

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 1.84	▲ \$ 0.01	▲ \$ 0.09

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 32.81	▼ \$ (0.90)	▼ \$ (0.6)

	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 34.48	▼ \$ (0.81)	▼ \$ (0.8)

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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	4.6	9.8	8.5	22.8
24 Hr Chg	2.0	9.0	4.0	15.0

GFS Ensemble 00z	1-5 Day	6-10 Day	11-15 Day	Total
12 Hr Chg	2.4	6.4	-4.2	4.6
24 Hr Chg	-0.6	3.1	-0.4	2.1

	Current	Δ from YD	Δ from 7D Avg
US Dry Production	83.7	▲ 0.33	▲ 0.23

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	32.8	▲ 0.46	▲ 3.08

	Current	Δ from YD	Δ from 7D Avg
US ResComm	8.1	▲ 0.07	▼ -0.23

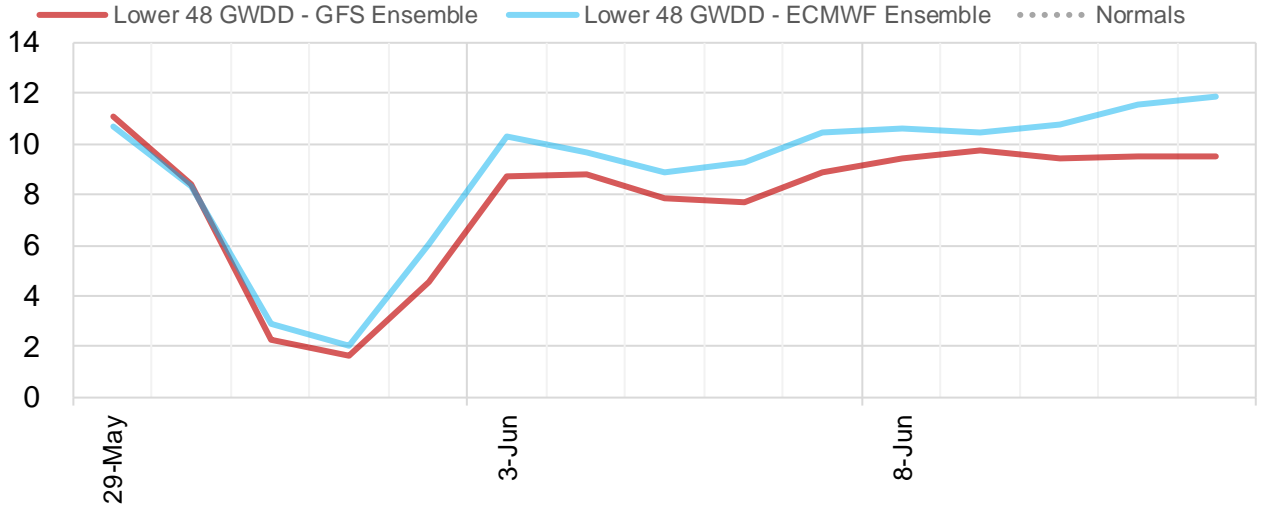
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	3.9	▼ -0.84	▼ -0.19

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	6.3	▼ -0.08	▲ 0.25

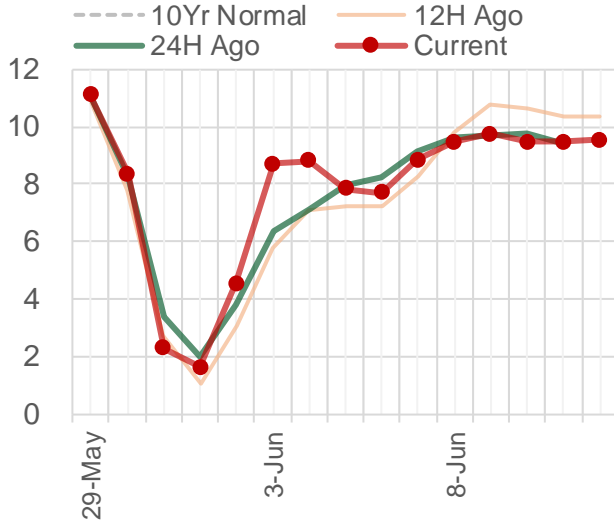
	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	5.1	▼ -0.02	▲ 0.12

Short-term Weather Model Outlooks (00z)

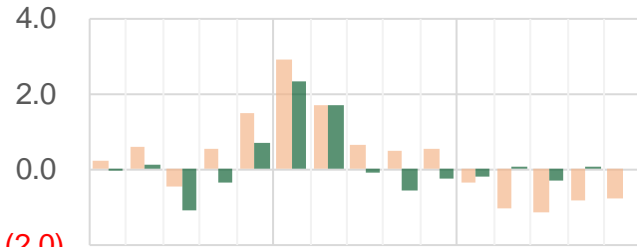
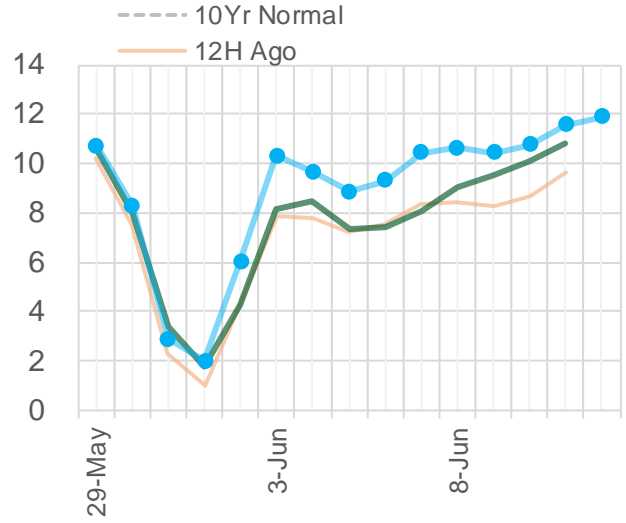
Lower 48 TDD Forecast



