

23 April 2021



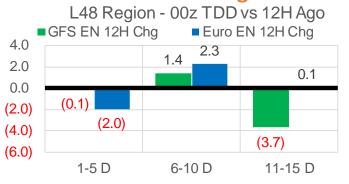
	Cı	ırrent	Δfı	om YD		m 7D vg
WTI Prompt	\$	61.68		\$ 0.25	- \$	(0.9)

	_	urront	Λ fro	m VD	Δ from 7D		
	C	urreni	Δ from YD		Avg		
Brent	\$	65.53	\$	0.13	~ \$	(0.8)	
Prompt	,		,		т.	(/	

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Short-term Weather Model Outlooks Lower 48 Component Models Regional S/D Models Storage Projection Weather Model Storage Projection Supply - Demand Trends Nat Gas Options Volume and Open Interest Nat Gas Futures Open Interest **Price Summary**

Vs. 12H Ago



Vs. 24H Ago

L48 Region - 00z TDD vs 24H Ago GFS EN 24H Chg ■ Euro EN 24H Chg 6.0 3.8 4.0 2.7 1.2 2.0 0.3 0.0 (2.0)(0.7)(2.0)(4.0)1-5 D 6-10 D 11-15 D

	Current	Δ from YD	Δ from 7D Avg
US Dry Production	90.1	- 0.47	- 0.40

US Dry Production	90.1	▼ -0.47	■ -0.40	US Power Burns	25.6	▼ -1.06	•
	Current	Δ from YD	Δ from 7D		Current	Δ from YD	Δ1

	Current	Δ from YD	Δ from 7D Avg
US ResComm	21.1	▼ -7.24	▼ -2.63

	Current	Δ from YD	Δ from 7D Avg		Current	Δ from YD
Net LNG Exports	11.5	a 0.51	- 0.07	Mexican Exports	6.7	▼ -0.02

	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	4.3	▼ -1.35	▼ -1.00

Δ from YD

Current

	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.7	- 0.02	▼ -0.11

Δ from 7D

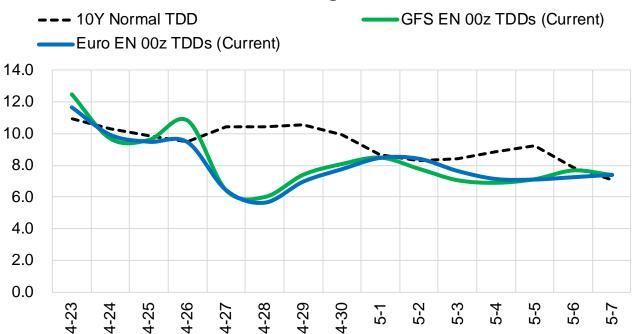
Avg

-0.24

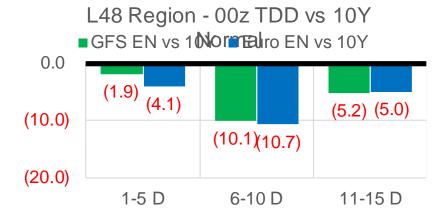


Short-term Weather Model Outlooks (00z)

L48 Region



Vs. 10Y Normal





Lower 48 Component Models

Daily Balances

	17-Apr	18-Apr	19-Apr	20-Apr	21-Apr	22-Apr	23-Apr	DoD	vs.7D
Lower 48 Dry Production	90.4	90.4	90.4	89.6	90.3	90.6	90.1	▼-0.5	▼ -0.2
Canadian Imports	5.0	5.0	4.9	5.5	5.8	5.7	4.3	▼-1.4	▼-1.0
L48 Power	24.4	24.8	25.5	27.1	27.3	26.6	25.6	▼-1.1	▼-0.4
L48 Residential & Commercial	22.3	19.3	20.3	23.1	28.4	28.4	21.1	▼ -7.2	▼ -2.5
L48 Industrial	19.9	19.1	18.9	19.3	19.7	19.9	19.6	▼-0.3	0.1
L48 Lease and Plant Fuel	5.0	5.0	5.0	4.9	5.0	5.0	5.0	▼ 0.0	▼ 0.0
L48 Pipeline Distribution	2.3	2.2	2.3	2.5	2.7	2.7	2.3	▼ -0.4	▼ -0.1
L48 Regional Gas Consumption	73.8	70.4	72.0	76.9	83.2	82.6	73.5	▼ -9.1	▼ -3.0
Net LNG Delivered	11.70	11.92	11.82	11.46	11.69	11.02	11.53	0.5	▼ -0.1
Total Mexican Exports	6.9	6.4	7.0	6.7	6.5	6.7	6.7	▼ 0.0	▼ 0.0
Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error	3.0	6.6	4.4	0.1	-5.3	-4.1	2.6		

