

Market Report

11 August 2020

	Current		Δ fro	m YD	Δ from 7D Avg	
Nat Gas Prompt	\$	2.20	\$	0.05	▼ \$ (0.00)	

	С	urrent	Δ	from YD		Δ from 7D Avg	
WTI Prompt	\$	42.69	_	\$ 0.75	\$	1.1	

	Curr	urrent Δ from YD			n YD	Δ from 7D Ava		
Brent Prompt	\$ 4	5.61	_	\$	0.62	_	\$	0.9

Page Menu

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

00z GWDD Change

Cooler Change

Warmer Change

ECMWF Ensemble 00z	1-5 Day	6-10 Day	11-15 Day	Total
12 Hr Chg	0.4	2.5	3.0	5.9
24 Hr Chg	-0.9	-0.5	2.6	1.2
GFS Ensemble 00z	1-5 Day	6-10 Day	11-15 Day	Total
GFS Ensemble 00z 12 Hr Chg	1-5 Day 0.3	6-10 Day 3.1	11-15 Day 1.9	Total 5.3

	Current	Δ from YD	Δ from 7D Avg
US Dry Production	84.4	▽ -2.40	▼ -2.14

	Current	Δ from YD	Δ from 7D Avg
US ResComm	7.9	▼ -0.01	a 0.43

	Current	Δf	rom YD	Δf	Δ from 7D Avg		
Net LNG Exports	4.5	_	0.03		0.39		

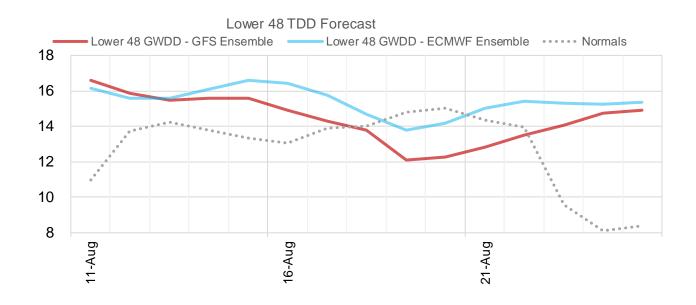
	Current	Δ from YD	Δ from 7D Avg
US Power Burns	42.5	▼ -2.17	2.64

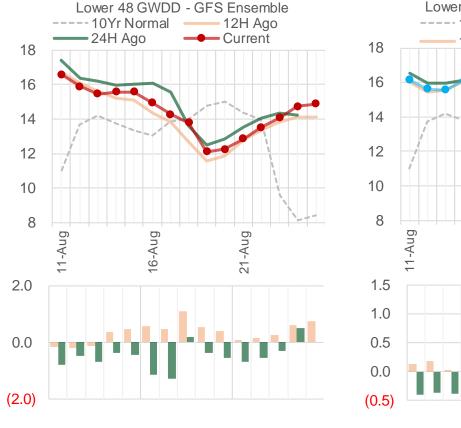
		Current	Δf	rom YD	Δf	rom 7D Avg
Can	adian orts	5.3	_	0.06	_	0.60

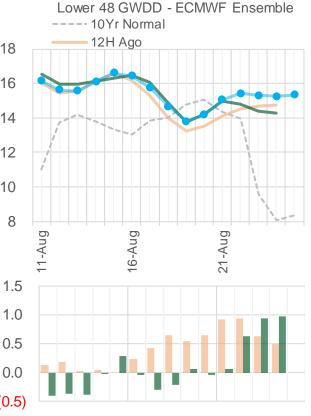
	Current	Δf	rom YD	Δf	rom 7D Avg
Mexican Exports	6.1		0.19	_	0.01



Short-term Weather Model Outlooks (00z)