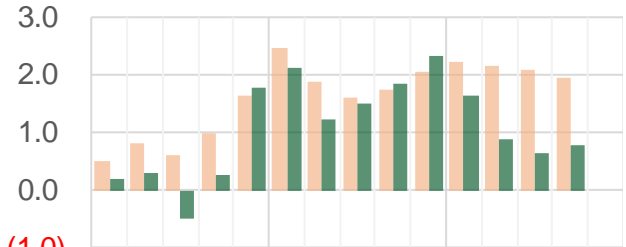
Lower 48 GWDD - GFS Ensemble



Lower 48 GWDD - ECMWF Ensemble



(2.0)



(1.0)

Source: WSI, Bloomberg

Lower 48 Component Models

Daily Balances

	23-May	24-May	25-May	26-May	27-May	28-May	29-May	DoD	vs. 7D
Lower 48 Dry Production	83.4	83.6	83.9	83.8	83.6	83.4	83.7	▲ 0.3	▲ 0.1
Canadian Imports	3.7	3.7	3.8	4.1	4.8	4.8	3.9	▼ -0.8	▼ -0.2
L48 Power	27.2	27.2	28.6	32.3	32.8	32.4	32.8	▲ 0.5	▲ 2.7
L48 Residential & Commercial	8.5	8.7	8.4	8.0	8.0	8.1	8.1	▲ 0.1	▼ -0.2
L48 Industrial	19.3	19.6	19.8	19.7	19.3	18.7	17.8	▼ -0.9	▼ -1.6
L48 Lease and Plant Fuel	4.7	4.7	4.7	4.7	4.7	4.7	4.7	▲ 0.0	▲ 0.0
L48 Pipeline Distribution	1.8	1.8	1.8	2.0	2.0	2.0	2.0	▲ 0.0	▲ 0.1
L48 Regional Gas Consumption	61.4	62.0	63.4	66.8	66.7	65.8	65.5	▼ -0.3	▲ 1.1
Net LNG Exports	5.8	5.6	6.3	6.4	6.3	6.4	6.3	▼ -0.1	▲ 0.2
Total Mexican Exports	4.9	4.8	4.9	4.8	5.0	5.1	5.1	▼ 0.0	▲ 0.2
Implied Daily Storage Activity	15.0	14.9	13.1	9.9	10.4	10.8	10.7		
EIA Reported Daily Storage Activity									
Daily Model Error									

EIA Storage Week Balances

	24-Apr	1-May	8-May	15-May	22-May	29-May	WoW	vs. 4W
Lower 48 Dry Production	90.8	89.7	86.5	86.1	83.5	83.5	▼ 0.0	▼ -3.0
Canadian Imports	3.9	3.4	3.6	4.0	4.1	4.1	▲ 0.0	▲ 0.3
L48 Power	24.9	24.5	24.5	24.8	26.5	29.8	▲ 3.2	▲ 4.7
L48 Residential & Commercial	22.7	17.0	14.7	19.5	10.9	8.4	▼ -2.6	▼ -7.2
L48 Industrial	18.3	18.1	18.4	17.0	18.2	19.3	▲ 1.1	▲ 1.4
L48 Lease and Plant Fuel	5.1	5.1	4.8	4.8	4.7	4.7	▼ 0.0	▼ -0.2
L48 Pipeline Distribution	2.3	2.0	1.9	2.2	1.9	1.9	▲ 0.0	▼ -0.1
L48 Regional Gas Consumption	73.4	66.7	64.4	68.4	62.2	64.0	▲ 1.8	▼ -1.4
Net LNG Exports	8.1	7.5	7.7	6.9	6.3	6.1	▼ -0.2	▼ -1.0
Total Mexican Exports	5.0	4.8	4.7	4.7	5.2	5.0	▼ -0.2	▲ 0.1
Implied Daily Storage Activity	8.3	14.1	13.3	10.1	14.0	12.5	-1.4	
EIA Reported Daily Storage Activity	10.0	15.6	14.7	11.6	15.6			
Daily Model Error	-1.7	-1.5	-1.4	-1.5	-1.6			

