

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 1.73	▲ \$ 0.00	▼ \$ (0.02)

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 34.01	▲ \$ 0.76	▲ \$ 0.7

	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 36.03	▲ \$ 0.50	▲ \$ 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	1.6	2.3	1.3	5.2
24 Hr Chg	-1.6	-7.3	-7.5	-16.4

GFS Ensemble 00z	1-5 Day	6-10 Day	11-15 Day	Total
12 Hr Chg	1.1	-2.1	-2.1	-3.2
24 Hr Chg	-0.3	-6.6	2.3	-4.6

	Current	Δ from YD	Δ from 7D Avg
US Dry Production	83.4	▼ -0.47	▲ 0.28

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	27.7	▲ 0.76	▲ 1.00

	Current	Δ from YD	Δ from 7D Avg
US ResComm	7.8	▼ -0.68	▼ -2.40

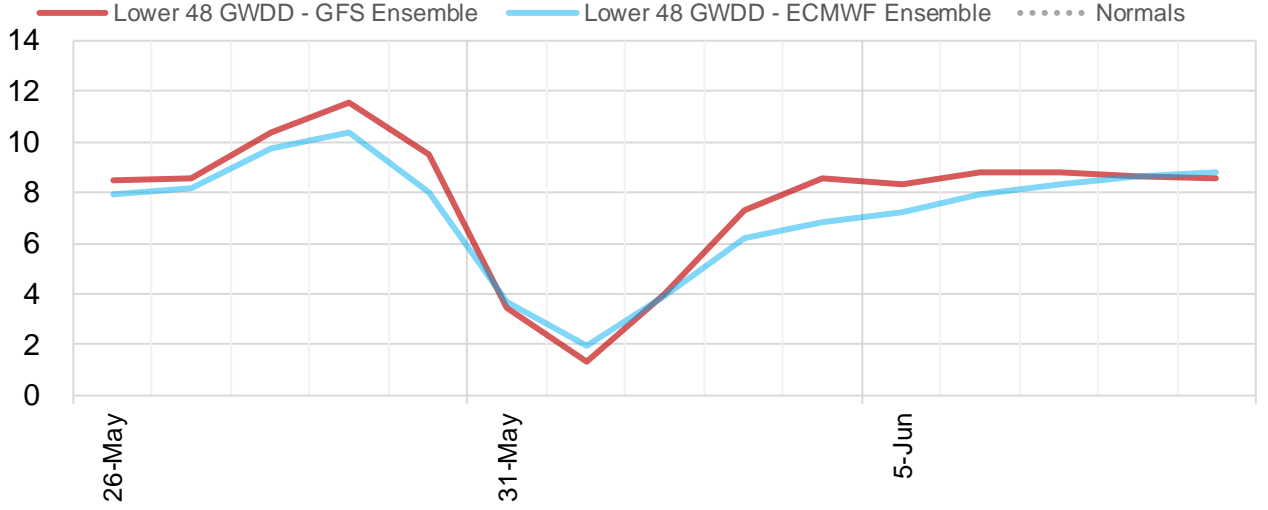
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	3.9	▲ 0.09	▼ -0.03

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	6.3	▲ 0.05	▲ 0.40

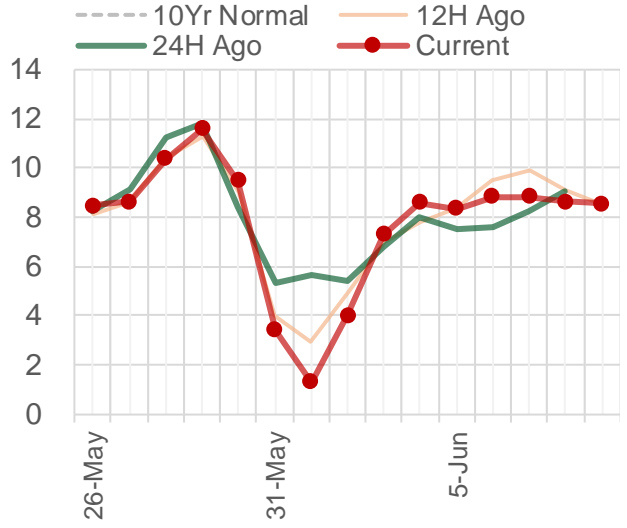
	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	5.2	▲ 0.23	▼ -0.03

Short-term Weather Model Outlooks (00z)

