

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 1.89	▲ \$ 0.06	▼ \$ (0.13)

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 39.89	▲ \$ 0.29	▼ \$ (0.6)

	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 41.89	▲ \$ 0.17	▼ \$ (0.7)

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00z GWDD Change

Cooler Change

Warmer Change

ECMWF Ensemble 00z	1-5 Day	6-10 Day	11-15 Day	Total
12 Hr Chg	1.9	0.6	0.1	2.6
24 Hr Chg	0.7	3.5	0.9	5.1

GFS Ensemble 00z	1-5 Day	6-10 Day	11-15 Day	Total
12 Hr Chg	2.6	1.2	2.4	6.3
24 Hr Chg	2.2	4.2	5.2	11.6

	Current	Δ from YD	Δ from 7D Avg
US Dry Production	83.4	▼ -2.26	▼ -3.49

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	31.3	▲ 0.43	▲ 0.67

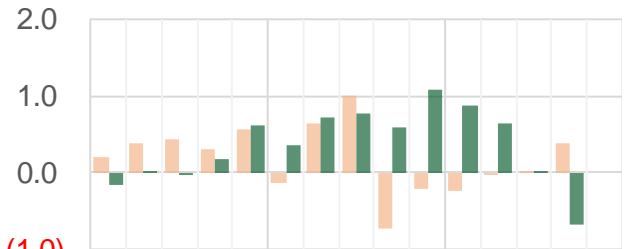
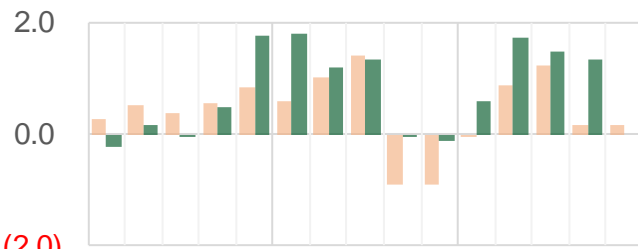
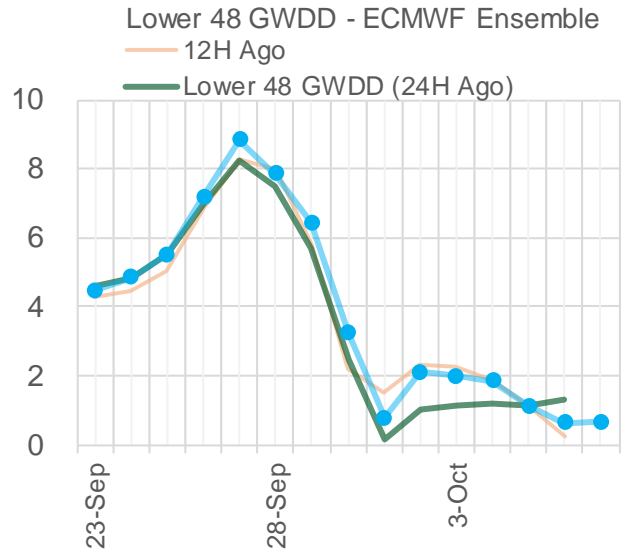
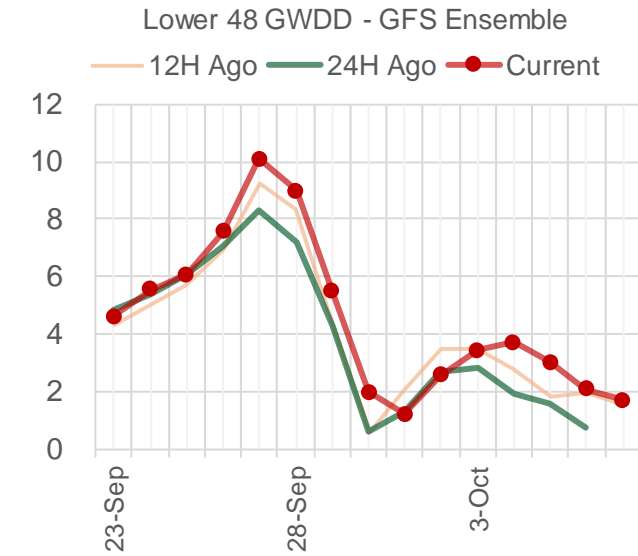
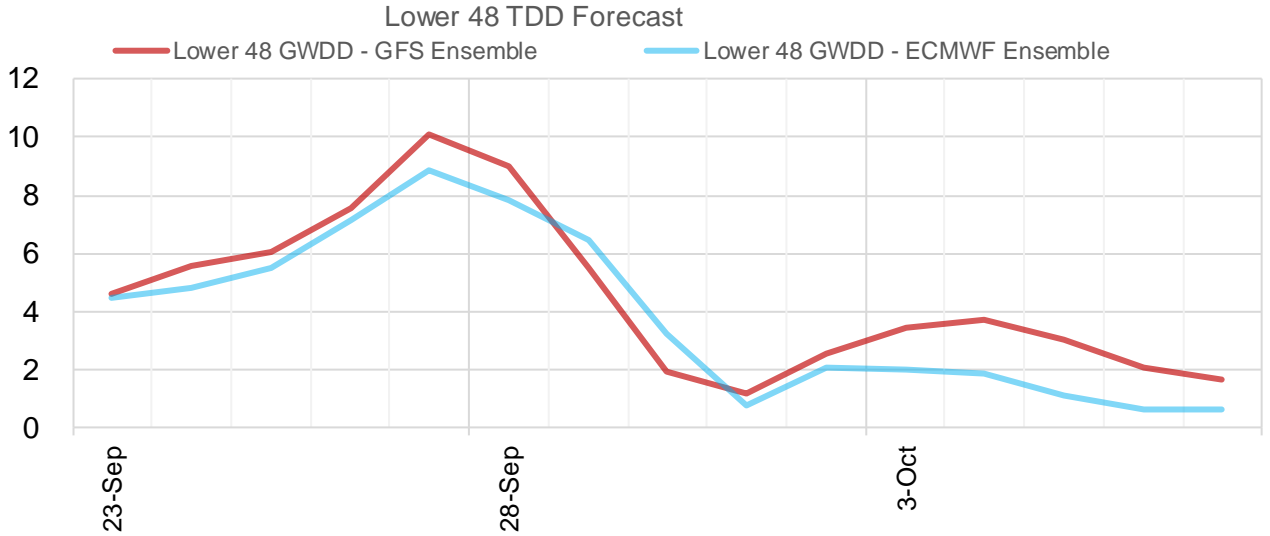
	Current	Δ from YD	Δ from 7D Avg
US ResComm	8.1	▼ -2.11	▼ -2.40

