

	Cu	ırrent	Δ1	fro	m YD	Δ1	_	m 7D vg
Nat Gas Prompt	\$	1.80	_	\$	0.00	_	\$	0.05

	Current	Δ from YD	Δ from Ανζ	
WTI Prompt	\$ 33.89	\$ (0.46)	\$	0.4

	Curront	Δ from YD	Δ from 7D
	Current		Avg
Brent Prompt	\$ 35.5	6 🕶 \$ (0.61)	\$ 0.0

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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	1.2	8.7	5.2	15.2
24 Hr Chg	-0.8	6.3	6.6	12.2
GFS Ensemble 00z	1-5 Day	6-10 Day	11-15 Day	Total
GFS Ensemble 00z 12 Hr Chg	1-5 Day -0.1	6-10 Day -1.4	11-15 Day -3.1	Total -4.6

	Current	Δ from YD	Δ from 7D Avg		
US Dry Production	83.1	▼ -0.70	▼ -0.10		

	Current	Δ from YD	Δ from 7D Avg
US ResComm	7.8	▼ -0.23	▼ -1.77

	Current		rom YD	Δf	Δ from 7D Avg		
Net LNG Exports	6.5		0.05		0.56		

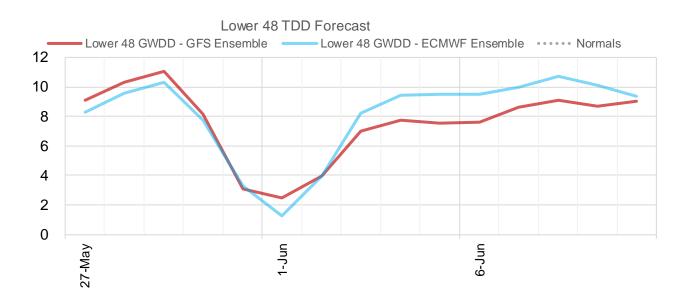
	Current	Δ from YD	Δf	rom 7D Avg
US Power Burns	31.4	▼ -0.09	_	3.64

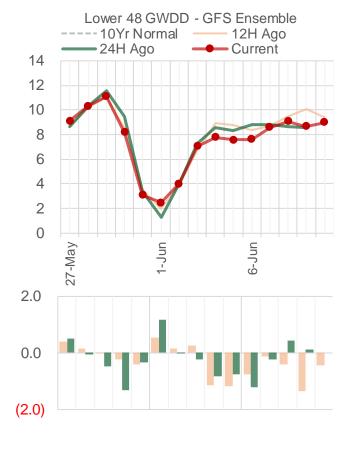
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	4.7	a 0.57	a 0.73

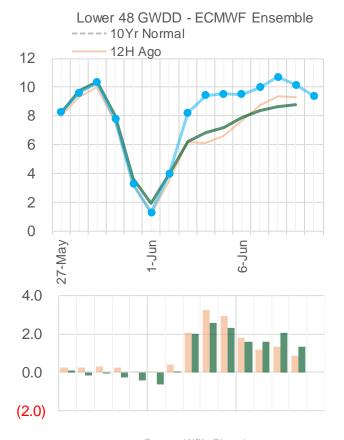
	Current	Δf	rom YD	Δf	rom 7D Avg
Mexican Exports	4.9		0.03	~	-0.27



Short-term Weather Model Outlooks (00z)







Source: WSI, Bloomberg



Lower 48 Component Models

Daily Balances

	21-May	22-May	23-May	24-May	25-May	26-May	27-May	DoD	vs. 7D
Lower 48 Dry Production	82.6	82.8	83.4	83.6	83.9	83.8	83.1	▽ -0.7	▼ -0.3
Canadian Imports	4.2	3.8	3.7	3.7	3.8	4.1	4.7	0.6	▲ 0.8
L48 Power	26.5	27.7	27.3	27.2	28.6	31.5	31.4	▼ -0.1	3.3
L48 Residential & Commercial	11.5	8.9	8.5	8.7	8.4	8.1	7.8	▼ -0.2	▼ -1.2
L48 Industrial	17.4	17.0	16.7	16.7	16.9	17.2	17.6	△ 0.4	△ 0.6
L48 Lease and Plant Fuel	4.6	4.6	4.7	4.7	4.7	4.7	4.6	▼ 0.0	▼ 0.0
L48 Pipeline Distribution	1.9	1.8	1.8	1.8	1.8	2.0	1.9	▼ 0.0	△ 0.1
L48 Regional Gas Consumption	61.9	60.0	58.8	59.1	60.4	63.4	63.5	0.0	2.9
Net LNG Exports	5.7	5.7	5.8	5.6	6.3	6.5	6.5	△ 0.0	△ 0.6
Total Mexican Exports	5.6	5.4	4.9	4.8	4.9	4.8	4.9	△ 0.0	▼ -0.2
Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error	13.6	15.6	17.6	17.8	16.0	13.2	12.9		