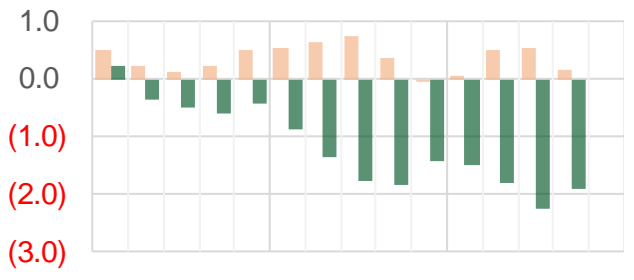
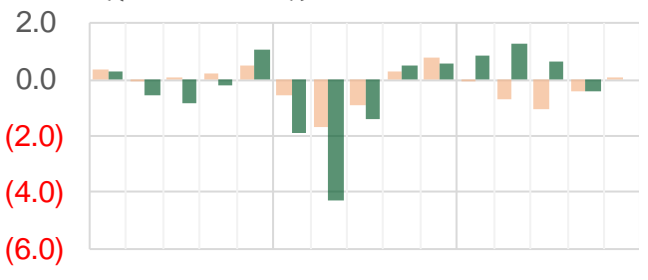
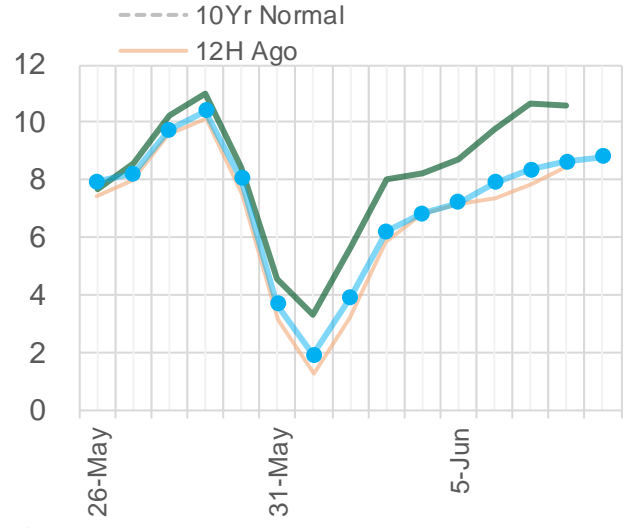
Lower 48 TDD Forecast



Lower 48 GWDD - GFS Ensemble



Lower 48 GWDD - ECMWF Ensemble



Source: WSI, Bloomberg

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Lower 48 Component Models

Daily Balances

	20-May	21-May	22-May	23-May	24-May	25-May	26-May	DoD	vs. 7D
Lower 48 Dry Production	82.3	82.6	82.8	83.4	83.6	83.8	83.4	▼ -0.5	▲ 0.3
Canadian Imports	4.2	4.2	3.8	3.7	3.7	3.8	3.9	▲ 0.1	▲ 0.0
L48 Power	25.6	26.5	27.6	27.2	27.2	27.0	27.7	▲ 0.8	▲ 0.9
L48 Residential & Commercial	13.3	11.5	8.9	8.5	8.7	8.5	7.8	▼ -0.7	▼ -2.1
L48 Industrial	18.3	18.2	18.1	18.0	18.1	18.3	18.4	▲ 0.1	▲ 0.3
L48 Lease and Plant Fuel	4.6	4.6	4.6	4.7	4.7	4.7	4.7	▼ 0.0	▲ 0.0
L48 Pipeline Distribution	1.9	1.9	1.8	1.8	1.8	1.8	1.8	▲ 0.0	▼ -0.1
L48 Regional Gas Consumption	63.7	62.7	61.0	60.1	60.5	60.2	60.4	▲ 0.2	▼ -1.0
Net LNG Exports	6.0	5.7	5.7	5.8	5.6	6.3	6.3	▲ 0.0	▲ 0.5
Total Mexican Exports	5.6	5.6	5.4	4.9	4.8	5.0	5.2	▲ 0.2	▲ 0.0
Implied Daily Storage Activity	11.2	12.9	14.5	16.4	16.4	16.2	15.3		
EIA Reported Daily Storage Activity									
Daily Model Error									

EIA Storage Week Balances

3.9

	17-Apr	24-Apr	1-May	8-May	15-May	22-May	WoW	vs. 4W
Lower 48 Dry Production	91.4	90.8	89.7	86.5	86.1	83.5	▼ -2.6	▼ -4.8
Canadian Imports	4.4	3.9	3.4	3.6	4.0	4.1	▲ 0.1	▲ 0.4
L48 Power	25.5	24.9	24.5	24.5	24.8	26.5	▲ 1.7	▲ 1.8
L48 Residential & Commercial	26.1	22.7	17.0	14.7	19.5	10.9	▼ -8.6	▼ -7.6
L48 Industrial	18.7	18.3	18.3	18.0	16.5	17.8	▲ 1.3	▲ 0.0
L48 Lease and Plant Fuel	5.2	5.1	5.1	4.8	4.8	4.7	▼ -0.1	▼ -0.3
L48 Pipeline Distribution	2.5	2.3	2.0	1.9	2.2	1.9	▼ -0.3	▼ -0.3
L48 Regional Gas Consumption	77.9	73.3	66.9	64.0	67.9	61.8	▼ -6.1	▼ -6.2
Net LNG Exports	8.6	8.1	7.5	7.7	6.9	6.3	▼ -0.7	▼ -1.3
Total Mexican Exports	4.8	5.0	4.8	4.7	4.7	5.2	▲ 0.5	▲ 0.4
Implied Daily Storage Activity	4.5	8.3	13.8	13.7	10.6	14.3	3.7	
EIA Reported Daily Storage Activity	6.1	10.0	15.6	14.7	11.6			
Daily Model Error	-1.7	-1.7	-1.8	-1.0	-1.0			