EIA Storage Week Balances

	19-Mar	26-Mar	2-Apr	9-Apr	16-Apr	23-Apr	WoW	vs. 4W
Lower 48 Dry Production	91.8	92.0	92.5	92.1	91.4	90.5	▼ -0.9	▼-1.5
Canadian Imports	5.0	4.5	4.5	4.2	4.3	5.3	1.1	1.0
L48 Power	24.9	24.1	24.6	23.2	24.6	25.8	1.2	1.7
L48 Residential & Commercial	30.3	24.9	23.3	18.5	18.5	23.7	5.3	2.4
L48 Industrial	21.2	20.3	21.2	21.4	22.0	19.7	▼ -2.4	▼ -1.6
L48 Lease and Plant Fuel	5.1	5.1	5.1	5.1	5.0	5.0	▼ 0.0	▼ -0.1
L48 Pipeline Distribution	2.6	2.3	2.3	2.1	2.1	2.4	0.3	0.2
L48 Regional Gas Consumption	84.0	76.7	76.5	70.3	72.3	76.7	4.4	2.7
Net LNG Exports	11.2	11.6	11.7	11.5	11.4	11.6	0.2	0.1
Total Mexican Exports	6.3	6.6	6.4	6.2	7.3	6.8	▼ -0.5	0.2
Implied Daily Storage Activity	-4.7	1.6	2.4	8.3	4.7	0.7	-4.0	
EIA Reported Daily Storage Activity	-4.6	2.0	2.9	8.7	5.4			
Daily Model Error	-0.2	-0.4	-0.5	-0.5	-0.7			

Monthly Balances									
	2Yr Ago	LY					MTD		
	Apr-19	Apr-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	MoM	vs. LY
Lower 48 Dry Production	89.1	91.9	91.0	90.5	85.1	92.0	91.3	▼-0.6	8.0 🛋
Canadian Imports	4.6	4.0	5.8	6.3	6.4	4.7	4.6	▼ -0.1	▼-1.7
L48 Power	24.6	25.6	28.0	28.1	27.8	25.0	24.7	▼-0.3	▼ -3.4
L48 Residential & Commercial	19.1	20.5	40.0	43.8	47.7	28.3	20.8	▼ -7.4	▼-23.0
L48 Industrial	21.4	19.8	23.3	23.5	22.1	20.1	21.1	0.9	▼ -2.4
L48 Lease and Plant Fuel	4.9	5.1	5.0	5.1	4.7	5.1	5.0	▼ 0.0	▼ 0.0
L48 Pipeline Distribution	2.2	2.3	3.1	3.2	3.4	2.5	2.2	▼ -0.3	▼ -1.0
L48 Regional Gas Consumption	72.3	73.2	99.4	103.7	105.7	81.0	73.9	▼ -7.2	▼-29.8
Net LNG Exports	4.5	8.2	11.0	10.5	8.4	11.1	11.5	0.4	1.0
Total Mexican Exports	4.7	4.8	5.8	6.2	5.7	6.5	6.7	0.3	▲ 0.6
Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error	12.3	9.6	-19.5	-23.5	-28.3	-1.9	3.9		

Source: Bloomberg, analytix.ai



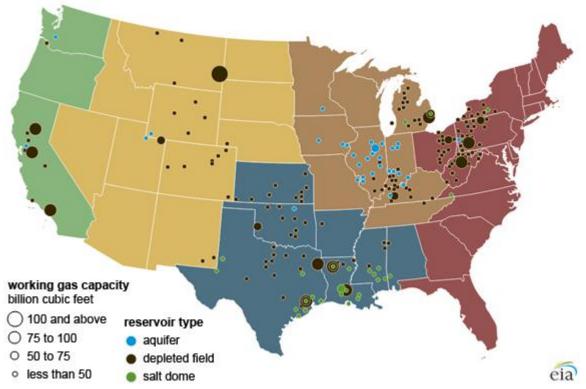
Regional S/D Models Storage Projection

Week Ending 23-Apr

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	0.4	0.9	1.4	9
East	-2.3	1.8	-0.5	-3
Midwest	0.1	-0.3	-0.2	-1
Mountain	3.3	-2.9	0.4	3
South Central	-2.4	2.7	0.3	2
Pacific	1.7	-0.4	1.3	9

