

This week we once again take a look at European natural gas storage levels. Lots has changed over the past two months as storage levels start to comeback to the 5Yr range. Lower prices across Europe look to be working in correcting the storage surplus left after winter.

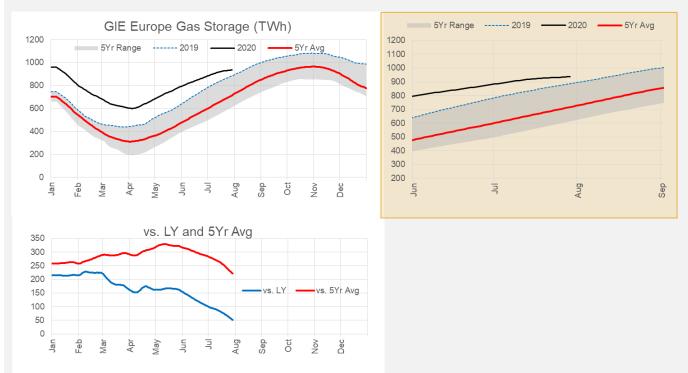
At the beginning of June, the storage levels were 796 TWh, or 149 TWh ahead of last year. Fastforward to today and the current European storage level is 945 TWh, or 48 TWh ahead of last year.

Curent Storage Level = 945 TWh (85% full)

- +48 TWh or +3% YoY
- +221 TWh or +30% vs 5Yr Averge.

[Note: 1 TWh = 3.41 Bcf]

The surplus has dropped drastically, and it now looks like European natural storage will not be hitting capacity.



The next table take the same data but breaks it up by country. It shows where the storage is and how full it is. The major storage sites sit in Germany, Netherlands, France and Italy. Ukraine, a non-EU country, has a larger working gas capacity and is well connected to Europe.

Here is a link to a detail Europe infrastructure map.



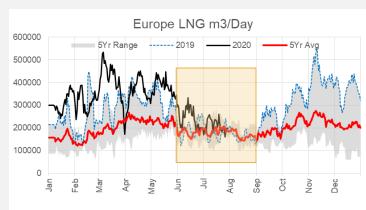
European Natural Gas Storage Levels					
	Level (TWh)	Capacity (TWh)	% Utilization		
Country	7/29/2020	7/29/2020	7/29/2020	YoY	vs. 5Yr Avg
Europe	945.3	1107.0	85%	4%	18%
Germany	201.0	227.7	88%	3%	19%
France	111.1	128.8	86%	5%	23%
Netherlands Gas Storage (T	109.5	139.8	78%	-8%	4%
United Kingdom Gas Storage	10.9	12.3	89%	27%	32%
Belgium	8.8	9.0	98%	13%	47%
Italy	169.8	196.9	86%	5%	8%
Austria	82.8	95.0	87%	-5%	23%
Slovakia	38.6	42.6	91%	5%	31%
Czech Republic Gas Storage	31.3	35.7	88%	0%	12%
Poland	29.5	35.6	83%	1%	8%
Hungary	59.2	69.6	85%	9%	35%
Bulgaria	4.6	6.3	74%	2%	11%
Spain	29.1	34.3	85%	11%	17%
Denmark	9.6	10.2	94%	-1%	25%
Croatia	3.7	5.2	71%	-4%	-1%
Ireland	1.6	1.8	87%	87%	87%
Latvia	10.0	21.5	47%	47%	47%
Portugal	3.7	3.7	99%	27%	47%
Romania	26.5	33.0	80%	22%	28%
Sweden	0.1	0.1	74%	-11%	42%
Non-EU					
Ukraine	228.4	320.2	71%	21%	29%

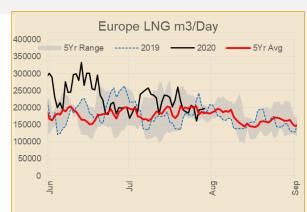
What has happened to get storage in check, and could this mean US LNG to Europe starts to flow in Oct as spreads widen?

LNG imports

We have seen US LNG fall apart this summer. Global LNG spread to henry hub have tightened (even negative to NBP and TTF) leading to a massive number of cargo cancellations. TTF and NBP traded close (sometime below) to Henry Hub levels

That being said, daily European import data shows levels have not dropped off significantly, and infact are sitting above the 5Yr average and close to last year's levels.



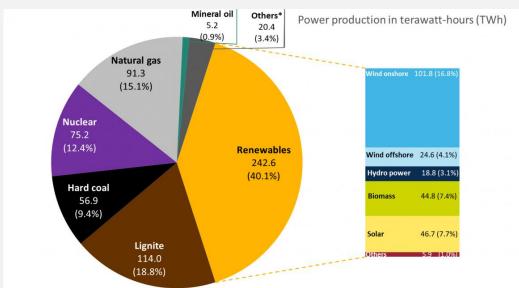




So the storage correction cannot really be attributed to lower LNG imports.

European Coal to Gas Switching

2019 complete year data shows that roughly 28% of Germany's power came from coal sources, while natural gas only contributed 15%. For H1 2020, there has been a flip where natural gas generation has increased at the expense of coal generation.