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	85.0	▼ -6.0	▼ -4.1
Canadian Imports	5.8	4.7	4.8	5.3	4.1	3.9	3.9	▼ 0.0	▼ -0.8
L48 Power	27.3	26.9	30.0	29.9	27.4	25.4	25.7	▲ 0.3	▼ -1.2
L48 Residential & Commercial	10.6	12.8	41.4	40.5	27.9	21.8	13.8	▼ -8.0	▲ 1.0
L48 Industrial	21.7	22.8	24.1	24.7	22.2	18.7	17.6	▼ -1.1	▼ -5.2
L48 Lease and Plant Fuel	4.6	4.9	5.1	5.1	5.2	5.1	4.8	▼ -0.4	▼ -0.2
L48 Pipeline Distribution	1.6	1.8	3.0	3.0	2.4	2.3	2.0	▼ -0.3	▲ 0.2
L48 Regional Gas Consumption	65.8	69.1	103.6	103.2	85.1	73.2	63.7	▼ -9.5	▼ -5.4
Net LNG Exports	3.1	5.6	8.3	8.5	8.5	8.2	6.8	▼ -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	13.6	13.9	-19.7	-19.8	-3.3	8.5	13.5		
EIA Reported Daily Storage Activity									
Daily Model Error									

Source: Bloomberg, analytix.ai

Regional S/D Models Storage Projection

Week Ending 22-May

	Daily Raw Storage	Daily Adjustment Factor	Daily Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	14.1	1.3	15.4	108
East	2.4	2.8	5.2	37
Midwest	3.8	0.8	4.6	32
Mountain	3.0	-1.7	1.3	9
South Central	2.6	0.1	2.6	18
Pacific	2.3	-0.6	1.7	12

*Adjustment Factor is calculated based on historical regional deltas

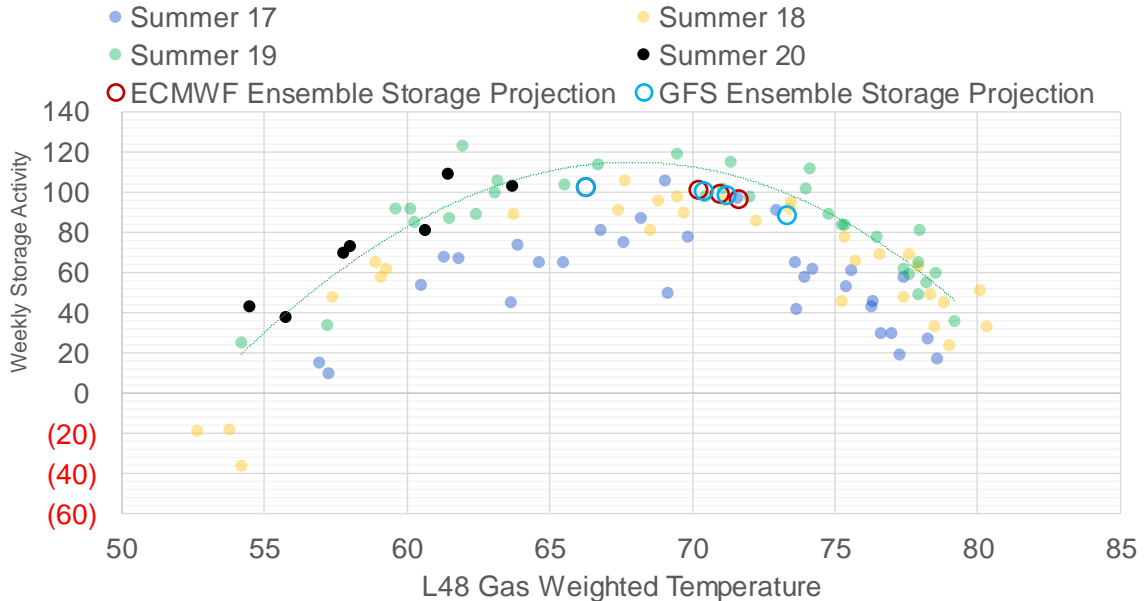
U.S. underground natural gas storage facilities by type (July 2015)