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	24.9	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	18.6	18.3	18.3	18.0	16.4	17.5	1.1	▼ -0.3
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	67.8	61.5	▽ -6.4	▼ -6.5
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 EIA Reported Daily Storage Activity Daily Model Error	4.5 6.1 -1.6	8.3 10.0 -1.7	13.8 15.6 -1.8	13.7 14.7 -1.0	10.7 11.6 -0.9	14.7	4.0	

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	▼ -4.2
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	26.1	a 0.7	▼ -0.8
L48 Residential & Commercial	10.6	12.8	41.4	40.5	27.9	21.8	13.6	▼ -8.2	a 0.8
L48 Industrial	21.7	22.8	24.1	24.7	22.2	18.7	17.2	▼ -1.4	▼ -5.5
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	a 0.2
L48 Regional Gas Consumption	65.8	69.1	103.6	103.2	85.1	73.2	63.6	▽ -9.6	▼ -5.5
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 EIA Reported Daily Storage Activity Daily Model Error	13.6	13.9	-19.7	-19.8	-3.3	8.5	13.6		

Source: Bloomberg, analytix.ai



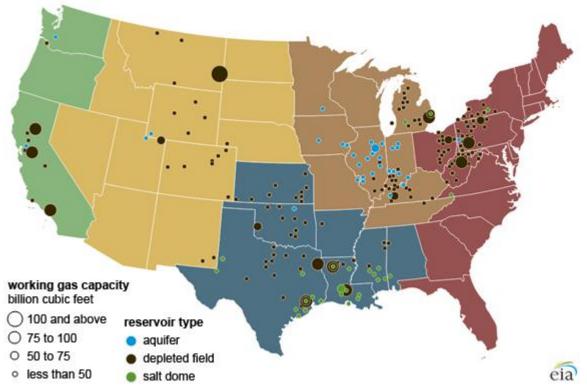
Regional S/D Models Storage Projection

Week Ending 22-May

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	14.4	1.3	15.7	110
East	2.5	2.8	5.3	37
Midwest	3.9	8.0	4.6	32
Mountain	3.0	-1.7	1.3	9
South Central	2.7	0.1	2.8	19
Pacific	2.4	-0.6	1.7	12

^{*}Adjustment Factor is calcuated 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	100
5-Jun	101
12-Jun	91

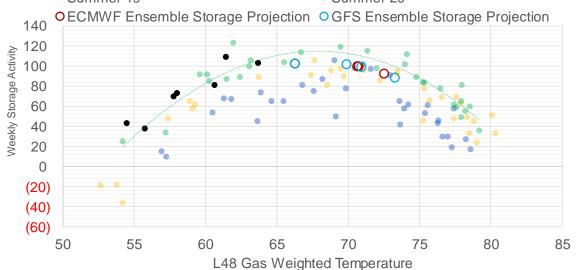
Weather Storage Model - Next 4 Week Forecast

Summer 17

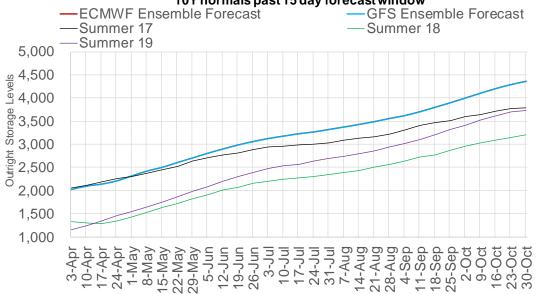
Summer 18

Summer 19

• Summer 20



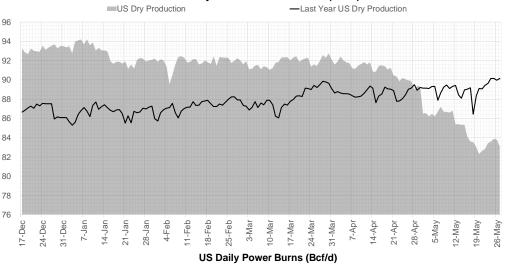
Weather Based End of Winter Projection (Bcf) 10Y normals past 15 day forecast window