	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	3.5	▲ 0.17	▼ -0.15

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	4.0	▲ 0.11	▼ -2.33

	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.6	▼ -0.17	▲ 0.18

Short-term Weather Model Outlooks (00z)



(2.0)

(1.0)

Source: WSI, Bloomberg

Lower 48 Component Models

Daily Balances

	17-Sep	18-Sep	19-Sep	20-Sep	21-Sep	22-Sep	23-Sep	DoD	vs. 7D
Lower 48 Dry Production	87.7	87.7	87.2	87.1	87.0	85.7	83.4	▼ -2.3	▼ -3.7
Canadian Imports	3.7	4.0	3.5	3.5	3.6	3.3	3.5	▲ 0.2	▼ -0.1
L48 Power	33.2	31.5	28.5	27.8	30.1	30.9	31.3	▲ 0.4	▲ 1.0
L48 Residential & Commercial	8.7	10.9	12.5	11.6	11.2	10.2	8.1	▼ -2.1	▼ -2.7
L48 Industrial	19.1	19.2	19.3	19.2	19.2	19.1	19.0	▼ -0.1	▼ -0.2
L48 Lease and Plant Fuel	4.9	4.9	4.9	4.9	4.9	4.8	4.6	▼ -0.1	▼ -0.2
L48 Pipeline Distribution	2.0	2.0	1.9	1.9	2.0	1.9	1.9	▼ -0.1	▼ -0.1
L48 Regional Gas Consumption	67.8	68.5	67.2	65.2	67.4	67.0	65.0	▼ -2.0	▼ -2.2
Net LNG Exports	7.8	8.3	6.5	5.8	5.1	3.9	4.0	▲ 0.1	▼ -2.2
Total Mexican Exports	6.5	6.7	6.3	6.0	6.4	6.8	6.6	▼ -0.2	▲ 0.1
Implied Daily Storage Activity	9.2	8.2	10.8	13.6	11.8	11.3	11.3		
EIA Reported Daily Storage Activity									
Daily Model Error									

EIA Storage Week Balances

	14-Aug	21-Aug	28-Aug	4-Sep	11-Sep	18-Sep	WoW	vs. 4W
Lower 48 Dry Production	87.4	87.2	86.0	86.3	88.3	87.1	▼ -1.2	▲ 0.1
Canadian Imports	5.0	4.7	5.2	4.4	3.8	3.8	▼ 0.0	▼ -0.7
L48 Power	42.8	40.0	41.6	37.3	35.2	33.2	▼ -1.9	▼ -5.3
L48 Residential & Commercial	8.1	8.2	8.3	7.8	8.8	8.5	▼ -0.3	▲ 0.2
L48 Industrial	19.1	20.4	19.6	19.6	18.7	18.9	▲ 0.2	▼ -0.6
L48 Lease and Plant Fuel	4.9	4.8	4.8	4.8	4.9	4.9	▼ -0.1	▲ 0.0
L48 Pipeline Distribution	2.3	2.2	2.3	2.1	2.1	2.0	▼ -0.1	▼ -0.2
L48 Regional Gas Consumption	77.2	75.7	76.6	71.5	69.7	67.5	▼ -2.2	▼ -5.9
Net LNG Exports	4.4	4.7	3.9	3.0	5.2	7.3	▲ 2.1	▲ 3.1
Total Mexican Exports	6.0	6.2	6.6	6.5	6.4	6.2	▼ -0.2	▼ -0.2
Implied Daily Storage Activity	4.8	5.3	4.1	9.6	10.9	9.9	-1.0	
EIA Reported Daily Storage Activity	6.1	6.4	5.0	10.0	12.7			
Daily Model Error	-1.3	-1.2	-0.9	-0.4	-1.8			