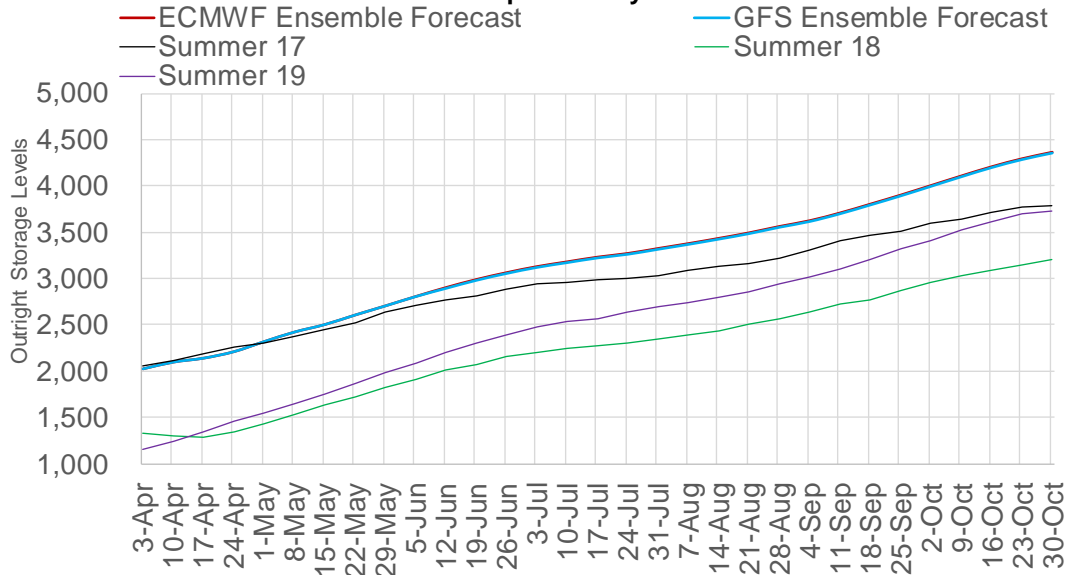
Weather Model Storage Projection

Week Ending	Week Storage Projection
22-May	103
29-May	99
5-Jun	101
12-Jun	93

Weather Storage Model - Next 4 Week Forecast

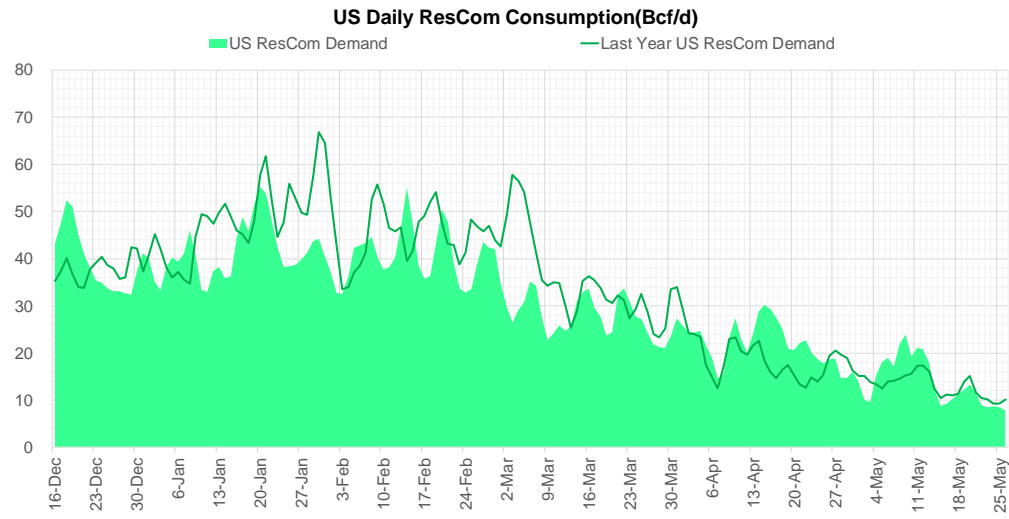
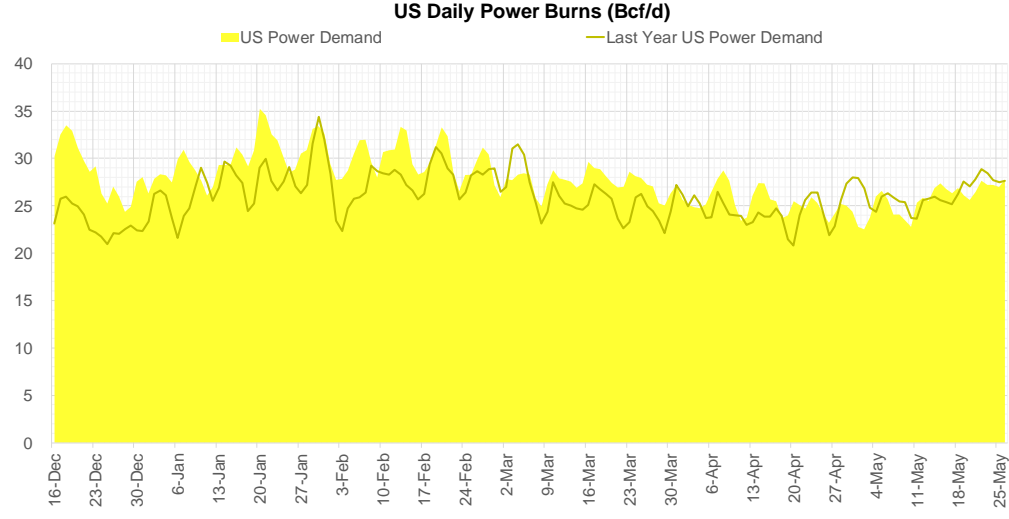
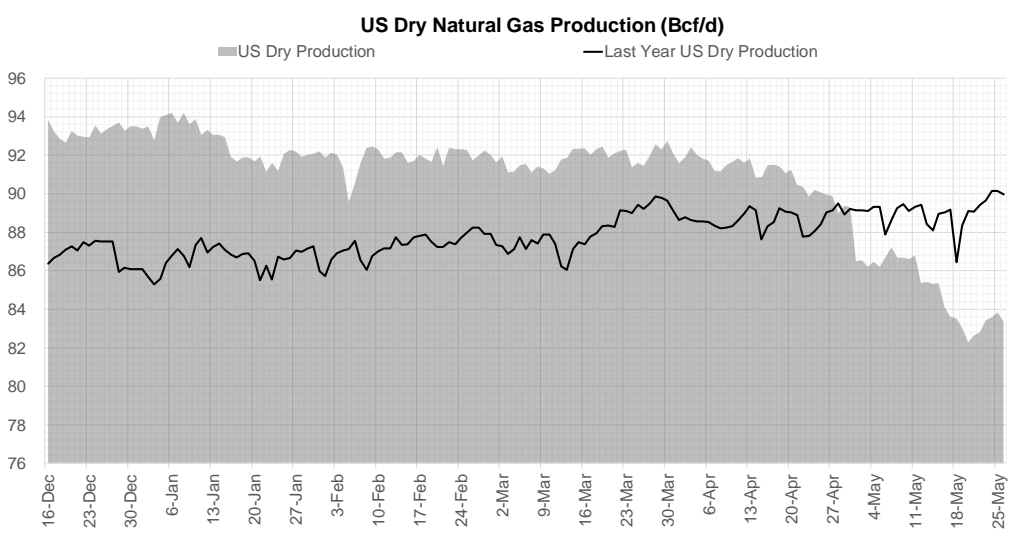