Source: WSI, Bloomberg



Market Report

Lower 48 Component Models

Daily Balances

	5-Aug	6-Aug	7-Aug	8-Aug	9-Aug	10-Aug	11-Aug	DoD	vs.7D
Lower 48 Dry Production	86.0	86.5	86.4	86.6	87.1	86.8	84.4	▽ -2.4	▼ -2.2
Canadian Imports	4.9	4.2	4.2	4.7	4.7	5.2	5.3	△ 0.1	△ 0.6
L48 Power	38.9	37.9	37.8	38.7	40.6	44.6	42.5	▼ -2.2	2.7
L48 Residential & Commercial	7.6	7.4	7.3	7.2	7.4	7.9	7.9	▼ 0.0	a 0.5
L48 Industrial	18.3	18.5	18.6	18.9	19.1	19.3	19.3	△ 0.0	a 0.5
L48 Lease and Plant Fuel	4.8	4.8	4.8	4.8	4.8	4.8	4.7	▼ -0.1	▼ -0.1
L48 Pipeline Distribution	2.1	2.1	2.1	2.1	2.2	2.4	2.3	▼ -0.1	0.1
L48 Regional Gas Consumption	71.7	70.8	70.6	71.7	74.2	79.1	76.7	▼ -2.4	3.7
Net LNG Exports	3.8	4.0	4.0	4.3	4.3	4.5	4.5	0.0	△ 0.4
Total Mexican Exports	6.2	6.3	6.3	5.8	5.7	5.9	6.1	△ 0.2	△ 0.0
Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error	9.1	9.6	9.8	9.6	7.5	2.5	2.4		

	3-Jul	10-Jul	17-Jul	24-Jul	31-Jul	7-Aug	WoW	vs. 4W
Lower 48 Dry Production	85.3	85.7	85.6	86.3	86.3	86.3	▼ 0.0	△ 0.3
Canadian Imports	4.1	4.3	4.5	4.4	4.5	4.6	△ 0.1	△ 0.2
L48 Power	38.5	41.8	42.9	45.5	45.6	40.8	▼ -4.7	▼ -3.1
L48 Residential & Commercial	8.2	7.9	7.9	8.1	8.1	7.6	▼ -0.5	▼ -0.4
L48 Industrial	19.0	18.3	17.9	17.2	17.0	18.0	1.0	a 0.5
L48 Lease and Plant Fuel	4.8	4.8	4.8	4.8	4.8	4.8	▼ 0.0	▼ 0.0
L48 Pipeline Distribution	2.2	2.3	2.3	2.4	2.4	2.2	▼ -0.2	▼ -0.1
L48 Regional Gas Consumption	72.7	75.0	75.8	78.0	77.9	73.5	▽ -4.4	▼ -3.2
Net LNG Exports	4.0	3.0	3.3	3.6	3.1	3.9	0.7	△ 0.6
Total Mexican Exports	5.8	5.9	6.2	6.4	6.2	6.1	▽ 0.0	▼ 0.0
Implied Daily Storage Activity	6.9	6.0	4.8	2.7	3.5	7.4	3.9	
EIA Reported Daily Storage Activity	8.0	6.4	5.3	3.7	4.7			
Daily Model Error	-1.1	-0.4	-0.5	-1.0	-1.2			

V	О	n	u	าเ	y	В	a	ıa	n	C	es	

menin, Laianese	2Yr Ago	LY					MTD		
	Aug-18	Aug-19	Apr-20	May-20	Jun-20	Jul-20	Aug-20	MoM	vs. LY
Lower 48 Dry Production	83.3	92.4	91.7	86.0	84.9	85.9	86.3	△ 0.3	▼ -6.2
Canadian Imports	5.0	4.4	3.9	3.9	4.0	4.4	4.7	0.3	△ 0.3
L48 Power	38.2	41.0	25.5	26.9	34.4	43.7	40.5	▼ -3.2	▼ -0.5
L48 Residential & Commercial	7.8	7.8	20.4	13.0	8.6	8.0	7.6	▼ -0.4	▼ -0.3
L48 Industrial	20.2	21.9	20.7	18.8	18.4	17.7	18.5	0.9	▼ -3.4
L48 Lease and Plant Fuel	4.7	5.1	5.1	4.8	4.8	4.8	4.8	▼ 0.0	▼ -0.3
L48 Pipeline Distribution	2.1	2.3	2.1	1.9	2.1	2.3	2.2	▼ -0.1	▼ 0.0
L48 Regional Gas Consumption	73.0	78.1	73.8	65.4	68.3	76.5	73.6	▼ -2.9	▼ -4.5
Net LNG Exports	3.3	5.2	8.2	6.7	4.0	3.3	4.1	0.9	▼ -1.0
Total Mexican Exports	5.0	5.4	4.9	4.9	5.7	6.1	6.0	▽ -0.1	△ 0.6
Implied Daily Storage Activity EIA Reported Daily Storage Activity	7.0	8.1	8.7	12.9	10.8	4.4	7.2		
Daily Model Error							0	Discoul	and an about