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

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



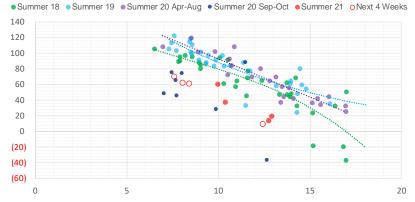


Weather Model Storage Projection

Next report
and beyond

Week Ending	GWDDs	Week Storage Projection
23-Apr	12.4	9
30-Apr	8.4	61
07-May	7.6	70
14-May	8.1	62

Weather Storage Model - Next 4 Week Forecast



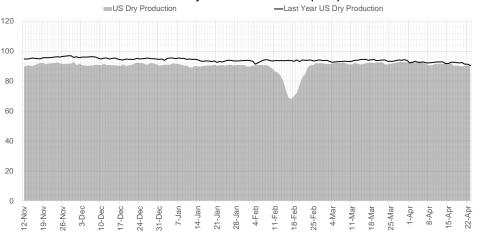
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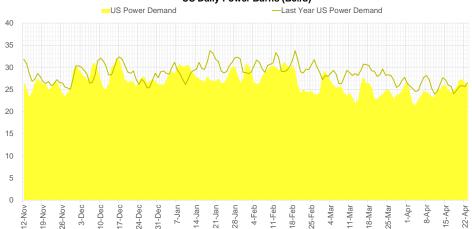


Supply - Demand Trends

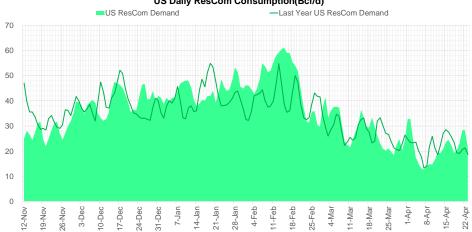
US Dry Natural Gas Production (Bcf/d)



US Daily Power Burns (Bcf/d)



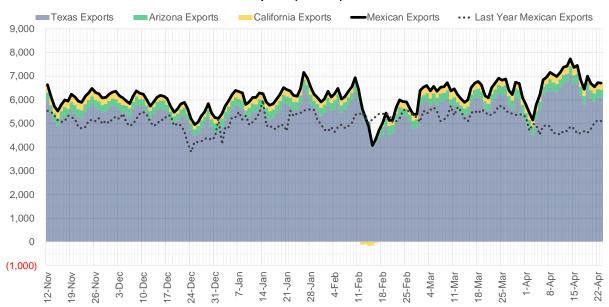
US Daily ResCom Consumption(Bcf/d)



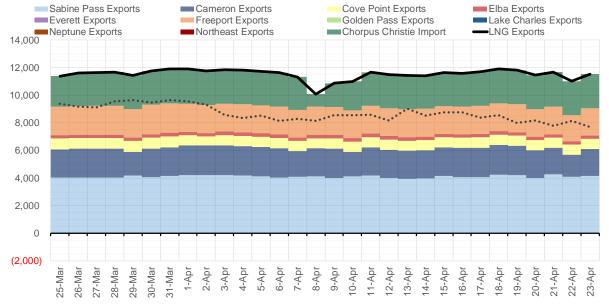
Source: Bloomberg



Mexican Exports (MMcf/d)



Net LNG Exports - Last 30 days (MMcf/d)