Weather Based End of Winter Projection (Bcf) 10Y normals past 15 day forecast window



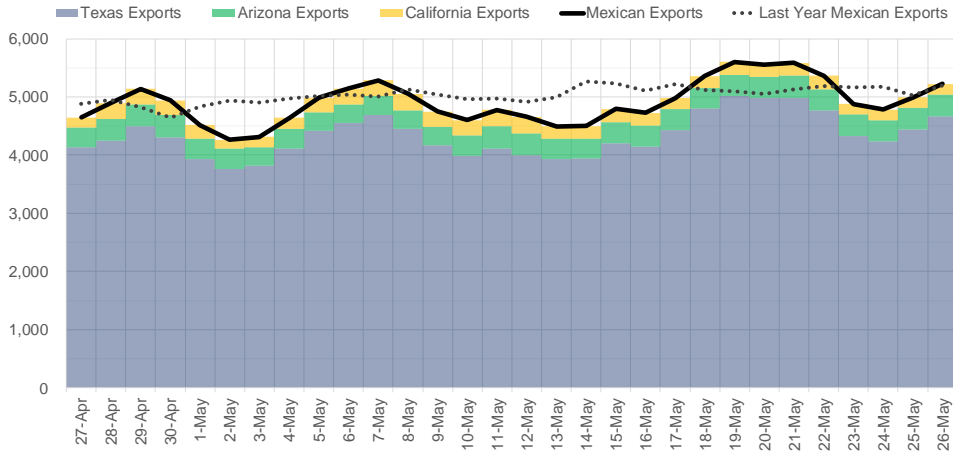
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Supply – Demand Trends