Monthly Balances

	2Yr Ago Sep-18	LY Sep-19	May-20	Jun-20	Jul-20	Aug-20	MTD Sep-20	MoM	vs. LY
Lower 48 Dry Production	85.2	93.5	85.8	85.1	86.6	86.8	87.1	▲ 0.3	▼ -6.3
Canadian Imports	4.5	4.7	3.9	4.0	4.4	4.9	3.8	▼ -1.1	▼ -0.9
L48 Power	34.3	36.4	26.9	34.8	43.9	40.6	33.7	▼ -6.9	▼ -2.7
L48 Residential & Commercial	8.5	8.3	12.9	9.0	8.6	8.1	9.1	▲ 1.0	▲ 0.8
L48 Industrial	21.6	22.2	18.9	18.4	17.8	19.5	19.0	▼ -0.6	▼ -3.2
L48 Lease and Plant Fuel	4.8	5.2	4.8	4.9	4.9	4.8	4.9	▲ 0.0	▼ -0.4
L48 Pipeline Distribution	2.0	2.1	1.9	2.0	2.4	2.2	2.0	▼ -0.2	▼ -0.1
L48 Regional Gas Consumption	71.2	74.3	65.5	69.1	77.5	75.3	68.6	▼ -6.6	▼ -5.6
Net LNG Exports	3.1	6.2	6.7	4.0	3.3	4.0	5.7	▲ 1.6	▼ -0.5
Total Mexican Exports	5.1	5.4	4.9	5.7	6.1	6.3	6.4	▲ 0.1	▲ 1.0
Implied Daily Storage Activity	10.3	12.4	12.6	10.2	4.1	6.2	10.2		
EIA Reported Daily Storage Activity									
Daily Model Error									

Source: Bloomberg, analytix.ai

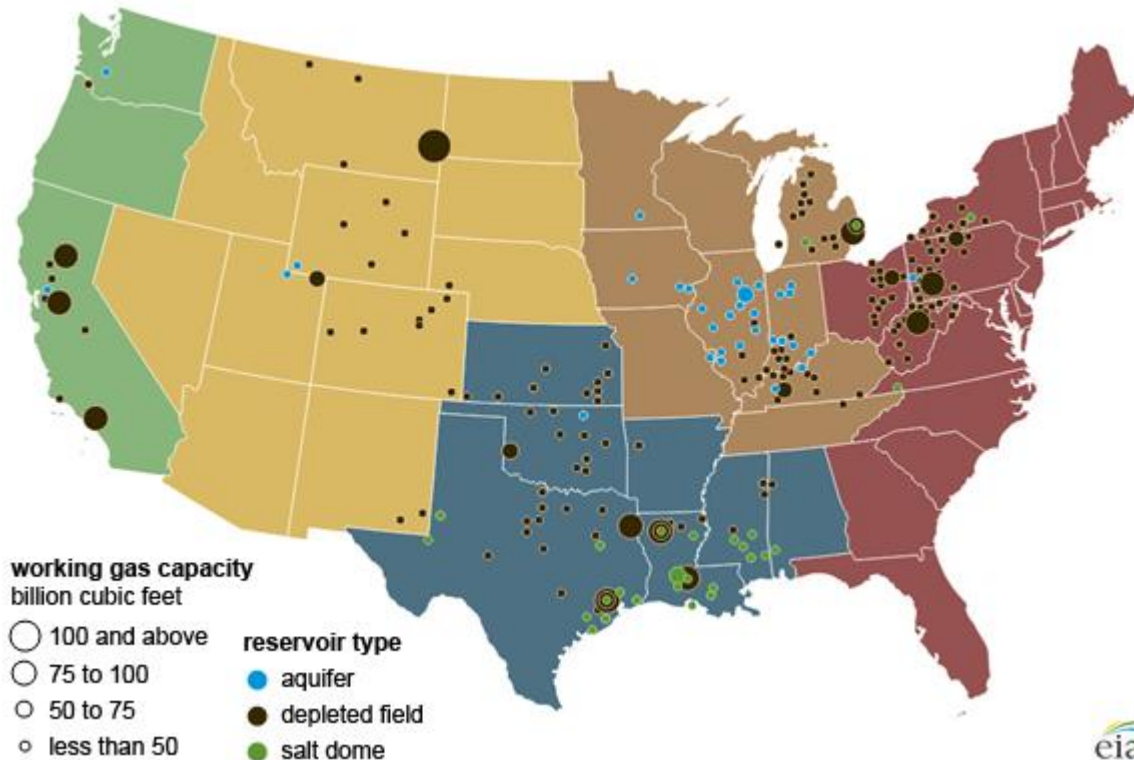
Regional S/D Models Storage Projection

Week Ending 18-Sep

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	9.7	1.6	11.3	79
East	2.0	1.5	3.6	25
Midwest	3.6	0.3	4.0	28
Mountain	3.7	-2.8	1.0	7
South Central	-0.7	3.0	2.3	16
Pacific	1.0	-0.5	0.4	3