Monthly Balances

	2Yr Ago May-18	LY May-19	Jan-20	Feb-20	Mar-20	Apr-20	MTD May-20	MoM	vs. LY
Lower 48 Dry Production	81.2	89.1	92.6	91.9	91.8	91.0	84.9	▼ -6.1	▼ -4.2
Canadian Imports	5.8	4.7	4.8	5.3	4.1	3.9	3.9	▲ 0.1	▼ -0.7
L48 Power	27.3	26.9	30.0	29.9	27.4	25.4	26.6	▲ 1.2	▼ -0.3
L48 Residential & Commercial	10.6	12.8	41.4	40.5	27.9	21.8	13.2	▼ -8.6	▲ 0.4
L48 Industrial	21.7	22.2	24.4	24.7	22.0	18.6	18.2	▼ -0.4	▼ -4.0
L48 Lease and Plant Fuel	4.5	5.0	5.3	5.2	5.2	5.1	4.7	▼ -0.4	▼ -0.2
L48 Pipeline Distribution	1.9	2.0	3.0	3.0	2.4	2.3	2.0	▼ -0.3	▲ 0.0
L48 Regional Gas Consumption	66.0	68.8	104.1	103.3	84.9	73.2	64.8	▼ -8.4	▼ -4.0
Net LNG Exports	3.1	5.6	8.3	8.5	8.5	8.2	6.7	▼ -1.5	▲ 1.1
Total Mexican Exports	4.4	5.1	5.2	5.3	5.6	4.9	4.9	▼ 0.0	▼ -0.2
Implied Daily Storage Activity	13.4	14.3	-20.2	-19.9	-3.1	8.5	12.4		
EIA Reported Daily Storage Activity									
Daily Model Error									

Source: Bloomberg, analytix.ai

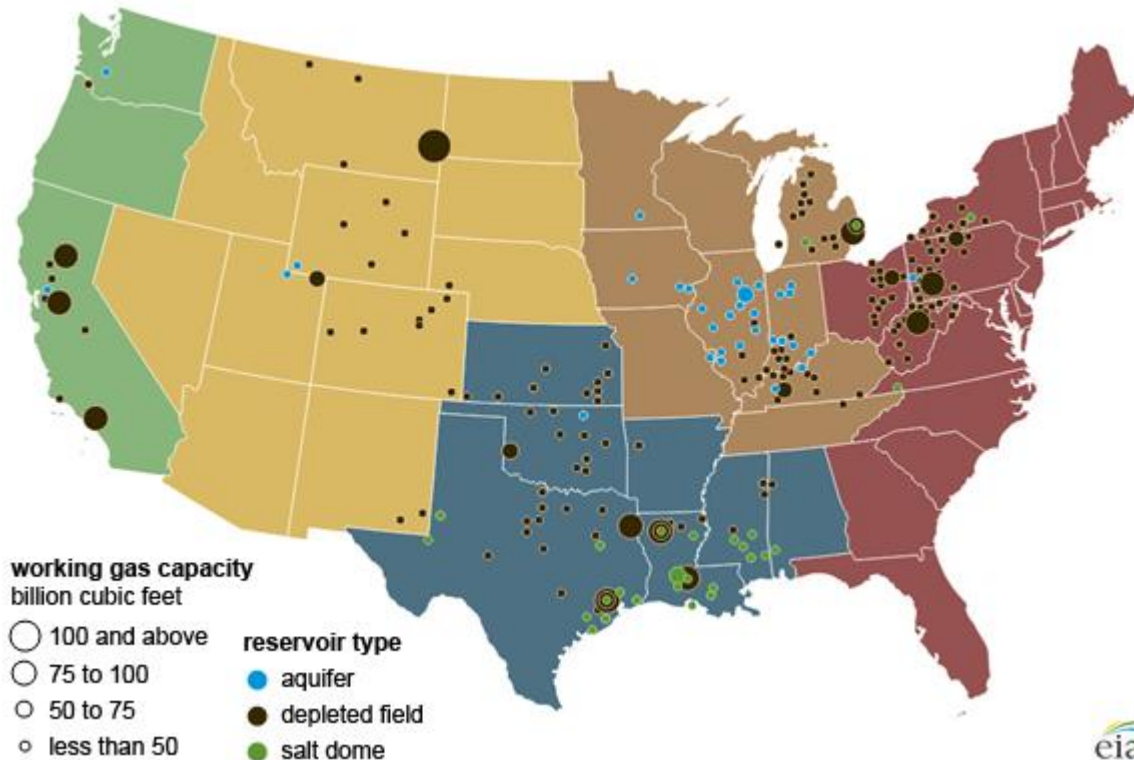
Regional S/D Models Storage Projection

Week Ending 29-May

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	12.3	1.7	14.0	98
East	2.7	2.8	5.5	39
Midwest	3.5	0.7	4.2	30
Mountain	3.0	-1.8	1.2	9
South Central	1.5	0.6	2.1	15
Pacific	1.5	-0.7	0.9	6