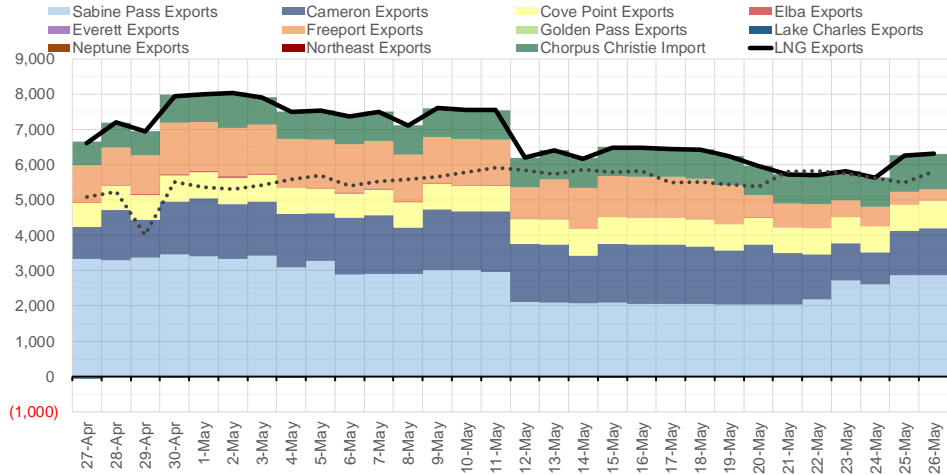


Source: Bloomberg

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

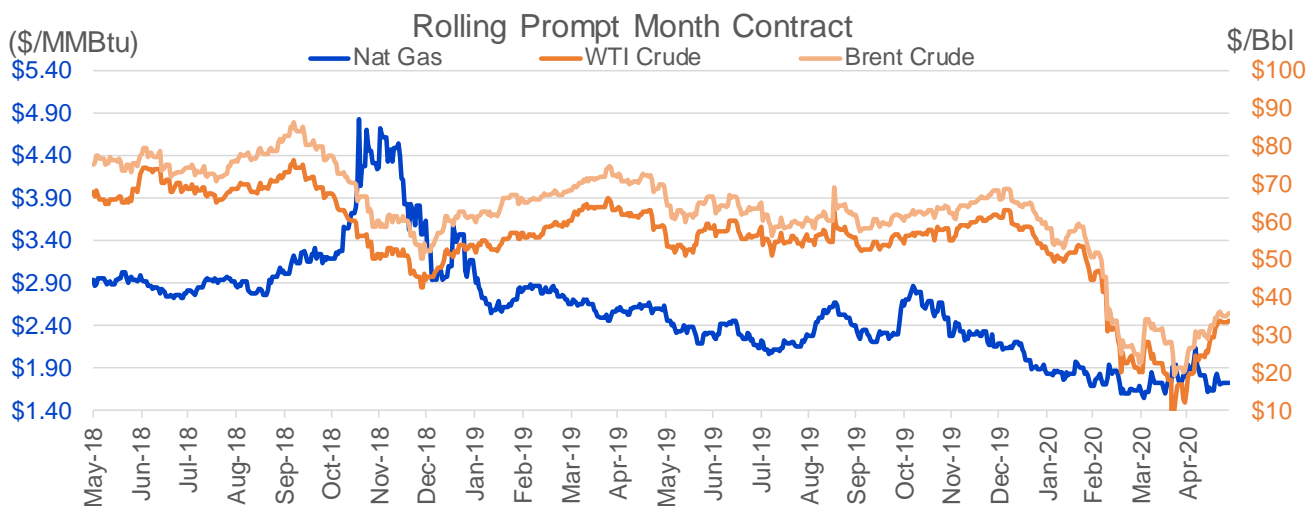
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
6	2020	P	1.60	8891	6	2020	P	1.25	39917
6	2020	P	1.70	5193	10	2020	C	3.00	38550
6	2020	C	2.05	2727	6	2020	C	2.50	37255
6	2020	C	1.90	2262	10	2020	P	1.50	37026
6	2020	P	1.50	2213	6	2020	C	2.25	34679
7	2020	P	1.60	1712	6	2020	P	1.50	34361
6	2020	C	1.75	1466	3	2021	P	2.00	33293
6	2020	P	1.75	1459	7	2020	P	1.50	32267
6	2020	P	1.65	1448	10	2020	C	2.75	30522
10	2020	C	2.75	1365	10	2020	P	1.60	29660
10	2020	P	2.00	1353	6	2020	P	1.75	28585
9	2020	C	3.50	1250	6	2020	C	2.00	28262
10	2020	P	1.50	1226	10	2020	P	2.00	28073
6	2020	C	1.80	1131	9	2020	C	2.50	26327
6	2020	C	1.85	1121	7	2020	C	3.00	26137
7	2020	P	1.70	1010	7	2020	P	1.75	25728
9	2020	C	3.00	1000	6	2020	P	2.00	25370
7	2020	P	1.65	944	10	2020	C	2.50	23483
7	2020	P	1.50	941	7	2020	C	2.50	23427
6	2020	C	1.70	936	9	2020	P	1.50	22260
9	2020	C	2.75	886	10	2020	P	1.25	21611
7	2020	P	1.25	858	9	2020	C	2.75	21443
8	2020	P	1.25	855	6	2020	C	3.00	21358
6	2020	P	1.90	836	7	2020	P	2.00	20468
7	2020	C	2.00	791	6	2020	P	1.60	20253
8	2020	P	1.00	750	1	2021	C	3.00	19822
6	2020	C	2.00	668	10	2020	P	1.75	19810
10	2020	P	0.50	650	7	2020	C	2.25	19233
8	2020	P	1.60	630	8	2020	C	3.00	18922
6	2020	P	1.40	620	1	2021	C	3.50	18870
10	2020	P	1.75	617	11	2020	C	4.00	18814
8	2020	C	2.30	603	7	2020	C	2.30	18342
9	2020	P	1.75	594	8	2020	P	1.50	18132
10	2020	C	2.50	580	8	2020	C	2.50	18094
7	2020	C	2.25	577	10	2020	P	2.10	17902
6	2020	P	1.55	572	9	2020	C	3.00	17439
7	2020	P	1.90	522	10	2020	C	3.25	17417
7	2020	C	2.75	510	6	2020	P	1.70	17026
9	2020	P	1.50	510	10	2020	C	2.25	16797
10	2020	P	1.60	504	6	2020	P	1.00	16758
6	2020	P	1.30	502	4	2021	C	3.00	16273
10	2020	P	0.40	500	7	2020	P	1.25	15788
10	2020	P	1.65	500	7	2020	C	2.75	15736
7	2020	P	1.35	486	9	2020	C	2.25	15674
7	2020	C	1.90	470	8	2020	C	2.75	15266
7	2020	C	2.05	465	6	2020	P	1.40	14659
8	2020	P	1.40	444	6	2020	C	2.75	14552
7	2020	P	1.75	407	9	2020	P	1.75	14404
8	2020	P	1.50	389	3	2021	C	3.00	14398
					10	2020	P	1	14243