*Adjustment Factor is calculated based on historical regional deltas

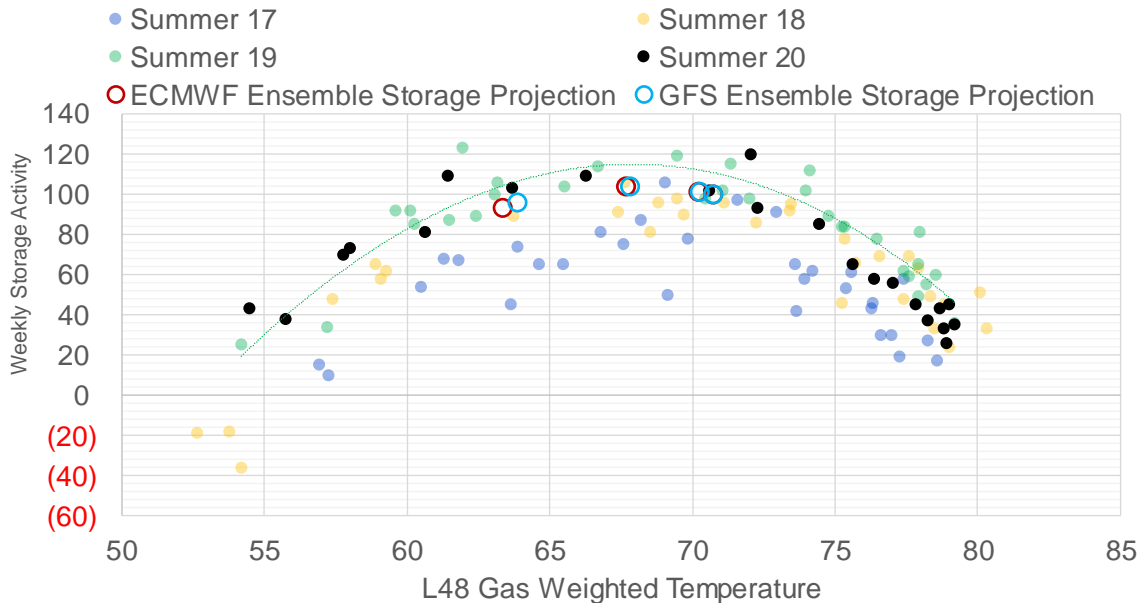
U.S. underground natural gas storage facilities by type (July 2015)



Weather Model Storage Projection

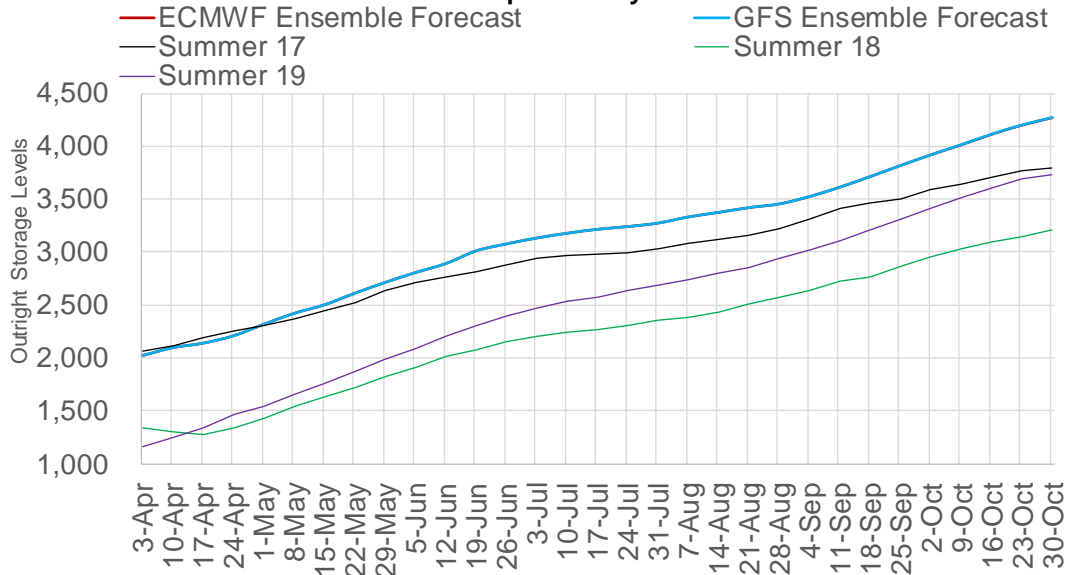
Next report and beyond	
Week Ending	Week Storage Projection
25-Sep	104
2-Oct	101
9-Oct	95

