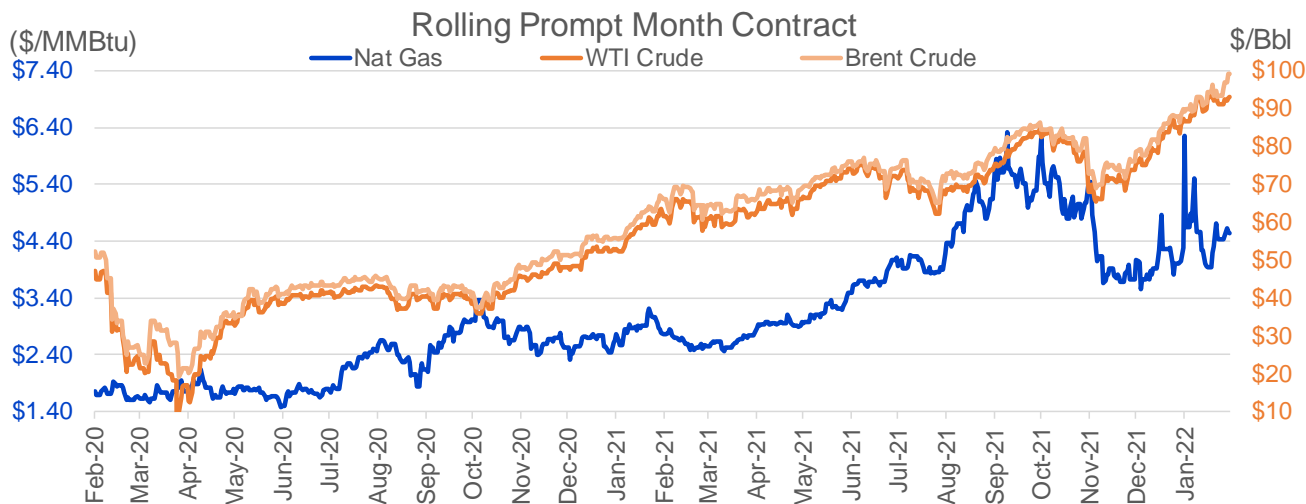
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
4	2022	P	4.00	15977	4	2022	P	3.50	32929
4	2022	P	3.75	12762	10	2022	C	6.00	27897
4	2022	P	4.50	8514	4	2022	P	3.00	27714
4	2022	C	5.00	5241	4	2022	C	5.00	26602
5	2022	C	6.00	4534	10	2022	C	5.00	23179
4	2022	P	3.50	4509	5	2022	P	3.00	22215
6	2022	C	5.00	3924	4	2022	C	6.00	21799
10	2022	P	3.00	3825	6	2022	C	6.00	21493
4	2022	P	4.25	3783	5	2022	C	5.00	21039
5	2022	C	7.00	3106	5	2022	P	2.50	19877
10	2022	P	3.60	3025	6	2022	C	5.00	19701
4	2022	C	5.50	2739	5	2022	C	6.00	18900
4	2022	C	6.00	2727	4	2022	C	4.50	18454
6	2022	P	3.50	2641	6	2022	P	3.00	17599
6	2022	C	6.00	2589	4	2022	C	3.00	17511
5	2022	P	4.00	2512	5	2022	P	2.75	17339
4	2022	C	4.75	2361	12	2022	C	5.00	17286
5	2022	C	5.00	2345	4	2022	P	2.50	17193
4	2022	P	4.75	2193	9	2022	C	6.00	17190
10	2022	P	3.50	2191	10	2022	P	3.00	17180
4	2022	C	7.00	2118	4	2022	P	3.75	17115
10	2022	P	2.90	2000	7	2022	P	3.25	16586
10	2022	C	5.00	1908	4	2022	P	4.00	16504
6	2022	P	4.00	1837	4	2022	C	5.50	16483
8	2022	C	5.50	1825	7	2022	C	6.00	16342
10	2022	C	5.60	1500	4	2022	C	8.00	15488
6	2022	C	4.50	1477	4	2022	C	4.75	14896
7	2022	C	5.00	1468	8	2022	C	6.00	14857
7	2022	C	6.00	1415	4	2022	P	3.25	14838
5	2022	C	8.00	1373	8	2022	P	3.00	14791
4	2022	C	8.00	1315	4	2022	C	7.00	14744
4	2022	P	3.70	1313	6	2022	C	4.50	14662
4	2022	P	3.95	1301	7	2022	P	3.00	14587
8	2022	C	5.00	1287	1	2023	C	5.00	14404
9	2022	C	5.00	1250	10	2022	P	2.00	13921
4	2022	C	6.50	1140	5	2022	C	3.00	13733
4	2022	P	3.90	1109	10	2022	C	7.00	13628
5	2022	P	4.25	1109	9	2022	P	3.00	13623
4	2022	P	5.00	1108	12	2022	C	6.25	13593
8	2022	C	8.00	1100	4	2022	C	4.00	13574
1	2023	C	6.00	1100	6	2022	C	3.00	13438
5	2022	C	5.50	1074	5	2022	C	4.00	13420
9	2022	C	8.00	1060	7	2022	C	5.00	13370
6	2022	C	8.00	1028	5	2022	C	7.00	13346
7	2022	C	8.00	1001	7	2022	C	3.00	13230
10	2022	C	8.00	1000	8	2022	C	3.00	13226
1	2023	C	4.50	1000	9	2022	C	3.00	13225
3	2023	C	20.00	1000	5	2022	P	3.50	13124
4	2022	C	5.30	989	10	2022	C	3.00	13114
					6	2022	P	3.5	12926.5