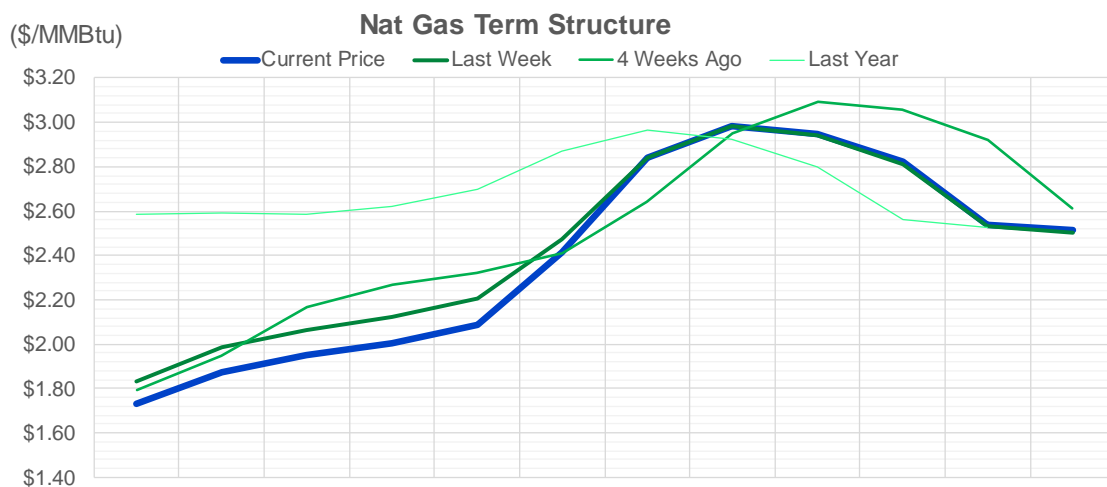
Source: CME, Nasdaq, ICE

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 MMBtu)				NASDAQ Henry Hub Futures (10,000 MMBtu)			
	Current	Prior	Daily Change		Current	Prior	Daily Change		Current	Prior	Daily Change
JUN 20	16079	23451	-7372	JUN 20	67266	67083	182.75	JUN 20	81	81	0
JUL 20	352938	351053	1885	JUL 20	83004	83190	-186	JUL 20	80	80	0
AUG 20	74503	72638	1865	AUG 20	68994	69001	-7.75	AUG 20	280	280	0
SEP 20	147287	144983	2304	SEP 20	66041	66101	-60	SEP 20	81	81	0
OCT 20	102163	101917	246	OCT 20	75606	75583	23.25	OCT 20	760	760	0
NOV 20	44020	44273	-253	NOV 20	59317	59317	0	NOV 20	631	631	0
DEC 20	57031	58255	-1224	DEC 20	57260	57260	0	DEC 20	132	132	0
JAN 21	95392	94412	980	JAN 21	69110	69102	7.75	JAN 21	151	151	0
FEB 21	35684	35293	391	FEB 21	43467	43467	0	FEB 21	23	23	0
MAR 21	62793	62671	122	MAR 21	58255	58255	0	MAR 21	1101	1101	0
APR 21	70541	70425	116	APR 21	51355	51355	0	APR 21	775	775	0
MAY 21	25623	26034	-411	MAY 21	44344	44344	0	MAY 21	41	41	0
JUN 21	16776	16656	120	JUN 21	41186	41186	0	JUN 21	40	40	0
JUL 21	12211	12077	134	JUL 21	42852	42852	0	JUL 21	41	41	0
AUG 21	10231	10263	-32	AUG 21	43150	43150	0	AUG 21	41	41	0
SEP 21	11669	11612	57	SEP 21	40793	40793	0	SEP 21	40	40	0
OCT 21	23892	23919	-27	OCT 21	52314	52314	0	OCT 21	326	326	0
NOV 21	16571	16507	64	NOV 21	35708	35708	0	NOV 21	405	405	0
DEC 21	13387	13367	20	DEC 21	36137	36137	0	DEC 21	5	5	0
JAN 22	11507	11603	-96	JAN 22	27511	27511	0	JAN 22	36	36	0
FEB 22	6182	6186	-4	FEB 22	24496	24496	0	FEB 22	33	33	0
MAR 22	13470	13542	-72	MAR 22	26558	26558	0	MAR 22	900	900	0
APR 22	10838	10945	-107	APR 22	23096	23096	0	APR 22	1035	1035	0
MAY 22	4341	4341	0	MAY 22	20895	20895	0	MAY 22	36	36	0
JUN 22	2058	2051	7	JUN 22	20012	20012	0	JUN 22	35	35	0
JUL 22	1801	1801	0	JUL 22	21126	21126	0	JUL 22	36	36	0
AUG 22	1255	1255	0	AUG 22	20407	20407	0	AUG 22	36	36	0
SEP 22	1320	1320	0	SEP 22	20305	20305	0	SEP 22	35	35	0
OCT 22	1890	1890	0	OCT 22	22820	22820	0	OCT 22	479	479	0
NOV 22	1357	1357	0	NOV 22	18577	18577	0	NOV 22	35	35	0