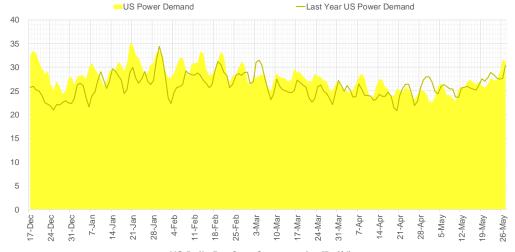




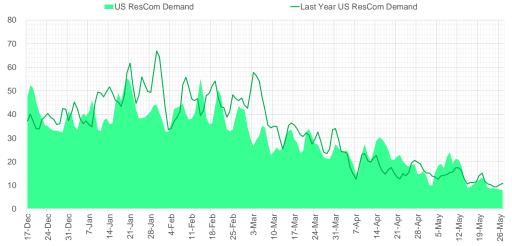
Supply - Demand Trends

US Dry Natural Gas Production (Bcf/d)





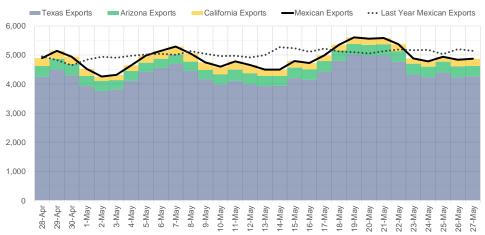
US Daily ResCom Consumption(Bcf/d)



Source: Bloomberg



Mexican Exports - Last 30 days (MMcf/d)



Net LNG Exports - Last 30 days (MMcf/d) Cove Point Exports Elba Exports Sabine Pass Exports Cameron Exports Everett Exports Freeport Exports Golden Pass Exports Lake Charles Exports Neptune Exports Northeast Exports Chorpus Christie Import LNG Exports 9,000 8.000 7,000 6,000 5,000 4.000 3,000 2 000 1,000 0 (1,000)7-May 8-Мау 9-Мау 10-May 12-May 13-May 14-May 16-May

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
7	2020	С	1.95	5970	6	2020	Р	1.25	39917
6	2020	P	1.70	4309	10	2020	С	3.00	38511
6	2020	С	1.80	4213	6	2020	С	2.50	36980
8	2020	P	1.50	3208	10	2020	Р	1.50	36246
6	2020	P	1.75	3172	6	2020	С	2.25	34676
7	2020	Р	1.55	3151	6	2020	Р	1.50	33755
7	2020	P	1.65	2905	3	2021	Р	2.00	33293
7	2020	P	1.80	2447	7	2020	Р	1.50	32856
7	2020	Р	1.70	2445	10	2020	С	2.75	30693
7	2020	P	1.50	2429	10	2020	Р	1.60	29293
6	2020	C	1.85	2410	6	2020	Р	1.75	28091
7	2020	P	1.90	2332	6	2020	С	2.00	27838
7	2020	C	2.25	2190	10	2020	Р	2.00	27078
7	2020	Ċ	2.00	1894	7	2020	С	3.00	26150
7	2020	P	1.85	1849	9	2020	С	2.50	25942
6	2020	Р	1.80	1795	7	2020	Р	1.75	25759
7	2020	C	1.90	1664	10	2020	С	2.50	23499
7	2020	P	1.60	1628	7	2020	С	2.50	23476
7	2020	C	2.10	1527	6	2020	Р	2.00	23464
7	2020	P	1.75	1264	9	2020	Р	1.50	22200
8	2020	Р	1.25	1262	10	2020	Р	1.25	21811
7	2020	Р	1.40	1189	9	2020	С	2.75	21144
8	2020	C	2.10	1017	7	2020	Р	2.00	20575
8	2020	P	1.70	1002	10	2020	Р	1.75	20226
8	2020	C	2.25	870	1	2021	С	3.00	19823
9	2020	C	2.30	870	7	2020	С	2.25	19328
6	2020	C	1.75	806	8	2020	С	3.00	18922
5	2030	C	6.75	754	1	2021	С	3.50	18872
8	2020	C	2.05	716	11	2020	С	4.00	18814
8	2020	P	1.80	709	8	2020	Р	1.50	18461
8	2020	P	1.95	670	7	2020	С	2.30	18387
8	2020	r P	1.60	667	8	2020	C	2.50	18099
8	2020	r P	1.40	656	10	2020	Р	2.10	17913
7	2020	C	2.75	626	9	2020	C	3.00	17861
, 12	2020	P	2.50	600	6	2020	P	1.60	17554
1	2021	P	2.50	600	10	2020	С	3.25	17327
6	2020	P	1.85	594	6	2020	С	3.00	16933
7	2020	C	3.00	577	10	2020	C	2.25	16811
6	2020	P	1.60	486	6	2020	P	1.00	16758
7	2020	C	2.40	458	7	2020	P	1.25	16424
, 12	2020	C	3.50	455	4	2021	С	3.00	16273
					7	2020	С	2.75	16236
7 7	2020 2020	C C	2.50 2.20	446 436	6	2020	P	1.70	15865
7 7	2020		2.20		9	2020	С	2.25	15695
		С		426	8	2020	С	2.75	15276
8	2020	P	2.00	380	6	2020	P	1.40	14681
7	2020	С	2.05	378	3	2021	С	3.00	14398
8	2020	Р	1.75	378	9	2020	P	1.75	14385
7	2020	Р	1.95	336	7	2020	P	1.00	14371
6	2020	Р	1.67	302	8	2020	Р	1	14263