Source: Clean Energy Wire

Behind the change in the power mix is of course price. The current 12-month TTF strip is 30% lower than last year, while front-year coal into Europe has only fallen 12%. Adding to the pricing pressure is European carbon prices which hit a 14-year high in mid-July. The changing price landscape has prompted RWE and Uniper to return mothballed gas plants to service while other generation owners like Vattenfall have booked a \$1B impairment on its Hamburg coal plant that was commissioned in 2015.

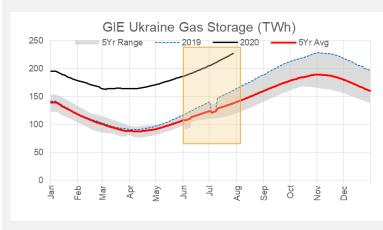
Ukraine

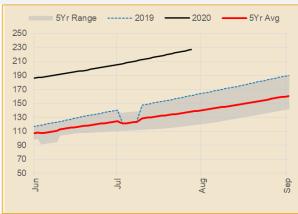
Ukraine's natural gas storage capacity is immense. Total storage capacity is 320 Twh, or 30% of Europe's total capacity. Ukraine storage levels have been at a high all year, but there still remains room to take overflow from Europe.

In June there were concerns that Ukraine storage might not be accessible when Ukraine's gas grid operator GTSOU announced maintenance at a major interconnect that brought gas from Slovakia into Ukraine. The original timeframe for the maintenance was Aug 11 to Oct 1. The maintenance has since been reduced to Sept 1-21, allowing more excess European gas to flow into Ukraine storage.



Current Ukraine storage levels are now above the 5Yr max typically set in early-November.

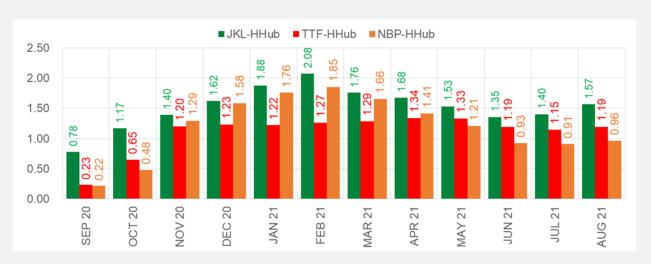




With current Ukraine storage levels at 228 TWh, there is still 92 TWh of space remaining. [92 TWh = 313 Bcf or 94 LNG tankers worth of gas]

Overall, we do not see European storage a major issue hanging over US natgas markets. The problem seems to be have been corrected by this point, and current LNG spreads indicate that we could see cargo headed back to Europe by October.

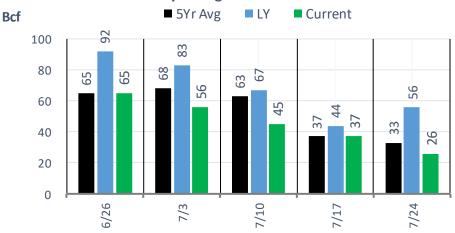
Here are current forward Henry Hub to TTF spreads. European ports trade at both discounts and premiums to TTF; hence at current shipping rate US Gulf Coast LNG is economic to some ports for October.