*Adjustment Factor is calculated based on historical regional deltas

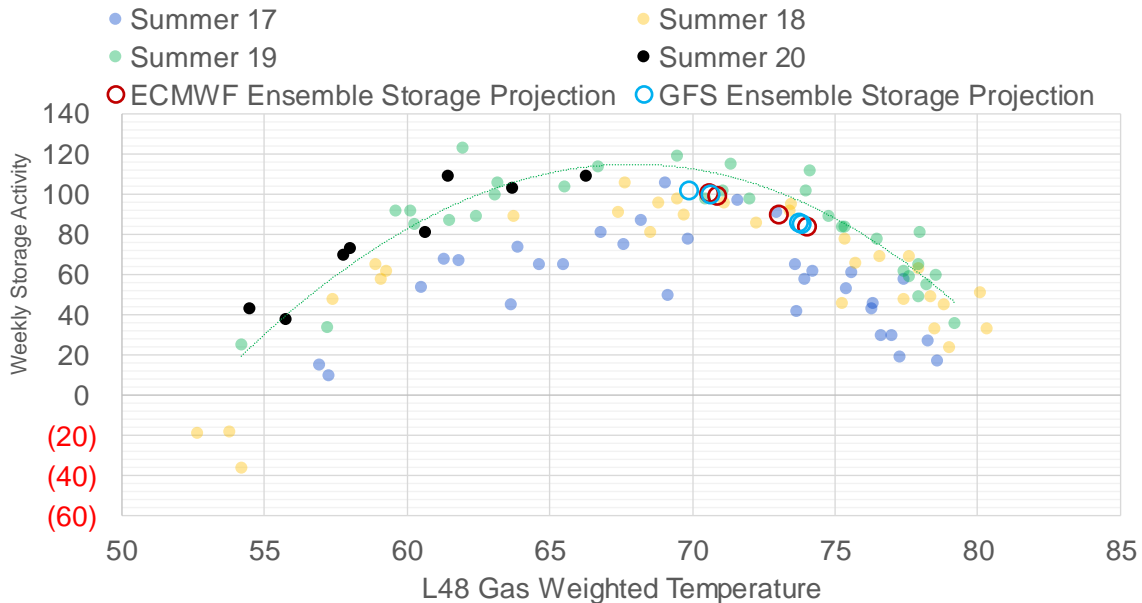
U.S. underground natural gas storage facilities by type (July 2015)



Weather Model Storage Projection

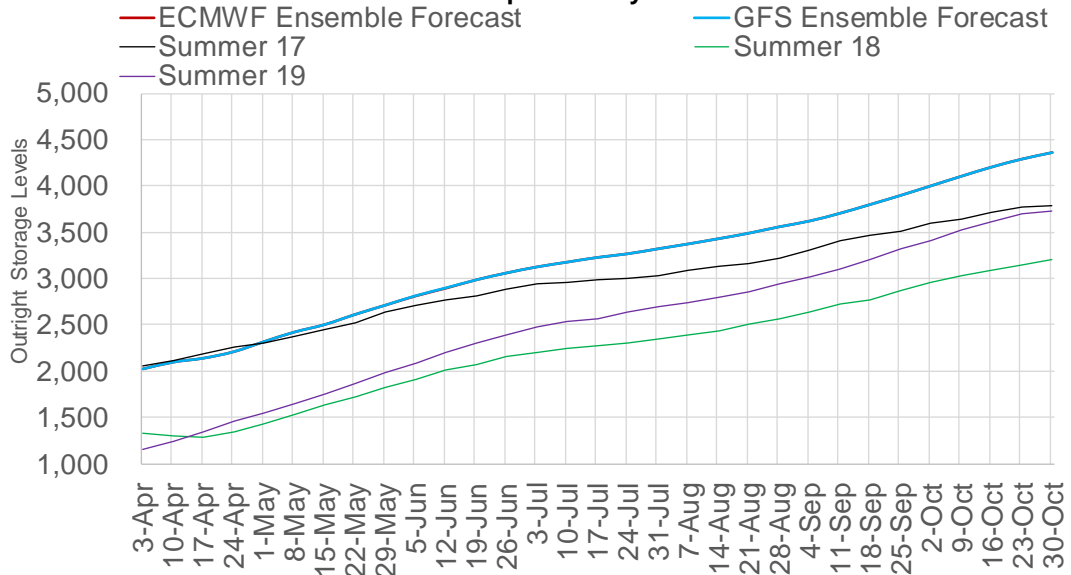
Week Ending	Week Storage Projection
29-May	100
5-Jun	101
12-Jun	85
19-Jun	88