Source: Bloomberg, analytix.ai



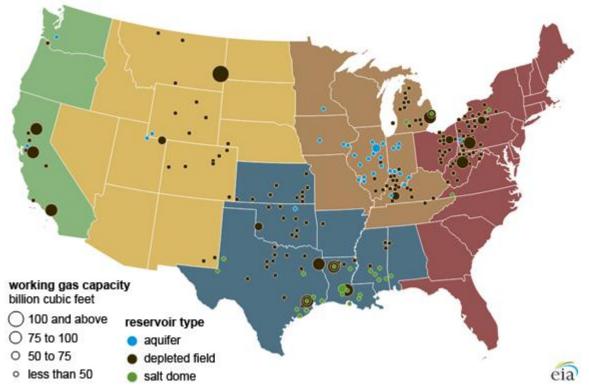
Regional S/D Models Storage Projection

Week Ending 7-Aug

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	7.2	1.3	8.5	59
East	0.7	2.8	3.4	24
Midwest	3.4	-0.3	3.1	21
Mountain	3.1	-2.2	1.0	7
South Central	-1.1	1.8	0.7	5
Pacific	1.0	-0.7	0.3	2

^{*}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 repor	t and beyond
	Week Storage
Week Ending	Projection
14-Aug	42
21-Aug	45
28-Aug	63

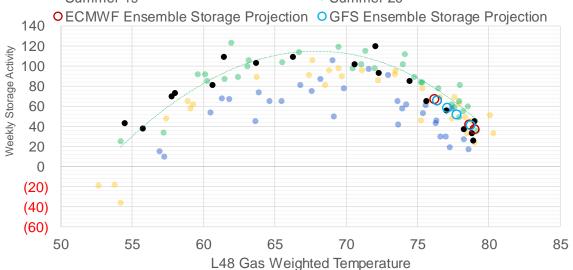
Weather Storage Model - Next 4 Week Forecast

Summer 17

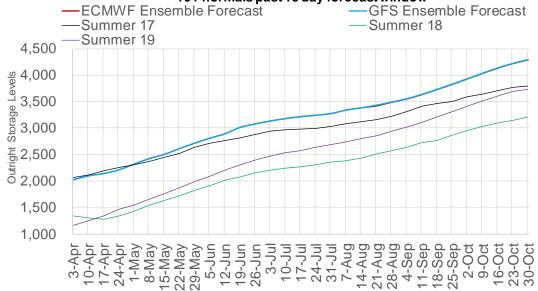
Summer 18

Summer 19

• Summer 20



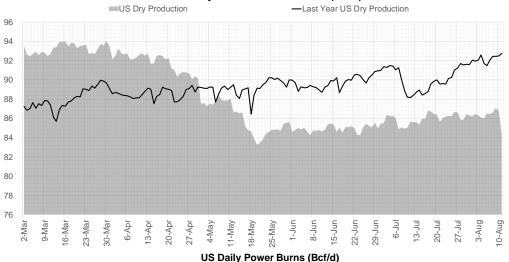
Weather Based End of Winter Projection (Bcf) 10Y normals past 15 day forecast window