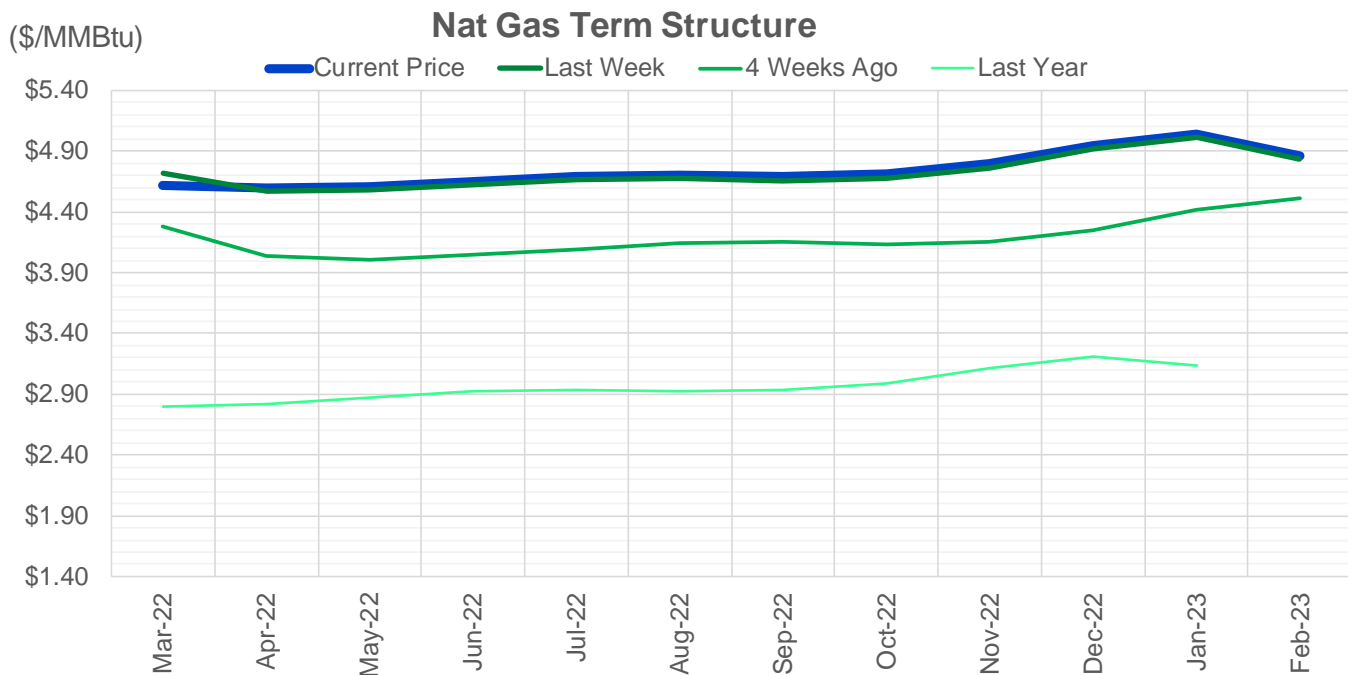
Source: CME, Nasdaq, ICE

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
APR 22	403	2556	-2153	APR 22	77434	72420	5014
MAY 22	150107	147480	2627	MAY 22	85776	83925	1851
JUN 22	185349	181913	3436	JUN 22	81272	81609	-337
JUL 22	73317	71685	1632	JUL 22	72049	72253	-204
AUG 22	85252	83938	1314	AUG 22	66592	66683	-91
SEP 22	44661	44031	630	SEP 22	62033	61540	493
OCT 22	70591	69914	677	OCT 22	63216	63132	85
NOV 22	83266	81656	1610	NOV 22	69203	68956	247
DEC 22	43999	44857	-858	DEC 22	55678	55394	284
JAN 23	41917	42108	-191	JAN 23	65655	65600	55
FEB 23	60949	60216	733	FEB 23	59540	59180	361
MAR 23	22817	22684	133	MAR 23	45369	45190	179
APR 23	43454	43547	-93	APR 23	49194	48690	505
MAY 23	34323	34244	79	MAY 23	47894	47986	-92
JUN 23	21972	22202	-230	JUN 23	42259	42006	253
JUL 23	13003	12855	148	JUL 23	39135	39029	106
AUG 23	10462	11012	-550	AUG 23	38907	38801	106
SEP 23	7370	7881	-511	SEP 23	38752	38546	206
OCT 23	10715	11019	-304	OCT 23	37992	37883	109
NOV 23	21653	19945	1708	NOV 23	42180	42066	114
DEC 23	10454	9907	547	DEC 23	40498	40355	143
JAN 24	13804	13734	70	JAN 24	35281	35188	93
FEB 24	13312	13388	-76	FEB 24	28638	28460	178
MAR 24	3239	3243	-4	MAR 24	19705	19645	60
APR 24	13010	12759	251	APR 24	25683	25597	86
MAY 24	6733	6696	37	MAY 24	19536	19259	277
JUN 24	2302	2288	14	JUN 24	18523	18433	90
JUL 24	1099	1099	0	JUL 24	18362	18295	67
AUG 24	900	888	12	AUG 24	19178	19080	98
SEP 24	1015	1014	1	SEP 24	19016	18913	103