Weather Storage Model - Next 4 Week Forecast



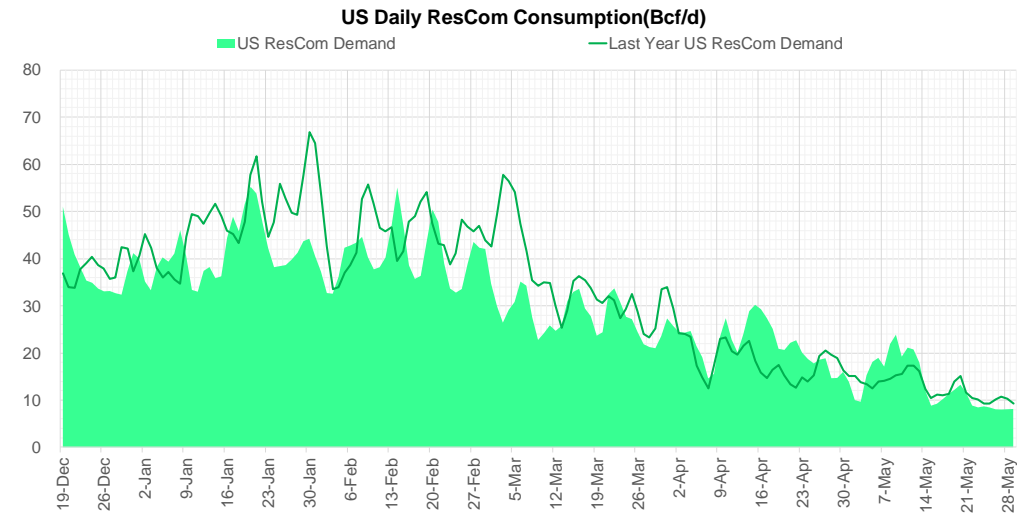
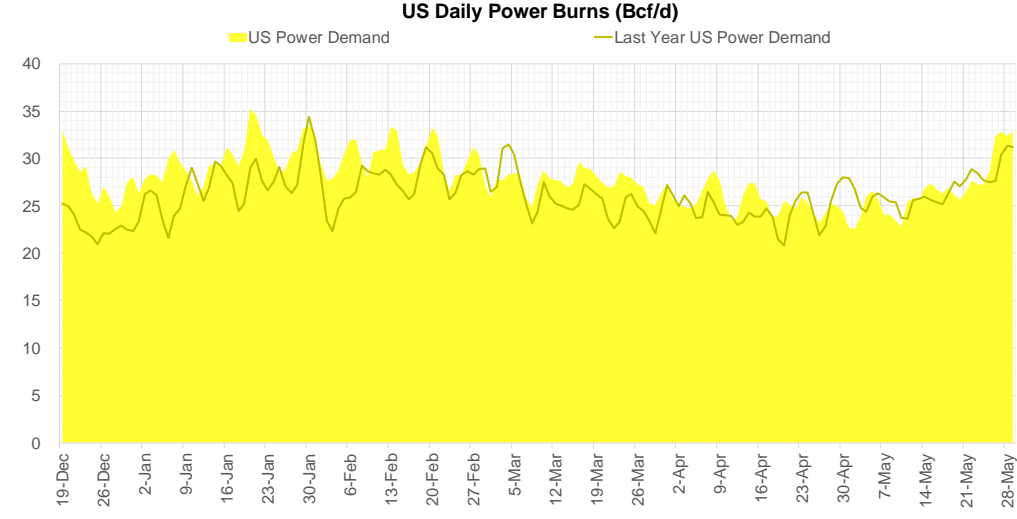
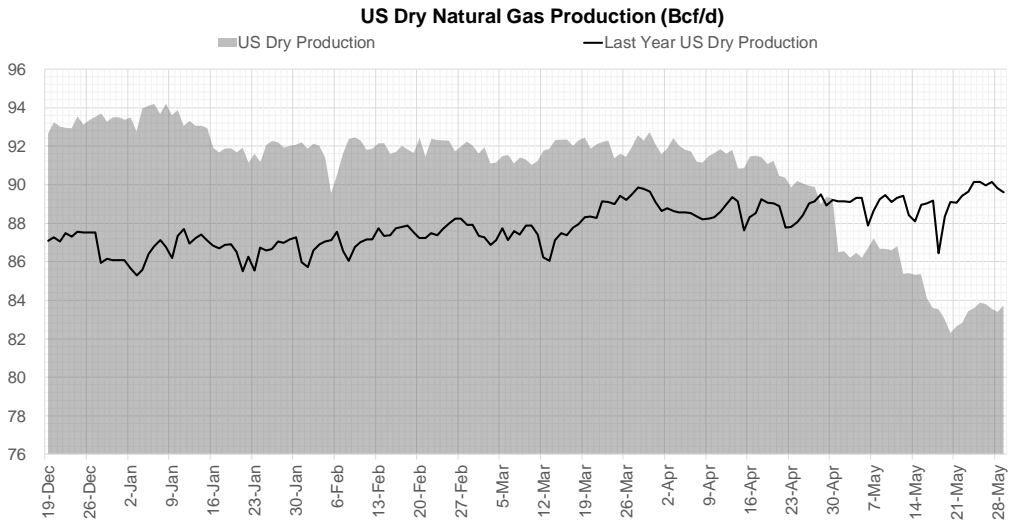
Weather Based End of Winter Projection (Bcf)

10Y normals past 15 day forecast window



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.