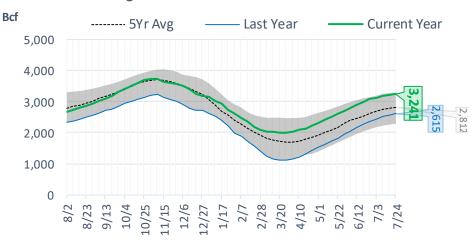


EIA Storage Report

Total Lower 48 YoY Weekly Change



Total Lower 48 Storage Levels



Total Lower 48 LY Surplus/Deficit



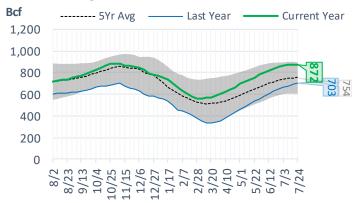


Natural Gas Storage Stats - Last 5 Weeks

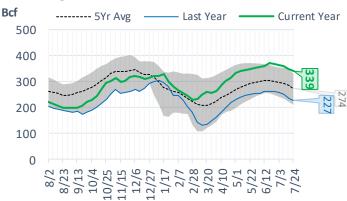
	Current	Week - 1	Week - 2	Week - 3	Week - 4	Week - 5
Week Ending	24-Jul	17-Jul	10-Jul	3-Jul	26-Jun	19-Jun
Total Lower 48 Storage Level	3241	3215	3178	3133	3077	3012
Weekly Change	+26	+37	+45	+56	+65	+120
vs LY	+626	+656	+663	+685	+712	+739
vs 5Yr Avg	+429	+436	+436	+454	+466	+466
S. Central Salt Storage Level	339	349	359	364	368	372
Weekly Change	-10	-10	-5	-4	-4	+14
vs LY	+112	+115	+110	+106	+108	+109
vs 5Yr Avg	+65	+65	+66	+68	+69	+68
S. Central NonSalt Storage Level	872	872	869	862	854	840
Weekly Change	0	+3	+7	+8	+14	+25
vs LY	+169	+183	+190	+199	+211	+215
vs 5Yr Avg	+118	+120	+121	+124	+128	+125
Midwest Storage Level	815	799	780	761	740	716
Weekly Change	+16	+19	+19	+21	+24	+28
vs LY	+146	+156	+162	+172	+181	+188
vs 5Yr Avg	+128	+132	+133	+138	+144	+145
East Storage Level	706	693	672	657	639	619
Weekly Change	+13	+21	+15	+18	+20	+33
vs LY	+115	+122	+116	+118	+121	+128
vs 5Yr Avg	+80	+86	+84	+91	+98	+104
Mountain Storage Level	196	190	186	180	173	165
Weekly Change	+6	+4	+6	+7	+8	+9
vs LY	+41	+40	+41	+42	+41	+41
vs 5Yr Avg	+20	+16	+15	+14	+11	+8
Pacific Storage Level	313	311	312	310	304	299
Weekly Change	+2	-1	+2	+6	+5	+9
vs LY	+43	+41	+45	+49	+52	+57



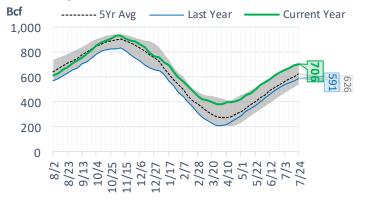
NonSalt Storage Levels



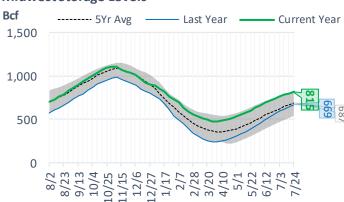
Salt Storage Levels



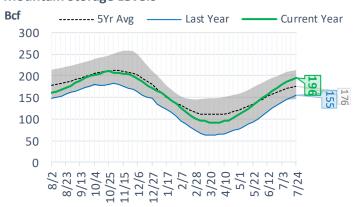
East Storage Levels



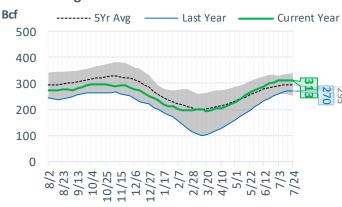
Midwest Storage Levels



Mountain Storage Levels

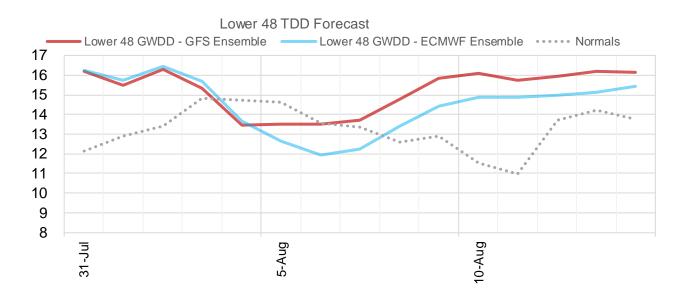


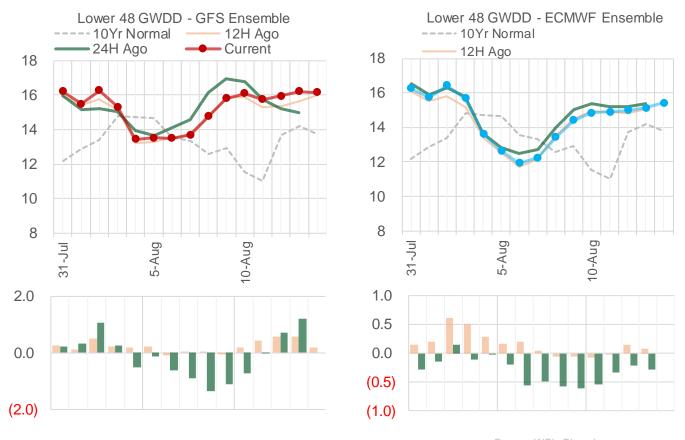
Pacific Storage Levels





Current Short-term Weather Model Outlooks (00z)