Source: CME, ICE






	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23
Current Price	\$4.623	\$4.593	\$4.605	\$4.647	\$4.697	\$4.705	\$4.688	\$4.709	\$4.795	\$4.944	\$5.040	\$4.862
Last Week	\$4.717	\$4.572	\$4.582	\$4.623	\$4.671	\$4.678	\$4.659	\$4.679	\$4.766	\$4.918	\$5.015	\$4.833
vs. Last Week	-\$0.094	\$0.021	\$0.023	\$0.024	\$0.026	\$0.027	\$0.029	\$0.030	\$0.029	\$0.026	\$0.025	\$0.029
4 Weeks Ago	\$4.277	\$4.036	\$4.011	\$4.044	\$4.090	\$4.144	\$4.154	\$4.135	\$4.158	\$4.247	\$4.415	\$4.510
vs. 4 Weeks Ago	\$0.346	\$0.557	\$0.594	\$0.603	\$0.607	\$0.561	\$0.534	\$0.574	\$0.637	\$0.697	\$0.625	\$0.352
Last Year	\$2.854	\$2.795	\$2.822	\$2.871	\$2.921	\$2.937	\$2.926	\$2.937	\$2.992	\$3.118	\$3.208	\$3.135
vs. Last Year	\$1.769	\$1.798	\$1.783	\$1.776	\$1.776	\$1.768	\$1.762	\$1.772	\$1.803	\$1.826	\$1.832	\$1.727

	Units	Current Price	vs. Last Week	Ago	vs. Last Year
NatGas Jul21/Oct21	\$/MMBtu	2.224	▲ 0.000	▲ 0.000	▲ 2.208
NatGas Oct21/Nov21	\$/MMBtu	0.361	▲ 0.000	▲ 0.000	▲ 0.306
NatGas Oct21/Jan22	\$/MMBtu	-1.817	▲ 0.000	▲ 0.000	▼ -2.085
NatGas Apr22/Oct22	\$/MMBtu	0.120	▼ -0.013	▼ -0.006	▲ 0.075
WTI Crude	\$/Bbl	92.81	▲ 1.050	▲ 6.200	▲ 29.280
Brent Crude	\$/Bbl	99.08	▲ 6.110	▲ 9.740	▲ 32.200
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18	▲ 0.000	▲ 0.000	▲ 0.000
Heating Oil	cents/Gallon	289.69	▲ 11.070	▲ 10.240	▲ 99.030
Propane, Mt. Bel	cents/Gallon	1.32	▲ 0.038	▲ 0.157	▲ 0.403
Ethane, Mt. Bel	cents/Gallon	0.40	▲ 0.008	▲ 0.027	▲ 0.134
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					
2/25/2022					
Baker Hughes 					
U.S. Breakout Information	This Week	+/-	Last Week	+/-	Year Ago
Oil	522	2	520	213	309
Gas	127	3	124	35	92
Miscellaneous	1	0	1	0	1
Directional	31	0	31	13	18
Horizontal	593	4	589	234	359
Vertical	26	1	25	1	25
Canada Breakout	This Week	+/-	Last Week	+/-	Year Ago
Oil	138	3	135	46	92
Gas	85	0	85	14	71
Miscellaneous	1	1	0	1	0
Major Basin Variances	This Week	+/-	Last Week	+/-	Year Ago
Ardmore Woodford	1	0	1	1	0
Arkoma Woodford	3	0	3	3	0
Barnett	3	0	3	2	1
Cana Woodford	28	2	26	19	9
DJ-Niobrara	14	0	14	7	7
Eagle Ford	54	0	54	25	29
Granite Wash	3	-2	5	3	0
Haynesville	61	3	58	15	46
Marcellus	36	0	36	5	31
Mississippian	1	1	0	1	0
Permian	309	3	306	101	208
Utica	11	0	11	4	7
Williston	34	0	34	20	14