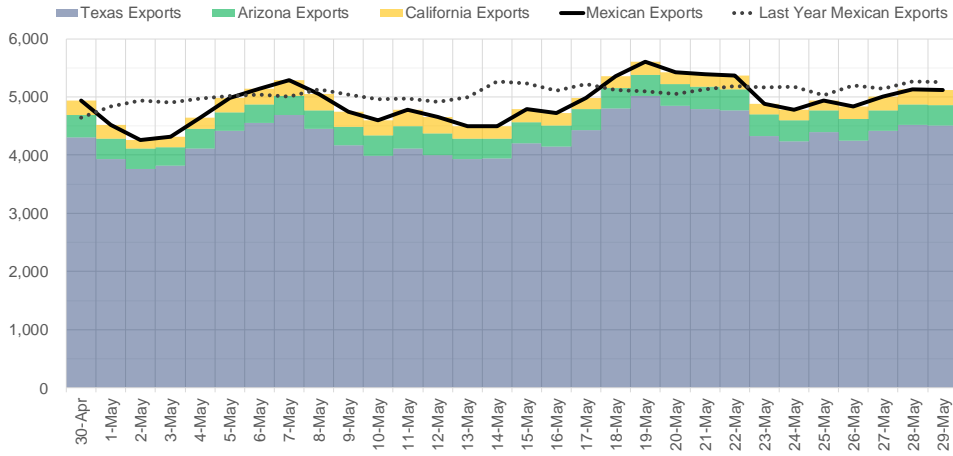
Supply – Demand Trends



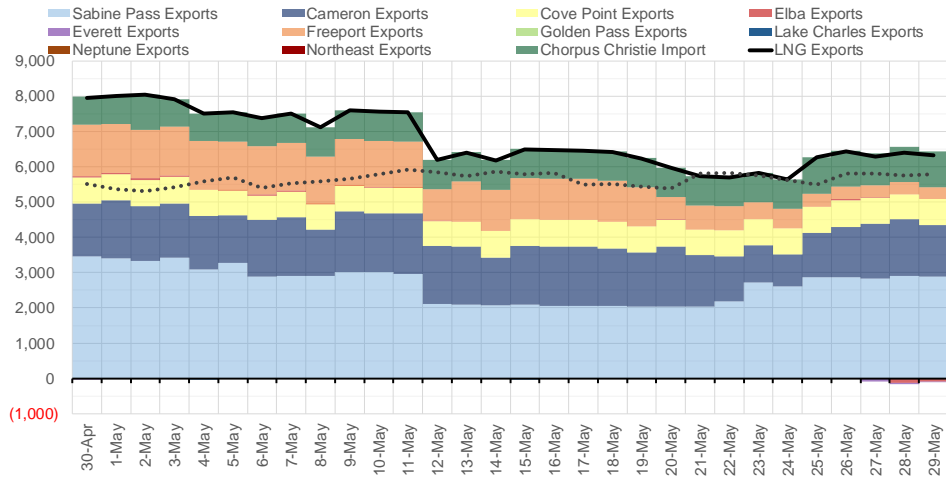
Source: Bloomberg

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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

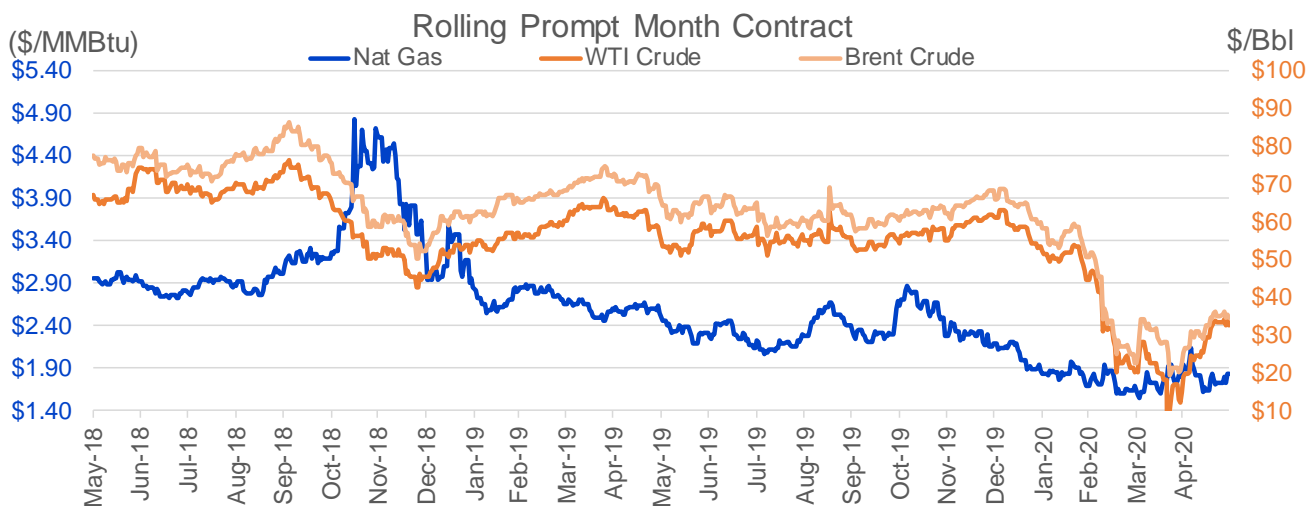
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
8	2020	C	3.00	10260	10	2020	P	1.50	36098
7	2020	C	3.00	10251	10	2020	C	3.00	34926
10	2020	C	3.00	9850	3	2021	P	2.00	33343
9	2020	C	3.00	8575	7	2020	P	1.50	31137
12	2020	C	3.00	7765	10	2020	C	2.75	30997
4	2022	C	3.00	7110	7	2020	P	1.75	30368
5	2022	C	3.00	7110	10	2020	P	1.60	29294
6	2022	C	3.00	7110	10	2020	P	2.00	26803
7	2022	C	3.00	7110	9	2020	C	2.50	25713
8	2022	C	3.00	7110	7	2020	C	2.50	23539
9	2022	C	3.00	7110	9	2020	P	1.50	22031
10	2022	C	3.00	7110	10	2020	P	1.25	22022
3	2021	C	3.00	6900	10	2020	C	2.50	21864
7	2020	C	3.75	5800	7	2020	C	3.00	21523
8	2020	C	3.75	5800	9	2020	C	2.75	21455
9	2020	C	3.75	5800	7	2020	P	2.00	20486
10	2020	C	3.75	5800	10	2020	P	1.75	20250
10	2020	C	2.50	5688	1	2021	C	3.00	19548
11	2020	C	3.00	5521	7	2020	C	2.25	19546
11	2020	C	3.75	5510	8	2020	P	1.50	18948
12	2020	C	3.75	5510	7	2020	C	2.30	18584
7	2020	P	1.75	5316	11	2020	C	4.00	18564
1	2021	C	3.00	5150	1	2021	C	3.50	18097
7	2020	C	2.00	3468	8	2020	C	2.50	18037
4	2021	C	3.00	3370	10	2020	P	2.10	17913
7	2020	C	2.25	3369	10	2020	C	2.25	16813
9	2020	P	1.50	3310	7	2020	C	2.75	16805
7	2020	P	1.60	3300	7	2020	P	1.60	16766
10	2020	P	1.50	3194	10	2020	C	3.25	16652
10	2020	C	3.50	3100	7	2020	P	1.25	16428
7	2020	C	3.50	3000	4	2021	C	3.00	16418
8	2020	C	3.50	3000	8	2020	C	2.75	15423
9	2020	C	3.50	3000	9	2020	P	1.75	15355
10	2020	P	2.00	2950	9	2020	C	2.25	15345
7	2020	C	2.50	2799	8	2020	C	3.00	15337
9	2020	P	2.00	2594	7	2020	C	2.00	15298
7	2020	C	2.10	2495	10	2020	P	1.00	14359
1	2021	C	4.00	2400	7	2020	P	1.00	14278
11	2020	C	2.75	2350	8	2020	P	1.00	14264
10	2020	P	2.25	2310	9	2020	C	3.00	14087
9	2020	P	1.75	2300	9	2020	P	2.00	14001
7	2020	P	1.50	2236	7	2020	C	2.35	13657
7	2020	P	2.00	2218	8	2020	P	1.75	13024
8	2020	P	2.00	2202	3	2021	C	7.00	12881
11	2020	C	3.50	2201	5	2021	C	3.00	12871
11	2020	C	4.00	2200	1	2021	P	2.00	12809
12	2020	C	3.50	2200	9	2020	P	1.20	12801
11	2021	C	3.00	2200	3	2021	C	3.50	12797
12	2021	C	3.00	2200	8	2020	P	1.20	12747
					1	2021	P	2.5	12526