Source: WSI, Bloomberg



EIA Reported Daily Storage Activity

Daily Model Error

Market Report

9.3

-0.8

26-Jun	3-Jul	10-Jul	17-Jul	24-Jul	31-Jul	WoW	vs. 4W
84.7	84.9	85.3	85.2	85.9	85.9	▽ 0.0	0.6
4.2	4.1	4.3	4.5	4.4	4.5	△ 0.1	0.2
37.1	38.5	41.8	42.9	45.5	45.6	0.1	3.4
7.4	7.2	6.9	6.9	7.1	7.2	△ 0.1	△ 0.1
19.1	19.8	19.1	18.6	17.9	17.9	0.0	▼ -0.9
4.8	4.8	4.8	4.8	4.8	4.8	▼ 0.0	0.0
2.1	2.1	2.1	2.2	2.3	2.3	0.0	△ 0.1
70.4	72.3	74.6	75.4	77.6	77.8	△ 0.2	2.8
4.0	4.0	3.0	3.3	3.6	3.1	▽ -0.5	▽ -0.4
5.9	5.8	5.9	6.2	6.4	6.1	▽ -0.2	△ 0.1
	84.7 4.2 37.1 7.4 19.1 4.8 2.1 70.4 4.0	84.7 84.9 4.2 4.1 37.1 38.5 7.4 7.2 19.1 19.8 4.8 4.8 2.1 2.1 70.4 72.3 4.0 4.0	84.7 84.9 85.3 4.2 4.1 4.3 37.1 38.5 41.8 7.4 7.2 6.9 19.1 19.8 19.1 4.8 4.8 4.8 2.1 2.1 2.1 70.4 72.3 74.6 4.0 4.0 3.0	84.7 84.9 85.3 85.2 4.2 4.1 4.3 4.5 37.1 38.5 41.8 42.9 7.4 7.2 6.9 6.9 19.1 19.8 19.1 18.6 4.8 4.8 4.8 4.8 2.1 2.1 2.1 2.2 70.4 72.3 74.6 75.4 4.0 4.0 3.0 3.3	84.7 84.9 85.3 85.2 85.9 4.2 4.1 4.3 4.5 4.4 37.1 38.5 41.8 42.9 45.5 7.4 7.2 6.9 6.9 7.1 19.1 19.8 19.1 18.6 17.9 4.8 4.8 4.8 4.8 4.8 2.1 2.1 2.1 2.2 2.3 70.4 72.3 74.6 75.4 77.6 4.0 4.0 3.0 3.3 3.6	84.7 84.9 85.3 85.2 85.9 85.9 4.2 4.1 4.3 4.5 4.4 4.5 37.1 38.5 41.8 42.9 45.5 45.6 7.4 7.2 6.9 6.9 7.1 7.2 19.1 19.8 19.1 18.6 17.9 17.9 4.8 4.8 4.8 4.8 4.8 2.1 2.1 2.1 2.2 2.3 2.3 70.4 72.3 74.6 75.4 77.6 77.8 4.0 4.0 3.0 3.3 3.6 3.1	84.7 84.9 85.3 85.2 85.9 № 0.0 4.2 4.1 4.3 4.5 4.4 4.5 ♠ 0.1 37.1 38.5 41.8 42.9 45.5 45.6 ♠ 0.1 7.4 7.2 6.9 6.9 7.1 7.2 ♠ 0.1 19.1 19.8 19.1 18.6 17.9 17.9 ♠ 0.0 4.8 4.8 4.8 4.8 4.8 ♥ 0.0 2.1 2.1 2.1 2.2 2.3 2.3 ♠ 0.0 70.4 72.3 74.6 75.4 77.6 77.8 ♠ 0.2 4.0 4.0 3.0 3.3 3.6 3.1 ▼ -0.5

8.0

-1.1

6.4

-0.4

5.3

-0.5

3.7

-1.0

Monthly Balances									
	2Yr Ago	LY	Mar. 00	A 00	May 20	l 00	MTD	Man	1.V
	Aug-18	Aug-19	Mar-20	Apr-20	May-20	Jun-20	Jul-20	MoM	vs. LY
Lower 48 Dry Production	83.3	92.4	93.3	91.8	86.0	84.8	85.1	▲ 0.3	▼ -7.3
Canadian Imports	5.0	4.4	4.1	4.0	3.9	4.0	4.1	▲ 0.1	▼ -0.3
L48 Power	38.2	41.0	28.3	25.6	26.9	34.4	40.0	5.6	▼ -1.0
L48 Residential & Commercial	6.8	6.9	22.9	17.2	10.9	7.6	7.1	▼ -0.5	a 0.2
L48 Industrial	21.4	22.9	27.7	24.2	20.9	19.3	19.6	0.3	▼ -3.3
L48 Lease and Plant Fuel	4.7	5.1	5.2	5.1	4.8	4.8	4.8	△ 0.0	▼ -0.4
L48 Pipeline Distribution	2.0	2.1	2.4	2.1	1.8	2.0	2.0	△ 0.1	▼ -0.1
L48 Regional Gas Consumption	73.0	78.1	86.6	74.1	65.4	68.1	73.5	▲ 5.4	▼ -4.6
Net LNG Exports	3.3	5.2	8.5	8.2	6.7	4.0	3.1	▼ -0.9	▼ -2.0
Total Mexican Exports	5.0	5.4	5.6	4.9	4.9	5.7	5.9	▲ 0.1	△ 0.4
Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error	6.9	8.1	-3.4	8.5	12.9	11.0	6.7		