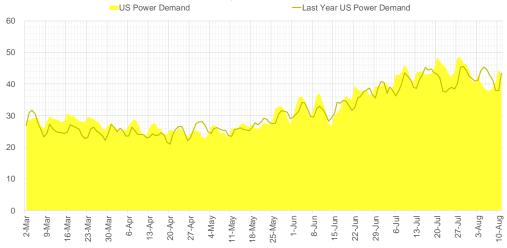




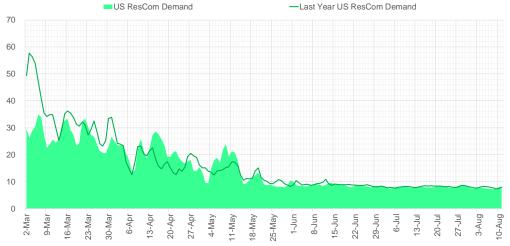
Supply - Demand Trends

US Dry Natural Gas Production (Bcf/d)





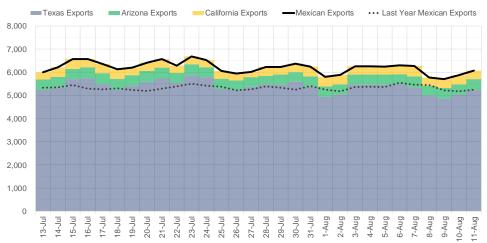
US Daily ResCom Consumption(Bcf/d)

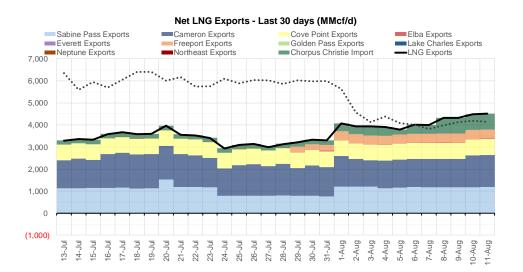


Source: Bloomberg



Mexican Exports - Last 30 days (MMcf/d)





Source: Bloomberg



Market Report

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	С	3.25	13464	10	2020	Р	1.50	48306
9	2020	P	2.00	8561	10	2020	С	2.75	45610
9	2020	С	2.50	7506	9	2020	С	2.50	45162
10	2020	Ċ	2.75	7207	10	2020	С	2.50	38737
10	2020	P	1.50	7078	10	2020	Р	2.00	36100
10	2020	Р	1.25	5835	3	2021	Р	2.00	35522
10	2020	C	3.00	4947	10	2020	Р	1.60	34363
10	2020	Č	2.50	4926	10	2020	С	3.00	30663
9	2020	Ċ	2.40	4922	10	2020	Р	1.25	28910
9	2020	Ċ	2.75	4713	10	2020	Р	1.75	27042
9	2020	P	1.85	4365	9	2020	Р	1.50	26116
10	2020	Р	2.00	3927	10	2020	Р	1.00	24749
10	2020	Р	1.75	3918	9	2020	Р	1.00	24289
12	2020	C	5.00	3894	9	2020	С	3.00	23761
9	2020	Č	2.20	3649	3	2021	С	6.00	23604
12	2020	Ċ	3.75	3151	9	2020	Р	1.75	22956
9	2020	C	2.25	3126	9	2020	С	2.00	22949
9	2020	P	1.50	2731	9	2020	Р	1.20	22887
9	2020	Р	1.75	2544	3	2021	С	3.00	22349
10	2020	C	2.60	2171	10	2020	С	2.10	21861
9	2020	Č	2.30	2161	9	2020	Р	2.00	21238
12	2020	C	3.50	2001	9	2020	Р	1.30	19386
9	2020	P	1.90	1908	9	2020	Р	1.25	19215
9	2020	P	1.60	1764	10	2020	Р	1.30	19095
9	2020	C	2.60	1674	10	2020	Р	2.10	18992
1	2021	P	2.25	1666	3	2021	С	3.50	18984
1	2021	P	2.65	1666	10	2020	С	3.25	18739
9	2020	C	2.45	1595	9	2020	С	2.75	18708
11	2020	C	3.00	1473	10	2020	С	2.00	18662
10	2020	P	2.25	1433	12	2020	Р	2.00	18544
3	2020	C	4.00	1425	1	2021	С	3.50	18477
3		C			1	2021	С	4.50	18446
	2021		5.00	1425	9	2020	С	2.25	17985
11	2020 2020	C P	2.75	1335 1287	12	2020	Р	1.50	17852
9		P	2.10		11	2020	С	3.00	17483
10	2020	-	1.55	1183	10	2020	С	2.40	17020
10	2020	C P	3.50	1180	10	2020	С	2.25	16866
9	2020	P P	1.65	1134	11	2020	С	3.50	16694
10	2020		2.15	1029	1	2021	С	3.00	16605
11	2020	С	3.10	1018	10	2020	Р	1.80	16426
9	2020	Р	1.40	1016	4	2021	С	3.00	14937
3	2021	Р	2.00	1000	11	2020	С	2.75	14828
10	2021	С	5.00	1000	9	2020	C	2.40	14164
9	2020	С	2.15	954	1	2021	C	3.75	13927
1	2021	С	4.25	880	10	2020	C	3.50	13714
1	2021	С	4.50	880	2	2021	C	5.00	13519
11	2020	С	3.75	805	9	2020	P	1.60	13157
9	2020	C	2.35	755	1	2021	P	2.25	13103
9	2020	Р	2.15	752	9	2020	С	3.25	12929
9	2020	С	2.65	727	4	2021	Р	2	12794