Source: CME, Nasdaq, ICE



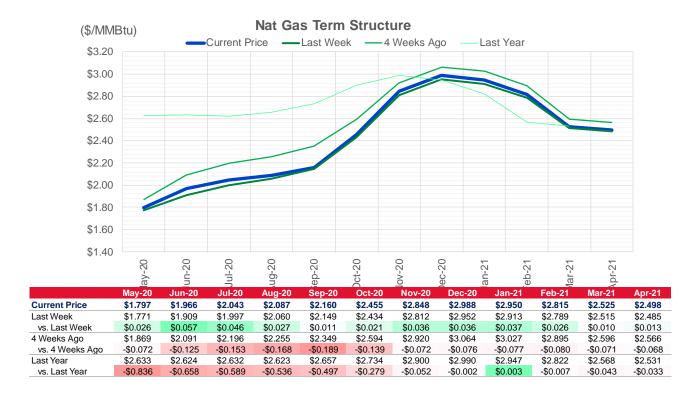
Nat Gas Futures Open Interest CME, ICE and Nasdaq Combined

CME Henry	Hub Futures (1	0,000 MMBtı	J)	ICE Henry	Hub Futures Con	tract Equiv	alent (10,000 MI	MNASDAQ	Henry Hub Futures	(10,000	MMBtu)
	Current	Prior	Daily Change		Current	Prior	Daily Change		Current	Prior	Daily Change
JUN 20	2113	16079	-13966	JUN 20	68844	67266	1578.5	JUN 20	81	81	0
JUL 20	354657	352938	1719	JUL 20	84835	83004	1831.25	JUL 20	80	80	0
AUG 20	76059	74503	1556	AUG 20	69073	68994	79.75	AUG 20	280	280	0
SEP 20	148670	147287	1383	SEP 20	66084	66041	43.75	SEP 20	81	81	0
OCT 20	103323	102163	1160	OCT 20	75585	75606	-21.75	OCT 20	760	760	0
NOV 20	44412	44020	392	NOV 20	59708	59317	391.5	NOV 20	631	631	0
DEC 20	56620	57031	-411	DEC 20	57287	57260	26.75	DEC 20	132	132	0
JAN 21	96171	95392	779	JAN 21	69155	69110	44.75	JAN 21	151	151	0
FEB 21	35575	35684	-109	FEB 21	43546	43467	79	FEB 21	23	23	0
MAR 21	62648	62793	-145	MAR 21	58241	58255	-14	MAR 21	1101	1101	0
APR 21	70539	70541	-2	APR 21	51435	51355	80	APR 21	775	775	0
MAY 21	25713	25623	90	MAY 21	44435	44344	90.75	MAY 21	41	41	0
JUN 21	16639	16776	-137	JUN 21	41365	41186	179	JUN 21	40	40	0
JUL 21	12253	12211	42	JUL 21	42917	42852	64.75	JUL 21	41	41	0
AUG 21	10493	10231	262	AUG 21	43168	43150	18.25	AUG 21	41	41	0
SEP 21	11620	11669	-49	SEP 21	40826	40793	33.5	SEP 21	40	40	0
OCT 21	24172	23892	280	OCT 21	52413	52314	99.25	OCT 21	326	326	0
NOV 21	16283	16571	-288	NOV 21	35807	35708	99.75	NOV 21	405	405	0
DEC 21	13395	13387	8	DEC 21	36285	36137	147.75	DEC 21	5	5	0
JAN 22	11284	11507	-223	JAN 22	27645	27511	133.75	JAN 22	36	36	0
FEB 22	6430	6182	248	FEB 22	24622	24496	125.5	FEB 22	33	33	0
MAR 22	13480	13470	10	MAR 22	26492	26558	-65.75	MAR 22	900	900	0
APR 22	10651	10838	-187	APR 22	23167	23096	70.75	APR 22	1035	1035	0
MAY 22	4339	4341	-2	MAY 22	20773	20895	-121.75	MAY 22	36	36	0
JUN 22	2059	2058	1	JUN 22	20125	20012	113.5	JUN 22	35	35	0
JUL 22	1801	1801	0	JUL 22	20971	21126	-155	JUL 22	36	36	0
AUG 22	1255	1255	0	AUG 22	20531	20407	123.5	AUG 22	36	36	0
SEP 22	1320	1320	0	SEP 22	20426	20305	121	SEP 22	35	35	0
OCT 22	1890	1890	0	OCT 22	23178	22820	358.25	OCT 22	479	479	0
NOV 22	1357	1357	. 0	NOV 22	18533	18577	-44	NOV 22	35	35	0 ,