Source: Bloomberg, analytix.ai

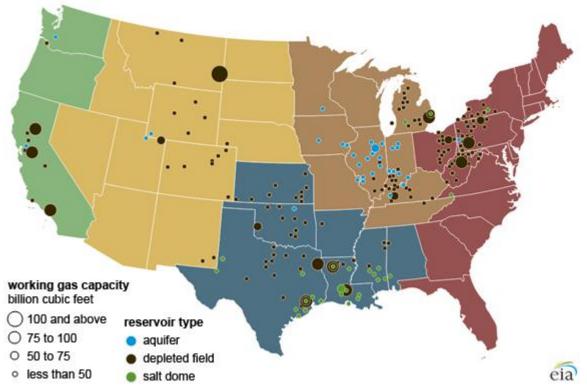
Regional S/D Models Storage Projection

Week Ending 31-Jul

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	3.1	1.1	4.2	29
East	-0.8	2.0	1.2	8
Midwest	4.0	-2.1	1.9	13
Mountain	2.9	-2.1	0.7	5
South Central	-3.2	3.5	0.3	2
Pacific	0.3	-0.1	0.1	1

^{*}Adjustment Factor is calcuated based on historical regional deltas

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





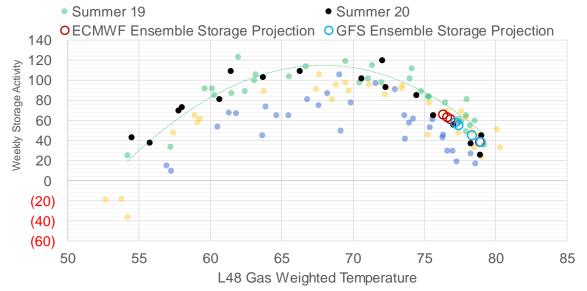
Weather Model Storage Projection

Next repor	t and beyond
	Week Storage
Week Ending	Projection
7-Aug	58
7-Aug 14-Aug	54
21-Aug	62

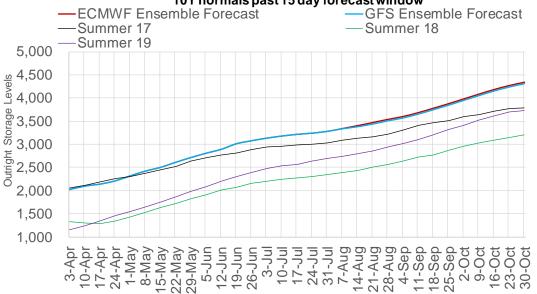
Weather Storage Model - Next 4 Week Forecast



Summer 18



Weather Based End of Winter Projection (Bcf) 10Y normals past 15 day forecast window





Weather Model Storage Projection to End of Season

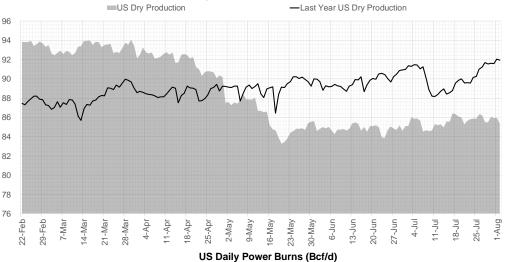
L48 Storage Trajector	Storage Trajectory from Weather Model					Forecast Storage Levels			
	Report		vs 5Yr	Reported	Estimate			5Yr Avg	
	Storage Level	vs. LY	Avg	Chg	Chg *	LY Chg	vs. LY	Chg	vs. 5Yr
3-Apr-20	2024	876	324	38		25	13	6	32
10-Apr-20	2097	876	370	73		73	0	27	46
17-Apr-20	2140	827	364	43		92	(49)	49	(6)
24-Apr-20	2210	783	360	70		114	(44)	74	(4)
1-May-20	2319	796	395	109		96	13	74	35
8-May-20	2422	799	413	103		100	3	85	18
15-May-20	2503	779	407	81		101	(20)	87	(6)
22-May-20	2612	778	423	109		110	(1)	93	16
29-May-20	2714	762	422	102		118	(16)	103	(1)
5-Jun-20	2807	748	421	93		107	(14)	94	(1)
12-Jun-20	2892	722	419	85		111	(26)	87	(2)
19-Jun-20	3012	739	466	120		103	17	73	47
26-Jun-20	3077	712	466	65		92	(27)	65	0
3-Jul-20	3133	685	454	56		83	(27)	68	(12)
10-Jul-20	3178	663	436	45		67	(22)	63	(18)
17-Jul-20	3215	656	436	37		44	(7)	37	0
24-Jul-20	3241	626	429	26		56	(30)	33	(7)
31-Jul-20					38	58	(20)	33	5
7-Aug-20					58	51	7	44	14
14-Aug-20					54	56	(2)	44	10
21-Aug-20					62	60	2	49	13
28-Aug-20					69	77	(8)	66	3
4-Sep-20					62	80	(18)	68	(6)
11-Sep-20					83	82	1	77	6
18-Sep-20					95	97	(2)	80	15
25-Sep-20					98	109	(11)	78	20
2-Oct-20					103	102	1	86	17
9-Oct-20					103	102	1	87	16
16-Oct-20					99	92	7	75	24
23-Oct-20					86	89	(3)	67	19
30-Oct-20					71	49	22	52	19
			2338	2596	(258)	2024	314		