Source: CME, Nasdaq, ICE

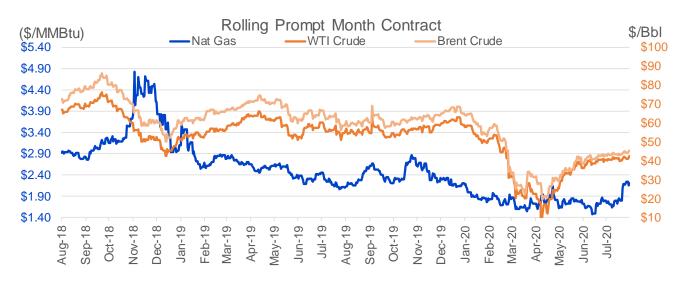


Nat Gas Futures Open Interest

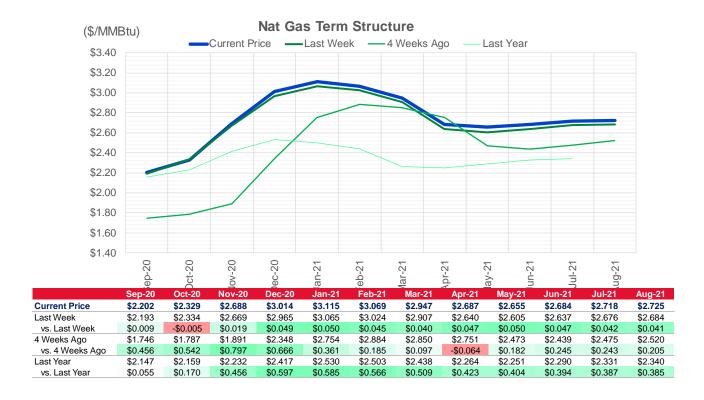
CME			O	In the latest
(N/I I	ana	ı(`⊢	Om	ninaa