Weather Storage Model - Next 4 Week Forecast



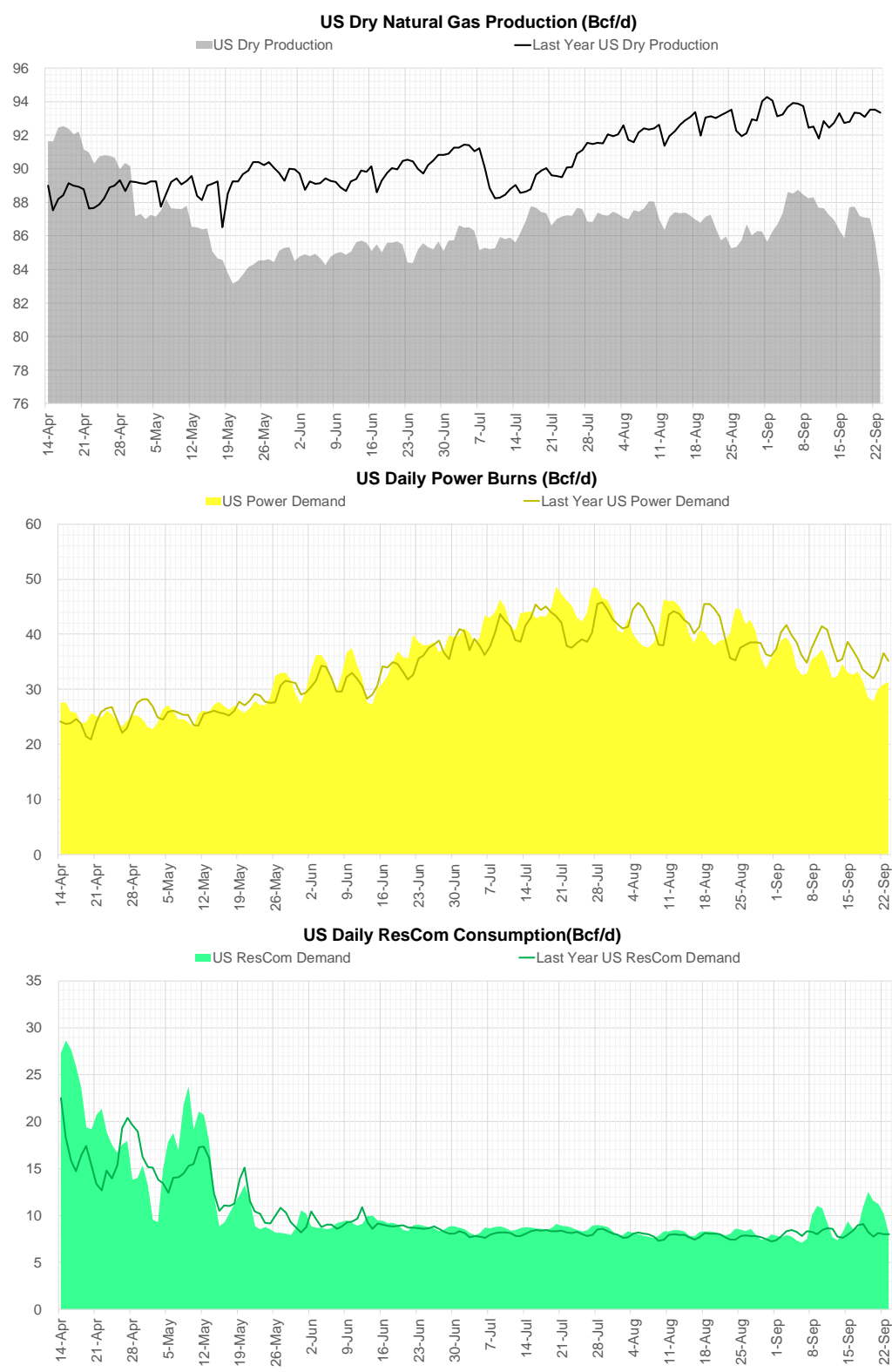
Weather Based End of Winter Projection (Bcf)

10Y normals past 15 day forecast window



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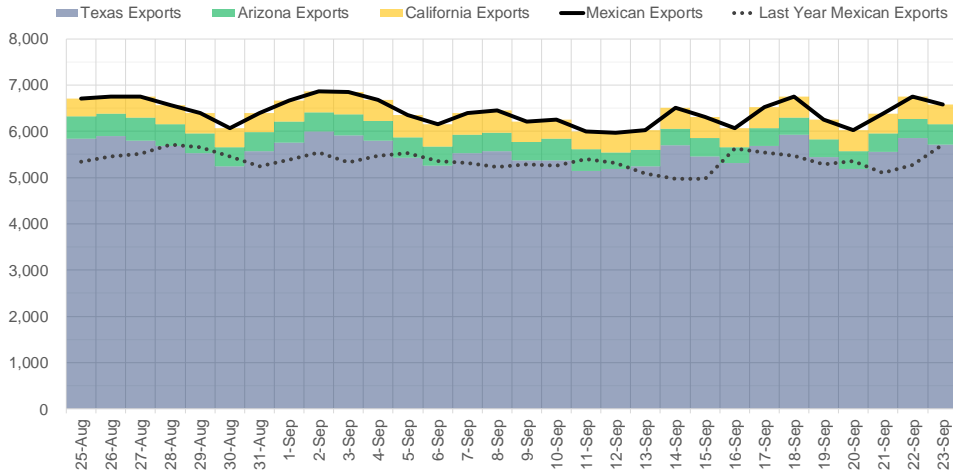
Supply – Demand Trends