^{*} first 15D change is an average of the GFS Ensemble and ECMWF Ensemble

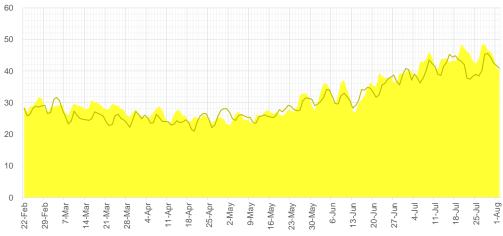


Supply - Demand Trends

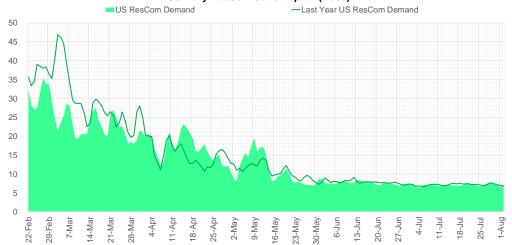
US Dry Natural Gas Production (Bcf/d)



US Power Demand —Last Year US Power Demand



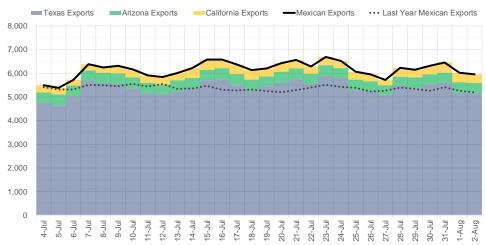
US Daily ResCom Consumption(Bcf/d)

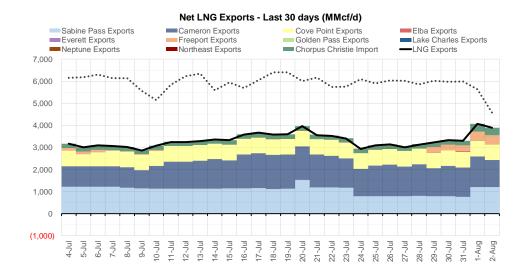


Source: Bloomberg



Mexican Exports - Last 30 days (MMcf/d)





Source: Bloomberg



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
10	2020	С	2.50	4708	10	2020	С	2.75	50608
9	2020	P	1.75	4297	10	2020	P	1.50	49284
9	2020	P	1.65	3366	10	2020	С	2.50	39130
12	2020	Р	2.75	3350	3	2021	P	2.00	35531
9	2020	C	2.25	3258	10	2020	Р	1.60	33272
10	2020	Ċ	2.10	3164	10	2020	С	3.00	31603
9	2020	P	1.50	2975	10	2020	P	2.00	30683
9	2020	Ċ	2.00	2813	9	2020	С	2.50	30681
12	2020	Č	5.00	2530	9	2020	P	1.50	30176
10	2020	P	1.40	2207	10	2020	Р	1.25	28194
9	2020	C	2.05	2156	10	2020	Р	1.75	26392
9	2020	Č	2.50	2133	9	2020	Р	1.75	26185
9	2020	C	1.90	1917	9	2020	С	3.00	24615
10	2020	P	1.00	1834	10	2020	P	1.00	24239
10	2020	P P	1.80	1555	9	2020	Р	1.00	24078
		P			9	2020	Р	1.20	22733
9	2020		1.80	1424	3	2021	С	3.00	21629
9	2020	С	2.10	1319	9	2020	C	2.00	20744
10	2020	P	1.75	1309	3	2021	C	6.00	20454
11	2022	С	3.00	1175	10	2020	Ċ	2.10	19804
12	2022	С	3.00	1175	9	2020	P	1.25	19769
8	2021	С	4.00	1125	10	2020	Р	1.30	19057
10	2020	P	1.50	934	9	2020	Р	1.30	19039
9	2020	С	1.95	917	9	2020	С	2.25	18856
11	2020	С	2.50	902	9	2020	C	2.75	18770
9	2020	С	1.80	837	1	2021	С	3.50	18489
9	2020	C	2.35	822	10	2020	Р	2.10	18284
9	2020	P	1.70	785	10	2020	С	3.25	18191
10	2020	Р	0.75	750	3	2021	C	3.50	18120
9	2020	С	2.15	723	10	2020	С	2.25	17717
9	2020	Р	1.60	683	12	2020	Р	2.00	17492
10	2020	Р	2.00	680	1	2021	С	3.00	17410
10	2020	Р	1.25	657	11	2020	P	1.75	16827
12	2020	Р	2.00	651	10	2020	С	2.40	16181
10	2020	С	2.00	635	10	2020	C	2.00	16023
10	2020	С	2.25	601	12	2020	P	1.50	15756
3	2021	С	4.50	600	4	2021	С	3.00	15512
10	2020	С	2.35	597	11	2020	С	3.50	14012
10	2020	С	2.05	593	9	2020	P	2.00	13926
9	2020	Р	1.90	569	9	2020	С	2.10	13779
11	2020	Р	1.50	561	1	2021	C	3.75	13718
2	2021	Р	2.50	550	9	2020	С	3.25	12912
10	2020	С	2.20	542	1	2021	Ċ	4.50	12907
9	2020	С	2.65	504	10	2020	P	1.40	12839
10	2020	С	2.45	502	10	2020	C	2.20	12744
9	2020	С	1.50	501	4	2021	P	2.00	12724
11	2020	Р	2.05	500	10	2021	C	3.00	12550
11	2020	С	3.00	473	1	2021	P	2.50	12509
3	2021	С	3.50	425	5	2021	С	3.00	12411
2	2021	P	2.75	400	10	2020	Р	1.2	12393