CME Henry	Hub Futures (10		, and ICE C		Futures Co	ntract Equiva	lent (10,000 MM
Sinz Homy	Current	Prior		FOR JUNE 26	Current	Prior	Daily Change
SEP 20	251807	284837	-33030	SEP 20	73165	74676	-1510.5
OCT 20	156026	148013	8013	OCT 20	82479	83155	-676
NOV 20	123992	111990	12002	NOV 20	68246	67787	458.5
DEC 20	90116	89305	811	DEC 20	71373	70707	665.75
JAN 21	122787	123750	-963	JAN 21	87051	86586	465.25
FEB 21	41021	40769	252	FEB 21	53347	53285	62.75
MAR 21	80699	81730	-1031	MAR 21	69179	69007	172.5
APR 21	77745	78048	-303	APR 21	58846	58879	-33.5
MAY 21	42728	41536	1192	MAY 21	49586	49422	163.75
JUN 21	24027	23972	55	JUN 21	48038	47974	64.25
JUL 21	17607	17782	-175	JUL 21	48963	48960	3.25
AUG 21	17192	16777	415	AUG 21	47958	47827	131.25
SEP 21	19821	19105	716	SEP 21	46859	46702	157.5
OCT 21	50964	50870	94	OCT 21	68130	68110	19.25
NOV 21	23794	23966	-172	NOV 21	39603	39637	-33.75
DEC 21	17179	16809	370	DEC 21	41820	41725	94.75
JAN 22	18604	18741	-137	JAN 22	34021	34292	-271.5
FEB 22	10694	10603	91	FEB 22	29292	29523	-230.5
MAR 22	16097	15620	477	MAR 22	31538	31748	-209.5
APR 22	16570	16603	-33	APR 22	30765	31110	-345
MAY 22	5482	5480	2	MAY 22	23230	23598	-368.5
JUN 22	2819	2823	-4	JUN 22	23023	23626	-602.5
JUL 22	2123	2123	0	JUL 22	22675	23339	-664.25
AUG 22	1745	1744	1	AUG 22	22993	23358	-364.25
SEP 22	2234	2244	-10	SEP 22	22487	22839	-352.5
OCT 22	2657	2662	-5	OCT 22	23896	24314	-418.5
NOV 22	1954	1945	9	NOV 22	21454	21777	-322.75
DEC 22	1947	1948	-1	DEC 22	22218	22551	-333.25
JAN 23	2628	2627	1	JAN 23	11998	11958	39.75
FEB 23	675	675	0	FEB 23	10840	10819	21

Source: CME, ICE







	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	2.25	1.82	-0.43
TETCO M3	\$/MMBtu	2.05	1.68	-0.37
FGT Zone 3	\$/MMBtu	1.95	2.24	0.29
Zone 6 NY	\$/MMBtu	1.95	1.66	-0.29
Chicago Citygate	\$/MMBtu	1.94	1.99	0.05
Michcon	\$/MMBtu	1.92	1.92	0.00
Columbia TCO Pool	\$/MMBtu	1.81	1.73	-0.08
Ventura	\$/MMBtu	1.86	1.93	0.07
Rockies/Opal	\$/MMBtu	1.93	1.89	-0.04
El Paso Permian Basin	\$/MMBtu	1.13	1.69	0.56
Socal Citygate	\$/MMBtu	2.46	2.14	-0.33
Malin	\$/MMBtu	1.89	1.99	0.10
Houston Ship Channel	\$/MMBtu	2.14	2.17	0.03
Henry Hub Cash	\$/MMBtu	2.15	2.04	-0.11
AECO Cash	C\$/GJ	1.71	1.84	0.13
Station2 Cash	C\$/GJ	1.70	1.99	0.29
Dawn Cash	C\$/GJ	1.89	1.96	0.07

Source: CME, Bloomberg



					V	s. 4 Weeks		
	Units	Current Price	vs.	Last Week		Ago	٧s	s. Last Year
NatGas Jan/Apr	\$/MMBtu	-0.43	$\overline{}$	-0.003	$\overline{}$	-0.017	$\overline{}$	-0.049
NatGas Mar/Apr	\$/MMBtu	-0.260	_	0.007	$\overline{}$	-0.538	$\overline{}$	-0.505
NatGas Oct/Nov	\$/MMBtu	0.36	_	0.024	$\overline{}$	-0.098		0.297
NatGas Oct/Jan	\$/MMBtu	0.79	_	0.055	$\overline{}$	-0.207		0.446
WTI Crude	\$/Bbl	42.69	_	0.990	_	2.400	$\overline{}$	-14.410
Brent Crude	\$/Bbl	45.61	_	1.180	_	2.710	$\overline{}$	-15.690
Fuel Oil, NY Harbour 1%	\$/Bbl	98.03	_	0.000	_	0.000		0.000
Heating Oil	cents/Gallon	124.93	$\overline{}$	-0.910	_	2.850	$\overline{}$	-62.800
Propane, Mt. Bel	cents/Gallon	0.50	_	0.004	_	0.024		0.094
Ethane, Mt. Bel	cents/Gallon	0.23	A	0.007	A	0.005		0.071
Coal, PRB	\$/MTon	12.30	_	0.000	_	0.000		0.100
Coal, ILB	\$/MTon	31.05	_	0.000	_	0.000	$\overline{}$	-7.000