Source: CME, Nasdaq, ICE







		Cash	Prompt	Cash to
	Units	Settled	Settle	Prompt
AGT Citygate	\$/MMBtu	1.75	1.48	-0.27
TETCO M3	\$/MMBtu	1.23	1.38	0.15
FGT Zone 3	\$/MMBtu	1.25	1.79	0.54
Zone 6 NY	\$/MMBtu	1.25	1.38	0.13
Chicago Citygate	\$/MMBtu	1.52	1.72	0.20
Michcon	\$/MMBtu	1.61	1.70	0.09
Columbia TCO Pool	\$/MMBtu	1.48	1.51	0.03
Ventura	\$/MMBtu	1.65	1.70	0.05
Rockies/Opal	\$/MMBtu	1.47	1.57	0.10
El Paso Permian Basin	\$/MMBtu	1.34	1.52	0.18
Socal Citygate	\$/MMBtu	1.73	1.78	0.05
Malin	\$/MMBtu	1.46	1.64	0.18
Houston Ship Channel	\$/MMBtu	1.65	1.73	80.0
Henry Hub Cash	\$/MMBtu	1.70	1.68	-0.02
AECO Cash	C\$/GJ	1.41	1.56	0.15
Station2 Cash	C\$/GJ	1.41	1.60	0.19
Dawn Cash	C\$/GJ	1.56	1.73	0.17

Source: CME, Bloomberg



					V:	s. 4 Weeks		
	Units	Current Price	vs.	Last Week		Ago	VS	s. Last Year
NatGas Jan/Apr	\$/MMBtu	-0.52	_	0.000	_	0.000	$\overline{}$	-0.106
NatGas Mar/Apr	\$/MMBtu	0.187	_	0.000	_	0.000	$\overline{}$	-0.061
NatGas Oct/Nov	\$/MMBtu	0.31	_	0.037	_	0.086		0.259
NatGas Oct/Jan	\$/MMBtu	0.86	_	0.067	_	0.183		0.554
WTI Crude	\$/Bbl	33.25	A	1.430		20.470	$\overline{}$	-25.380
Brent Crude	\$/Bbl	35.53	_	0.720	_	15.540	$\overline{}$	-34.580
Fuel Oil, NY Harbour 1%	\$/Bbl	98.03		0.000		0.000		0.000
Heating Oil	cents/Gallon	98.20	$\overline{}$	-2.440	_	37.160	$\overline{}$	-98.930
Propane, Mt. Bel	cents/Gallon	0.41	_	0.000	_	0.086	$\overline{}$	-0.168
Ethane, Mt. Bel	cents/Gallon	0.22	$\overline{}$	-0.015		0.093	$\overline{}$	-0.005
Coal, PRB	\$/MTon	12.30	A	0.000		0.000	$\overline{}$	-0.150
Coal, ILB	\$/MTon	31.05	_	0.000	_	0.000	$\overline{}$	-10.000