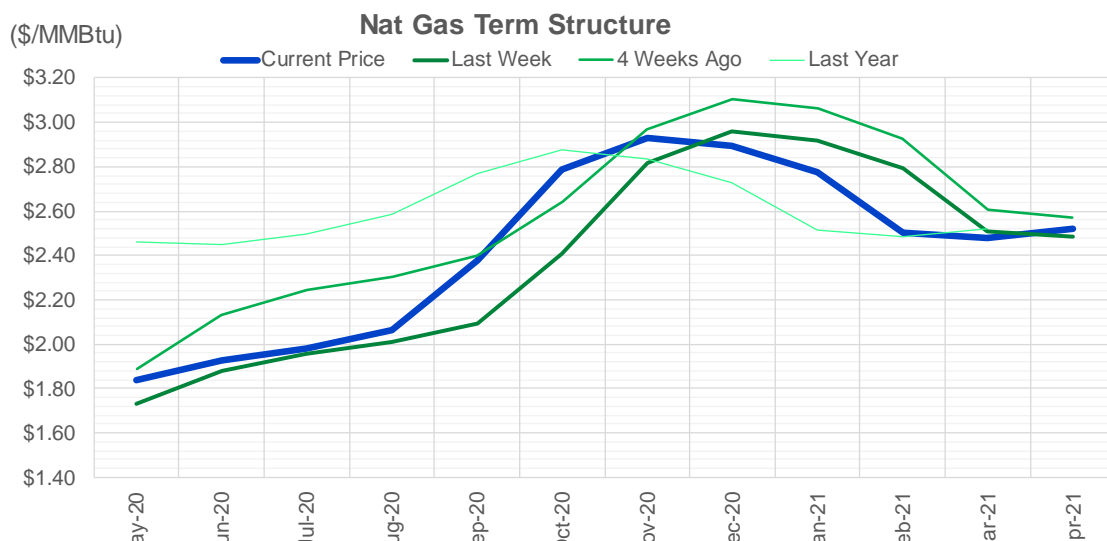
Source: CME, Nasdaq, ICE

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)				NASDAQ Henry Hub Futures (10,000 MMBtu)			
	Current	Prior	Daily Change		Current	Prior	Daily Change		Current	Prior	Daily Change
JUL 20	360569	351093	9476	JUL 20	89154	86546	2608.5	JUL 20			
AUG 20	80996	75579	5417	AUG 20	69054	69071	-17.75	AUG 20			
SEP 20	153133	151519	1614	SEP 20	65808	66017	-208.25	SEP 20			
OCT 20	107280	103656	3624	OCT 20	75814	75757	57	OCT 20			
NOV 20	47558	45234	2324	NOV 20	60121	59921	199.75	NOV 20			
DEC 20	58014	56986	1028	DEC 20	57659	57387	272.75	DEC 20			
JAN 21	99916	96583	3333	JAN 21	70199	70011	188	JAN 21			
FEB 21	36953	35566	1387	FEB 21	43759	43654	105	FEB 21			
MAR 21	62179	62713	-534	MAR 21	59692	59155	536.75	MAR 21			
APR 21	70697	70834	-137	APR 21	51449	51575	-125.75	APR 21			
MAY 21	26128	25597	531	MAY 21	44286	44379	-93	MAY 21			
JUN 21	16525	16537	-12	JUN 21	41745	41388	356.75	JUN 21			
JUL 21	12596	12482	114	JUL 21	43019	42866	153.25	JUL 21			
AUG 21	10739	10674	65	AUG 21	43611	43109	501.5	AUG 21			
SEP 21	11749	11588	161	SEP 21	41077	40828	249.25	SEP 21			
OCT 21	24847	24528	319	OCT 21	52479	52468	11.25	OCT 21			
NOV 21	16739	16255	484	NOV 21	35852	35881	-29.25	NOV 21			
DEC 21	13727	13432	295	DEC 21	36204	36229	-25	DEC 21			
JAN 22	11308	11285	23	JAN 22	27867	27779	88.25	JAN 22			
FEB 22	7791	6429	1362	FEB 22	24793	24705	88	FEB 22			
MAR 22	13517	13506	11	MAR 22	26441	26410	31	MAR 22			
APR 22	10846	10792	54	APR 22	23226	23238	-12.25	APR 22			
MAY 22	4386	4383	3	MAY 22	20808	20734	74.75	MAY 22			
JUN 22	2068	2061	7	JUN 22	20222	20154	67.5	JUN 22			
JUL 22	1807	1802	5	JUL 22	20947	20908	38.75	JUL 22			
AUG 22	1262	1256	6	AUG 22	20591	20560	31	AUG 22			
SEP 22	1326	1321	5	SEP 22	20485	20455	30	SEP 22			
OCT 22	1898	1890	8	OCT 22	23250	23286	-35.25	OCT 22			
NOV 22	1362	1357	5	NOV 22	18383	18405	-22.25	NOV 22			
DEC 22	1274	0	1274	DEC 22	19437	19460	-23.25	DEC 22			