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	\$1.732	\$1.875	\$1.950	\$2.003	\$2.089	\$2.415	\$2.838	\$2.980	\$2.945	\$2.820	\$2.539	\$2.512
Last Week	\$1.830	\$1.985	\$2.064	\$2.122	\$2.206	\$2.472	\$2.838	\$2.980	\$2.940	\$2.812	\$2.532	\$2.502
vs. Last Week	-\$0.098	-\$0.110	-\$0.114	-\$0.119	-\$0.117	-\$0.057	\$0.000	\$0.000	\$0.005	\$0.008	\$0.007	\$0.010
4 Weeks Ago	\$1.794	\$1.948	\$2.170	\$2.270	\$2.324	\$2.412	\$2.642	\$2.952	\$3.093	\$3.054	\$2.918	\$2.610
vs. 4 Weeks Ago	-\$0.062	-\$0.073	-\$0.220	-\$0.267	-\$0.235	\$0.003	\$0.196	\$0.028	-\$0.148	-\$0.234	-\$0.379	-\$0.098
Last Year	\$2.582	\$2.584	\$2.593	\$2.587	\$2.621	\$2.700	\$2.870	\$2.964	\$2.922	\$2.801	\$2.559	\$2.525
vs. Last Year	-\$0.850	-\$0.709	-\$0.643	-\$0.584	-\$0.532	-\$0.285	-\$0.032	\$0.016	\$0.023	\$0.019	-\$0.020	-\$0.013

	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	1.75	1.33	-0.42
TETCO M3	\$/MMBtu	1.23	1.21	-0.02
FGT Zone 3	\$/MMBtu	1.26	1.65	0.40
Zone 6 NY	\$/MMBtu	1.26	1.24	-0.01
Chicago Citygate	\$/MMBtu	1.52	1.58	0.06
Michcon	\$/MMBtu	1.61	1.57	-0.04
Columbia TCO Pool	\$/MMBtu	1.48	1.37	-0.11
Ventura	\$/MMBtu	1.65	1.57	-0.08
Rockies/Opal	\$/MMBtu	1.47	1.45	-0.02
El Paso Permian Basin	\$/MMBtu	1.34	1.42	0.08
Socal Citygate	\$/MMBtu	1.73	1.66	-0.07
Malin	\$/MMBtu	1.46	1.52	0.06
Houston Ship Channel	\$/MMBtu	1.65	1.60	-0.05
Henry Hub Cash	\$/MMBtu	1.70	1.54	-0.16
AECO Cash	C\$/GJ	1.41	1.41	0.00
Station2 Cash	C\$/GJ	1.41	1.47	0.06
Dawn Cash	C\$/GJ	1.56	1.60	0.04

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	▼ -0.106	
NatGas Mar/Apr	\$/MMBtu	0.187	▲ 0.000	▲ 0.000	▼ -0.061	
NatGas Oct/Nov	\$/MMBtu	0.31	▲ 0.009	▲ 0.089	▲ 0.259	
NatGas Oct/Jan	\$/MMBtu	0.86	▲ 0.005	▲ 0.190	▲ 0.554	
WTI Crude	\$/Bbl	33.25	▲ 3.820	▲ 16.310	▼ -25.380	
Brent Crude	\$/Bbl	35.13	▲ 2.630	▲ 13.690	▼ -33.560	
Fuel Oil, NY Harbour 1%	\$/Bbl	98.03	▲ 0.000	▲ 0.000	▲ 0.000	
Heating Oil	cents/Gallon	98.20	▲ 6.160	▲ 33.530	▼ -98.930	
Propane, Mt. Bel	cents/Gallon	0.41	▲ 0.015	▲ 0.084	▼ -0.168	
Ethane, Mt. Bel	cents/Gallon	0.22	▼ -0.004	▲ 0.091	▼ -0.005	
Coal, PRB	\$/MTon	12.30	▲ 0.000	▲ 0.000	▼ -0.050	
Coal, ILB	\$/MTon	31.05	▲ 0.000	▲ 0.000	▼ -10.000	