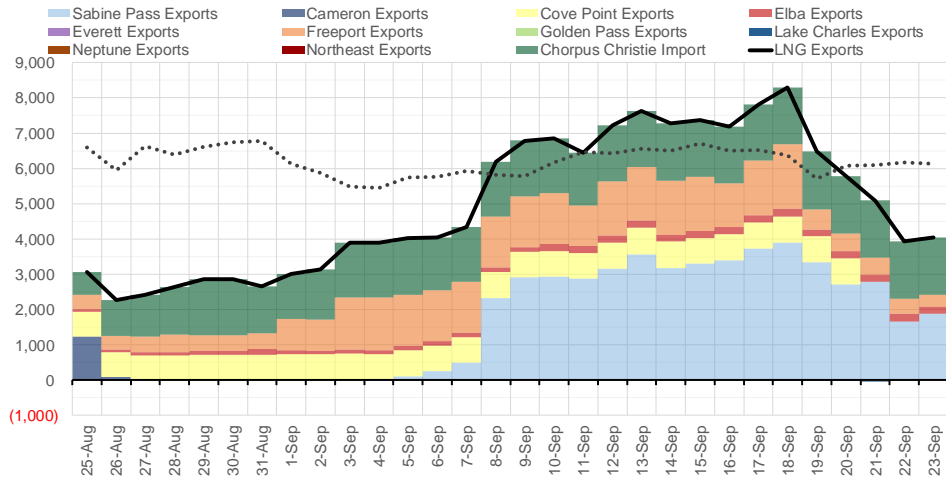
Source: Bloomberg

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Mexican Exports - Last 30 days (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

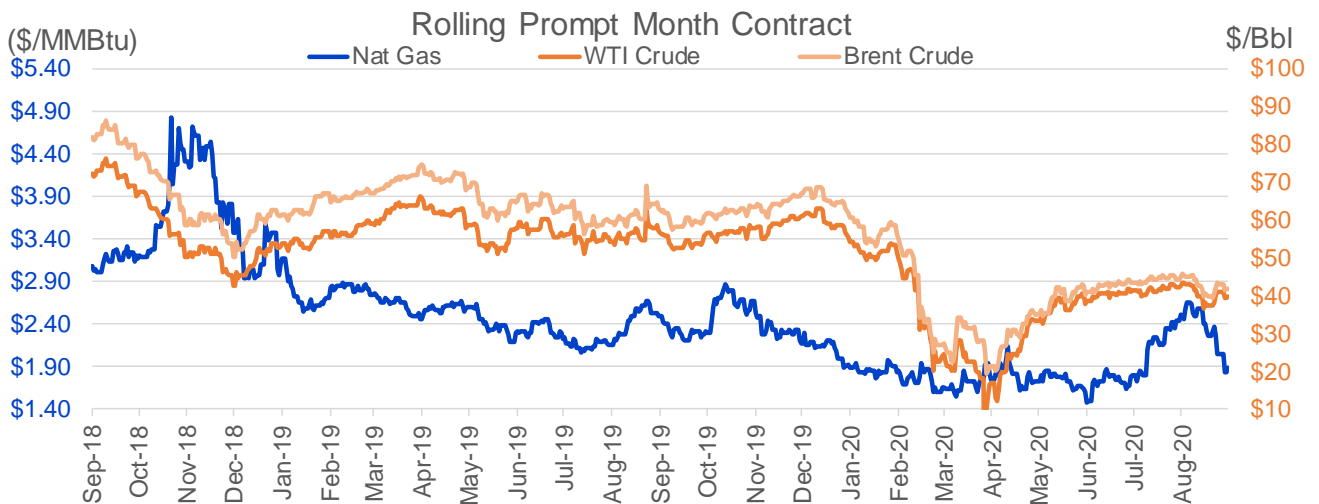
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
10	2020	P	1.50	7266	10	2020	C	2.75	49943
11	2020	P	2.00	6213	10	2020	C	3.00	48326
11	2020	P	1.65	6020	10	2020	P	1.50	44103
10	2020	C	2.10	5928	10	2020	P	2.00	43510
10	2020	P	1.75	4693	10	2020	P	1.75	38750
10	2020	P	1.80	4478	10	2020	P	2.25	37423
10	2020	C	2.15	4336	10	2020	P	1.60	35763
10	2020	C	2.20	4301	10	2020	C	2.50	35302
10	2020	C	2.25	3880	3	2021	P	2.00	33153
11	2020	P	2.25	3867	4	2021	C	5.00	32687
10	2020	C	2.00	3773	10	2020	C	2.25	29395
10	2020	P	1.60	3433	11	2020	C	3.50	29236
10	2020	P	1.70	3018	11	2020	P	2.00	28110
10	2020	P	1.40	2988	3	2021	C	3.25	27228
11	2020	C	3.25	2763	11	2020	C	5.00	27101
11	2020	C	3.00	2415	10	2020	P	1.25	26857
11	2020	P	2.50	2297	3	2021	C	4.00	26684
11	2020	C	3.30	2135	11	2020	P	2.25	25060
11	2020	C	3.50	2134	1	2021	C	3.50	23777
3	2022	P	2.00	2000	10	2020	P	1.80	23669
12	2020	P	2.50	1978	3	2021	C	6.00	23510
10	2020	C	2.05	1918	10	2020	P	2.10	23488
11	2020	C	2.75	1917	10	2020	C	2.10	23440
10	2020	P	1.65	1779	12	2020	P	2.00	23435
10	2020	C	1.90	1595	10	2020	C	3.25	23427
12	2020	P	2.25	1592	1	2021	C	4.50	23175
10	2020	P	1.90	1397	10	2020	P	1.00	22550
11	2020	P	1.75	1250	3	2021	C	3.00	22265
12	2020	C	5.00	1200	12	2020	P	2.50	21783
3	2021	C	3.50	1200	10	2020	P	2.20	21534
11	2020	C	2.60	1149	10	2020	C	2.00	21273
2	2021	P	2.00	1139	10	2020	P	1.90	21084
12	2020	C	3.50	1126	10	2020	P	1.30	20684
10	2020	C	1.95	1059	1	2021	C	5.00	20426
10	2020	P	1.55	1006	3	2021	C	3.50	19897
11	2020	P	1.50	952	10	2020	C	2.80	19241
11	2020	P	2.40	939	11	2020	C	3.00	18892
11	2020	C	3.10	930	10	2020	C	3.50	18823
10	2020	P	1.85	780	10	2020	C	2.60	17820
11	2020	P	2.20	766	11	2020	P	2.50	17606
12	2020	P	2.00	720	11	2020	C	3.25	17502
11	2020	C	5.00	703	10	2020	C	2.40	17401
10	2020	P	2.00	701	2	2021	C	5.00	17187
1	2021	C	3.25	700	1	2021	C	3.00	16784
1	2021	P	2.50	675	1	2021	C	3.75	16398
10	2020	C	1.85	641	10	2020	P	1.85	15990
3	2021	P	2.25	633	12	2020	C	4.00	15676
12	2020	C	4.00	626	10	2020	P	1.70	15595
3	2021	P	2.50	625	12	2020	C	3.75	15522
					1	2021	P	2.5	15338