Source: CME, Nasdaq, ICE





	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21
Current Price	\$1.840	\$1.927	\$1.979	\$2.061	\$2.375	\$2.785	\$2.928	\$2.895	\$2.775	\$2.503	\$2.476	\$2.519
Last Week	\$1.731	\$1.881	\$1.958	\$2.013	\$2.095	\$2.408	\$2.817	\$2.957	\$2.920	\$2.795	\$2.511	\$2.485
vs. Last Week	\$0.109	\$0.046	\$0.021	\$0.048	\$0.280	\$0.377	\$0.111	-\$0.062	-\$0.145	-\$0.292	-\$0.035	\$0.034
4 Weeks Ago	\$1.890	\$2.134	\$2.242	\$2.302	\$2.396	\$2.643	\$2.965	\$3.104	\$3.063	\$2.925	\$2.604	\$2.569
vs. 4 Weeks Ago	-\$0.050	-\$0.207	-\$0.263	-\$0.241	-\$0.021	\$0.142	-\$0.037	-\$0.209	-\$0.288	-\$0.422	-\$0.128	-\$0.050
Last Year	\$2.454	\$2.460	\$2.450	\$2.499	\$2.588	\$2.767	\$2.874	\$2.837	\$2.730	\$2.517	\$2.487	\$2.522
vs. Last Year	-\$0.614	-\$0.533	-\$0.471	-\$0.438	-\$0.213	\$0.018	\$0.054	\$0.058	\$0.045	-\$0.014	-\$0.011	-\$0.003

	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	1.60	1.51	-0.09
TETCO M3	\$/MMBtu	1.50	1.47	-0.03
FGT Zone 3	\$/MMBtu	1.52	1.80	0.28
Zone 6 NY	\$/MMBtu	1.52	1.43	-0.09
Chicago Citygate	\$/MMBtu	1.73	1.73	0.00
Michcon	\$/MMBtu	1.70	1.70	0.00
Columbia TCO Pool	\$/MMBtu	1.62	1.54	-0.08
Ventura	\$/MMBtu	1.71	1.70	-0.01
Rockies/Opal	\$/MMBtu	1.65	1.55	-0.10
El Paso Permian Basin	\$/MMBtu	1.63	1.51	-0.12
Socal Citygate	\$/MMBtu	2.28	1.76	-0.52
Malin	\$/MMBtu	1.63	1.61	-0.02
Houston Ship Channel	\$/MMBtu	1.73	1.74	0.01
Henry Hub Cash	\$/MMBtu	1.78	1.69	-0.10
AECO Cash	C\$/GJ	1.52	1.47	-0.05
Station2 Cash	C\$/GJ	1.53	1.58	0.05
Dawn Cash	C\$/GJ	1.67	1.72	0.05

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks		vs. Last Year
				Ago		
NatGas Jan/Apr	\$/MMBtu	-0.52	▲ 0.000	▲ 0.000	▼ -0.102	
NatGas Mar/Apr	\$/MMBtu	0.187	▲ 0.000	▲ 0.000	▼ -0.067	
NatGas Oct/Nov	\$/MMBtu	0.31	▲ 0.023	▲ 0.063	▲ 0.252	
NatGas Oct/Jan	\$/MMBtu	0.85	▲ 0.051	▲ 0.139	▲ 0.543	
WTI Crude	\$/Bbl	32.81	▼ -0.680	▲ 17.750	▼ -26.000	
Brent Crude	\$/Bbl	34.74	▼ -1.010	▲ 12.200	▼ -34.710	
Fuel Oil, NY Harbour 1%	\$/Bbl	98.03	▲ 0.000	▲ 0.000	▲ 0.000	
Heating Oil	cents/Gallon	97.21	▼ -1.850	▲ 27.760	▼ -99.540	
Propane, Mt. Bel	cents/Gallon	0.41	▼ -0.002	▲ 0.085	▼ -0.168	
Ethane, Mt. Bel	cents/Gallon	0.22	▼ -0.001	▲ 0.093	▼ -0.006	
Coal, PRB	\$/MTon	12.30	▲ 0.000	▲ 0.000	▼ -0.150	
Coal, ILB	\$/MTon	31.05	▲ 0.000	▲ 0.000	▼ -10.000	