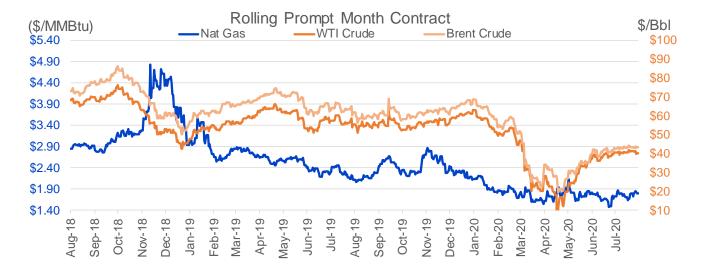
Source: CME, Nasdaq, ICE



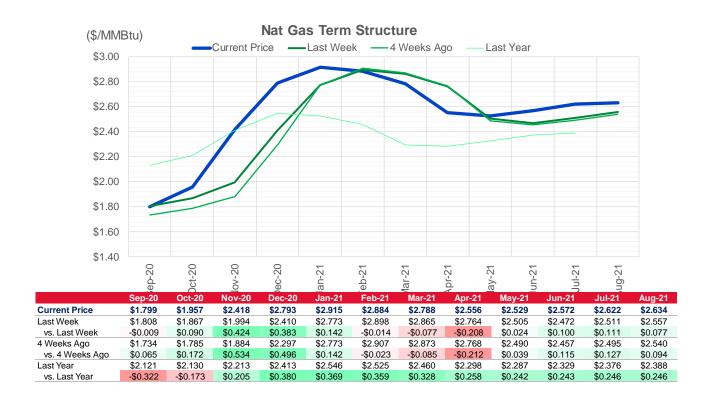
Nat Gas Futures Open Interest CME, ICE and Nasdaq Combined

CME Henry	Hub Futures (1)	0,000 MMBtu	ı)	ICE Henry Hub	Futures Co	ontract Equiva	lent (10,000 MM
	Current	Prior		FOR JUNÉ 26	Current	Prior	Daily Change
SEP 20	345505	10	345495	SEP 20	80037	69641	10395.5
OCT 20	145945	348866	-202921	OCT 20	81464	80520	943.5
NOV 20	106089	154303	-48214	NOV 20	66409	81780	-15370.25
DEC 20	86322	102630	-16308	DEC 20	64617	66341	-1724.25
JAN 21	130125	89282	40843	JAN 21	85030	64658	20372.25
FEB 21	41231	131933	-90702	FEB 21	51065	84879	-33813.5
MAR 21	78591	41670	36921	MAR 21	69093	50783	18310
APR 21	78103	78187	-84	APR 21	57023	68761	-11738.25
MAY 21	37421	78436	-41015	MAY 21	47808	56966	-9158.25
JUN 21	21405	37028	-15623	JUN 21	46667	47817	-1150.75
JUL 21	18276	21368	-3092	JUL 21	47305	46429	876
AUG 21	15336	18125	-2789	AUG 21	47530	47374	156
SEP 21	17546	15329	2217	SEP 21	45069	47638	-2569
OCT 21	44222	17537	26685	OCT 21	66953	44919	22033.5
NOV 21	23523	43469	-19946	NOV 21	38999	66738	-27738.25
DEC 21	15799	23212	-7413	DEC 21	40521	38764	1757.25
JAN 22	16766	16093	673	JAN 22	33295	40481	-7186.25
FEB 22	9503	15857	-6354	FEB 22	28786	31931	-3144.75
MAR 22	13920	9072	4848	MAR 22	31018	28560	2458
APR 22	13885	13852	33	APR 22	29352	30707	-1354.5
MAY 22	5456	13823	-8367	MAY 22	23134	28999	-5865.25
JUN 22	2710	5496	-2786	JUN 22	22877	22964	-87
JUL 22	2168	2706	-538	JUL 22	22722	22697	25
AUG 22	1659	2148	-489	AUG 22	22639	22582	57
SEP 22	2202	1631	571	SEP 22	22156	22453	-297
OCT 22	2485	2193	292	OCT 22	23986	21976	2009.5
NOV 22	1911	2418	-507	NOV 22	21241	23811	-2570.25
DEC 22	1871	1878	-7	DEC 22	21734	21060	673.75
JAN 23	2643	1829	814	JAN 23	11768	21562	-9793.5
FEB 23	651	2596	-1945	FEB 23	10701	11669	-968