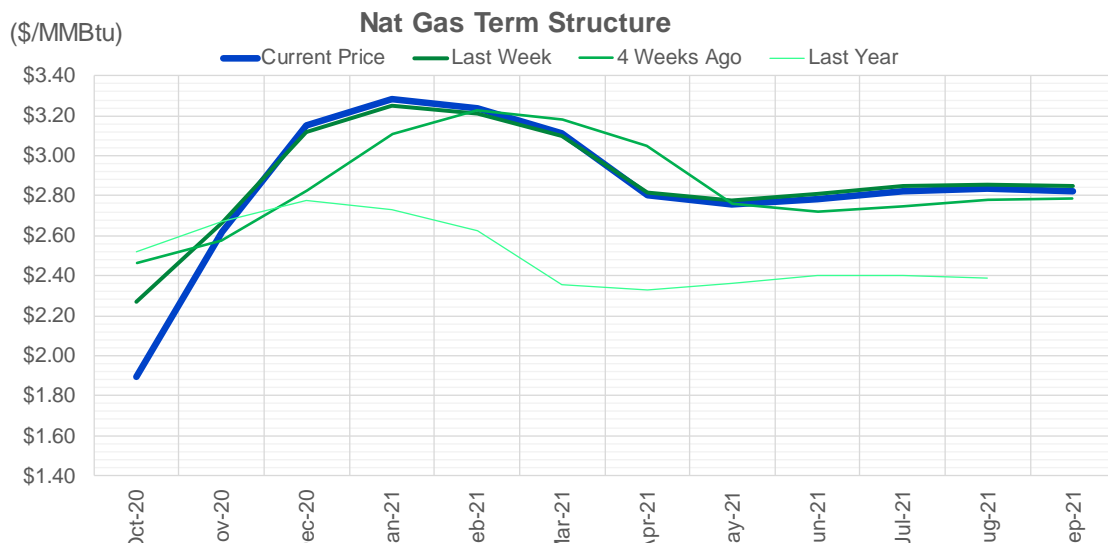
Source: CME, Nasdaq, ICE

Nat Gas Futures Open Interest CME, and ICE Combined

CME Henry Hub Futures (10,000 MMBtu)				ICE Henry Hub Futures Contract Equivalent (10,000 MMBtu)			
	Current	Prior	Daily Change	FOR JUNE 26	Current	Prior	Daily Change
OCT 20	36546	51359	-14813	OCT 20	73817	76272	-2455.25
NOV 20	291214	279690	11524	NOV 20	83553	79699	3854.5
DEC 20	138834	133083	5751	DEC 20	77259	76952	307.25
JAN 21	146495	147532	-1037	JAN 21	87906	87864	41.75
FEB 21	58697	58674	23	FEB 21	59893	59775	117.75
MAR 21	120355	120165	190	MAR 21	80236	79480	756.25
APR 21	78404	78016	388	APR 21	65507	65395	112
MAY 21	44361	43918	443	MAY 21	56741	56017	724.5
JUN 21	28729	28683	46	JUN 21	52377	52083	294.25
JUL 21	20759	19920	839	JUL 21	54898	54550	348
AUG 21	23800	23525	275	AUG 21	54610	54677	-67
SEP 21	30318	30194	124	SEP 21	51486	51253	233.25
OCT 21	72025	71804	221	OCT 21	77294	76137	1157.25
NOV 21	27664	27555	109	NOV 21	44451	44444	7
DEC 21	24692	24163	529	DEC 21	43889	43904	-15
JAN 22	25989	25260	729	JAN 22	37481	37622	-141.25
FEB 22	14056	13902	154	FEB 22	32387	32482	-95.25
MAR 22	18565	18549	16	MAR 22	34534	34581	-47
APR 22	22823	22450	373	APR 22	35502	35511	-9
MAY 22	6794	6752	42	MAY 22	25310	25375	-64.75
JUN 22	3856	3829	27	JUN 22	23922	23909	13.5
JUL 22	3148	3150	-2	JUL 22	25333	25404	-71
AUG 22	2128	2120	8	AUG 22	24260	24327	-67
SEP 22	2130	2178	-48	SEP 22	23264	23251	13.5
OCT 22	3505	3455	50	OCT 22	25136	25105	31.5
NOV 22	2509	2509	0	NOV 22	22772	22770	2
DEC 22	2610	2603	7	DEC 22	24837	24836	1.5
JAN 23	2812	2832	-20	JAN 23	12647	12664	-17
FEB 23	875	855	20	FEB 23	12038	12087	-49
MAR 23	911	911	0	MAR 23	12015	12092	-77.25