Source: Bloomberg



Nat Gas Options Volume and Open Interest CME, ICE and Nasdaq Combined

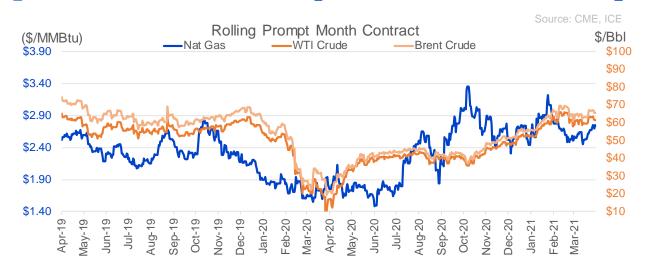
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
6	2021	P	2.65	6320	10	2021	С	4.00	38898
		P P			5	2021	C	3.00	34335
6	2021		2.55	5619	8	2021	C	4.00	33833
8 7	2021	C C	3.25	5180	5	2021	P	2.50	31001
6	2021 2021	C	3.25 3.00	4531 3638	10	2021	C	3.25	30594
8	2021	C	3.00	3574	6	2021	P	2.50	28610
5	2021	C	2.75		7	2021	Ċ	4.00	28238
5 8	2021	P	2.75	3500 3051	8	2021	Č	3.50	27956
5	2021	P	2.60	2985	6	2021	Č	4.00	27953
10	2021	C	3.25	2901	10	2021	Č	5.00	26339
5	2021	C	2.70	2896	5	2021	Č	3.50	25933
					6	2021	Č	3.00	25561
6	2021	C P	3.25	2750	5	2021	P	2.00	25423
10	2021		2.50	2608	5	2021	C	3.25	24854
5	2021	P	2.50	2476	5	2021	Č	4.00	24706
8	2021	C	3.50	2255	8	2021	Č	3.25	24528
6	2021	P	2.25	2210	5	2021	P	2.25	24000
5	2021	С	2.80	2120	10	2021	C	3.50	22908
5	2021	Р	2.65	2003	7	2021	C	3.25	22726
6	2021	Р	2.50	2001	5	2021	C	2.75	21750
2	2022	С	5.50	2000	6	2021	C	3.25	20849
10	2021	С	3.00	1882	10	2021	C	3.00	20359
10	2021	Р	2.75	1873	10	2021	P	2.50	19414
6	2021	Р	2.60	1709	6	2021	C	3.50	
9	2021	С	3.25	1601	9	2021	C	3.50	19121 18989
7	2021	С	3.00	1579	4	2021	C	3.00	18974
8	2021	С	4.00	1540	8	2022	P	2.25	18890
10	2021	С	3.50	1526	5	2021	P	2.23	18889
10	2021	Р	2.25	1500	5 7	2021	C	2.40 3.50	18708
7	2021	Р	2.50	1489	8	2021	P	2.50	
7	2021	Р	2.25	1401	6	2021	P	2.25	18669
10	2021	С	5.50	1400			P P		18571
11	2021	C	3.25	1400	10 10	2021 2021	P P	2.00 2.25	18110 17977
5	2021	C	2.90	1267	7	2021	P	2.25	17851
7	2021	C	3.50	1264	9	2021	P	2.00	17819
5	2021	C	2.85	1254	6	2021 2021	P		
6	2021	Ċ	2.90	1171	6 12		C	2.00	17058
1	2022	P	2.75	1100	12	2021 2021	C	4.00 4.00	16790
6	2021	Р	2.75	1088			C		16626
8	2021	C	3.10	1031	8	2021		3.00	16586
9	2021	Č	3.00	1023	6	2021	С	2.75	15755
5	2021	P	2.40	1005	6	2021	С	3.75	15649
9	2021	P	2.50	1003	7	2021	P	2.00	15536
10	2021	C	3.75	1003	7	2021	C P	3.00	15455
6	2021	C	2.85	973	8	2021		2.00	15255
9	2021	C	3.50	900	9	2021	С	3.25	15205
9 7		C			5	2021	P	2.60	14807
	2021	P	3.10	893	9	2021	С	4.00	14220
7	2021	P P	2.60	872	12	2021	P	2.00	13951
5	2021		2.75	842	9	2021	P	1.90	13733
6	2021	С	2.95	828	3	2022	C Source	: CME, ICE	13675