Source: CME, ICE







					VS	s. 4 Weeks		
	Units	Current Price	VS.	Last Week		Ago	V	s. Last Year
NatGas Jan/Apr	\$/MMBtu	-0.36	_	0.034	_	0.058		0.016
NatGas Mar/Apr	\$/MMBtu	-0.232	_	0.027	$\overline{}$	-0.510	$\overline{}$	-0.476
NatGas Oct/Nov	\$/MMBtu	0.46	_	0.045	_	0.048		0.389
NatGas Oct/Jan	\$/MMBtu	0.96	_	0.054	$\overline{}$	-0.065		0.603
WTI Crude	\$/Bbl	40.27	$\overline{}$	-1.020	$\overline{}$	-0.380	$\overline{}$	-15.390
Brent Crude	\$/Bbl	43.30	$\overline{}$	-0.040		0.500	\blacksquare	-18.590
Fuel Oil, NY Harbour 1%	\$/Bbl	98.03		0.000	_	0.000		0.000
Heating Oil	cents/Gallon	121.71	$\overline{}$	-3.920	$\overline{}$	-1.400	$\overline{}$	-67.310
Propane, Mt. Bel	cents/Gallon	0.49	$\overline{}$	-0.004	A	0.026		0.044
Ethane, Mt. Bel	cents/Gallon	0.22	$\overline{}$	0.000		0.015		0.091
Coal, PRB	\$/MTon	12.30		0.000	A	0.000		0.000
Coal, ILB	\$/MTon	31.05		0.000		0.000		-7.500

Source: CME, Bloomberg



Baker Hughes Rig Counts

Oil rigs increased by +1, while nat gas rigs dropped by -3. The weekly changes for the major basins are listed below.

	Baker	Hughes 🤰			
U.S. Breakout Information	This Week	+/-	Last Week	+/-	Year Ago
Oil	181	1	180	-595	776
Gas	68	-3	71	-101	169
Miscellaneous	2	0	2	1	1
Directional	22	-1	23	-45	67
Horizontal	215	0	215	-608	823
Vertical	14	-1	15	-42	56
Major Basin Variances	This Week	+/-	Last Week	+/-	Year Ago
		-			1 0 011 1 19 0
			_		
Ardmore Woodford	1	0	1	-4	5
Arkoma Woodford	1 0		0	-4 -3	5 3
Arkoma Woodford Barnett	1 0 0	0 0 0	0 0	-4 -3 -1	5 3 1
Arkoma Woodford Barnett Cana Woodford	1 0 0 5	0	0	-4 -3 -1 -44	5 3 1 49
Arkoma Woodford Barnett Cana Woodford DJ-Niobrara	1 0 0 5 4	0 0 0	0 0 6 4	-4 -3 -1 -44 -25	5 3 1 49 29
Arkoma Woodford Barnett Cana Woodford DJ-Niobrara Eagle Ford	1 0 0 5	0 0 0 -1	0 0 6	-4 -3 -1 -44	5 3 1 49
Arkoma Woodford Barnett Cana Woodford DJ-Niobrara	1 0 0 5 4	0 0 0 -1 0	0 0 6 4	-4 -3 -1 -44 -25 -54	5 3 1 49 29
Arkoma Woodford Barnett Cana Woodford DJ-Niobrara Eagle Ford Granite Wash Haynesville	1 0 0 5 4 12	0 0 0 -1 0 1	0 0 6 4 11	-4 -3 -1 -44 -25 -54	5 3 1 49 29 66
Arkoma Woodford Barnett Cana Woodford DJ-Niobrara Eagle Ford Granite Wash	1 0 0 5 4 12	0 0 0 -1 0 1	0 0 6 4 11 0	-4 -3 -1 -44 -25 -54	5 3 1 49 29 66 4
Arkoma Woodford Barnett Cana Woodford DJ-Niobrara Eagle Ford Granite Wash Haynesville	1 0 0 5 4 12 1 32	0 0 0 -1 0 1 1	0 0 6 4 11 0 32	-4 -3 -1 -44 -25 -54 -3	5 3 1 49 29 66 4 51
Arkoma Woodford Barnett Cana Woodford DJ-Niobrara Eagle Ford Granite Wash Haynesville Marcellus	1 0 0 5 4 12 1 32 25	0 0 0 -1 0 1 1 0 -2	0 0 6 4 11 0 32 27	-4 -3 -1 -44 -25 -54 -3 -19	5 3 1 49 29 66 4 51 56
Arkoma Woodford Barnett Cana Woodford DJ-Niobrara Eagle Ford Granite Wash Haynesville Marcellus Mississippian	1 0 0 5 4 12 1 32 25 0	0 0 -1 0 1 1 0 -2	0 0 6 4 11 0 32 27 0	-4 -3 -1 -44 -25 -54 -3 -19 -31	5 3 1 49 29 66 4 51 56 2