Source: CME, ICE





	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21
Current Price	\$1.891	\$2.621	\$3.154	\$3.281	\$3.238	\$3.115	\$2.803	\$2.758	\$2.785	\$2.823	\$2.837	\$2.825
Last Week	\$2.267	\$2.664	\$3.120	\$3.249	\$3.210	\$3.097	\$2.814	\$2.779	\$2.808	\$2.846	\$2.857	\$2.846
vs. Last Week	-\$0.376	-\$0.043	\$0.034	\$0.032	\$0.028	\$0.018	-\$0.011	-\$0.021	-\$0.023	-\$0.023	-\$0.020	-\$0.021
4 Weeks Ago	\$2.461	\$2.574	\$2.825	\$3.111	\$3.226	\$3.181	\$3.047	\$2.758	\$2.718	\$2.744	\$2.779	\$2.789
vs. 4 Weeks Ago	-\$0.570	\$0.047	\$0.329	\$0.170	\$0.012	-\$0.066	-\$0.244	\$0.000	\$0.067	\$0.079	\$0.058	\$0.036
Last Year	\$2.502	\$2.518	\$2.668	\$2.774	\$2.733	\$2.627	\$2.357	\$2.330	\$2.363	\$2.399	\$2.403	\$2.388
vs. Last Year	-\$0.611	\$0.103	\$0.486	\$0.507	\$0.505	\$0.488	\$0.446	\$0.428	\$0.422	\$0.424	\$0.434	\$0.437

	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	1.40	1.50	0.10
TETCO M3	\$/MMBtu	1.13	1.16	0.03
FGT Zone 3	\$/MMBtu	1.17	2.28	1.11
Zone 6 NY	\$/MMBtu	1.17	1.15	-0.02
Chicago Citygate	\$/MMBtu	1.50	1.96	0.46
Michcon	\$/MMBtu	1.46	1.87	0.41
Columbia TCO Pool	\$/MMBtu	1.13	1.46	0.33
Ventura	\$/MMBtu	1.50	1.82	0.32
Rockies/Opal	\$/MMBtu	2.16	1.82	-0.34
El Paso Permian Basin	\$/MMBtu	1.04	1.47	0.43
Socal Citygate	\$/MMBtu	3.00	2.07	-0.93
Malin	\$/MMBtu	2.19	2.01	-0.18
Houston Ship Channel	\$/MMBtu	1.47	2.24	0.77
Henry Hub Cash	\$/MMBtu	1.49	1.97	0.48
AECO Cash	C\$/GJ	1.47	1.73	0.26
Station2 Cash	C\$/GJ	1.47	2.15	0.68
Dawn Cash	C\$/GJ	1.49	1.86	0.37

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks		vs. Last Year
				Ago		
NatGas Jan/Apr	\$/MMBtu	-0.48	▼ -0.043	▼ -0.010	▼ -0.052	
NatGas Mar/Apr	\$/MMBtu	-0.312	▼ -0.029	▼ -0.601	▼ -0.574	
NatGas Oct/Nov	\$/MMBtu	0.73	▲ 0.333	▲ 0.479	▲ 0.671	
NatGas Oct/Jan	\$/MMBtu	1.39	▲ 0.408	▲ 0.738	▲ 1.052	
WTI Crude	\$/Bbl	39.89	▼ -0.270	▼ -3.500	▼ -16.600	
Brent Crude	\$/Bbl	41.89	▼ -0.330	▼ -3.750	▼ -20.500	
Fuel Oil, NY Harbour 1%	\$/Bbl	98.03	▲ 0.000	▲ 0.000	▲ 0.000	
Heating Oil	cents/Gallon	110.20	▼ -1.430	▼ -14.270	▼ -85.190	
Propane, Mt. Bel	cents/Gallon	0.49	▼ -0.006	▼ -0.015	▲ 0.042	
Ethane, Mt. Bel	cents/Gallon	0.19	▼ -0.015	▼ -0.049	▼ -0.022	
Coal, PRB	\$/MTon	12.30	▲ 0.000	▲ 0.000	▲ 0.150	
Coal, ILB	\$/MTon	31.05	▲ 0.000	▲ 0.000	▼ -4.500	