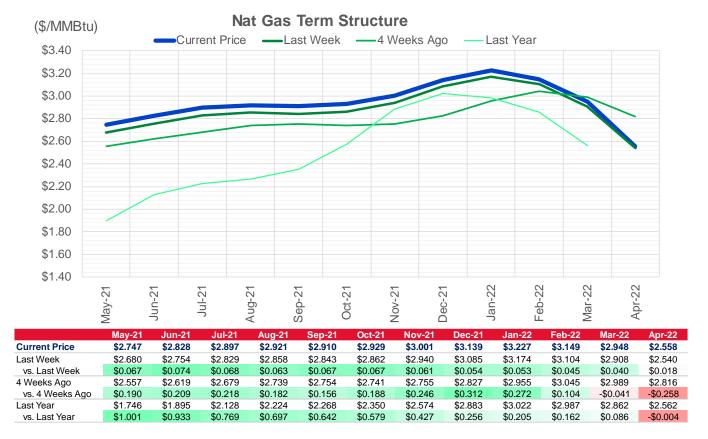
Nat Gas Futures Open Interest

CME, and ICE Combined

CME Henry Hub Futures (10,000 MMBtu) ICE Henry Hub Futures Contract Equivalent (10,000 MM								
	Current	Prior	Daily Change	FOR JUNE 26	Current	Prior	Daily Change	
MAY 21	37883	61406	-23523	MAY 21	77176	79464	-2289	
JUN 21	190709	178117	12592	JUN 21	79524	80418	-894	
JUL 21	187522	185755	1767	JUL 21	88359	88434	-75	
AUG 21	75518	73651	1867	AUG 21	78721	78260	461	
SEP 21	108552	107100	1452	SEP 21	68548	68405	143	
OCT 21	124717	126670	-1953	OCT 21	85038	84817	221	
NOV 21	65010	64935	75	NOV 21	59961	60293	-332	
DEC 21	46003	45051	952	DEC 21	59265	59049	216	
JAN 22	68500	68296	204	JAN 22	63171	62798	372	
FEB 22	22848	22449	399	FEB 22	46514	45918	596	
MAR 22	42761	43002	-241	MAR 22	51209	50912	297	
APR 22	49180	49169	11	APR 22	47390	47108	283	
MAY 22	27066	26445	621	MAY 22	41066	40493	573	
JUN 22	14872	14277	595	JUN 22	39640	39230	410	
JUL 22	9543	9256	287	JUL 22	39452	38801	651	
AUG 22	8724	8685	39	AUG 22	38300	38072	228	
SEP 22	9142	9132	10	SEP 22	39135	38942	193	
OCT 22	21869	21516	353	OCT 22	44626	44319	307	
NOV 22	10599	10376	223	NOV 22	35005	34833	172	
DEC 22	9467	9435	32	DEC 22	39260	39134	126	
JAN 23	5543	5357	186	JAN 23	21816	21683	133	
FEB 23	2459	2422	37	FEB 23	20499	20378	121	
MAR 23	4831	4842	-11	MAR 23	21924	21873	52	
APR 23	5482	5477	5	APR 23	18126	18058	68	
MAY 23	4436	4436	0	MAY 23	18072	18032	40	
JUN 23	957	957	0	JUN 23	16629	16560	69	
JUL 23	1076	1076	0	JUL 23	16590	16489	101	
AUG 23	753	753	0	AUG 23	16764	16664	101	
SEP 23	621	620	1	SEP 23	16168	16085	83	
OCT 23	1716	1716	0	OCT 23	16815	16761	54	







		Cash	Prompt	Cash to
	Units	Settled	Settle	Prompt
AGT Citygate	\$/MMBtu	2.75	2.24	-0.51
TETCO M3	\$/MMBtu	2.20	2.08	-0.12
FGT Zone 3	\$/MMBtu	2.20	2.73	0.53
Zone 6 NY	\$/MMBtu	2.20	1.95	-0.25
Chicago Citygate	\$/MMBtu	2.63	2.60	-0.03
Michcon	\$/MMBtu	2.62	2.59	-0.03
Columbia TCO Pool	\$/MMBtu	2.31	2.21	-0.10
Ventura	\$/MMBtu	2.71	2.53	-0.18
Rockies/Opal	\$/MMBtu	2.73	2.49	-0.24
El Paso Permian Basin	\$/MMBtu	2.48	2.53	0.05
Socal Citygate	\$/MMBtu	3.49	2.82	-0.67
Malin	\$/MMBtu	2.72	2.69	-0.03
Houston Ship Channel	\$/MMBtu	2.79	2.72	-0.07
Henry Hub Cash	\$/MMBtu	2.68	2.56	-0.12
AECO Cash	C\$/GJ	2.33	2.20	-0.13
Station2 Cash	C\$/GJ	2.27	2.53	0.26
Dawn Cash	C\$/GJ	2.61	2.60	-0.01

Source: CME, Bloomberg



					VS	. 4 Weeks		
	Units	Current Price	VS.	Last Week		Ago	vs	. Last Year
NatGas Jul21/Oct21	\$/MMBtu	0.032		-0.001		0.016		0.036
NatGas Oct21/Nov21	\$/MMBtu	0.072	•	-0.006	•	0.000		0.030
NatGas Oct21/Jan22	\$/MMBtu	0.298		-0.014		0.008		0.017
NatGas Apr22/Oct22	\$/MMBtu	0.020		-0.013		-0.021		-0.026
WTI Crude	\$/Bbl	61.68		-1.450		0.710		44.740
Brent Crude	\$/Bbl	65.53		-1.240		0.960		44.090
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18		0.000		0.000		0.000
Heating Oil	cents/Gallon	186.72		-2.850		5.720		122.050
Propane, Mt. Bel	cents/Gallon	0.81		-0.010		-0.115		0.480
Ethane, Mt. Bel	cents/Gallon	0.23		0.003		0.016		0.104
Coal, PRB	\$/MTon	12.30		0.000		0.000		0.000
Coal, PRB	\$/MMBtu	0.70						
Coal, ILB	\$/MTon	31.05		0.000		0.000		0.000
Coal, ILB	\$/MMBtu	1.32						



Weather Storage Model - Next 4 Week Forecast

