

# **Market Report**

# 10 July 2020

	Cı	urrent	Δ from YD	Δ from 7D Avg		
Nat Gas Prompt	\$	1.75	<b>&gt;</b> \$ (0.03)	▼ \$ (0.04)		

	С	urrent	Δ from YD	m 7D va
WTI Prompt	\$	39.10	<b>&gt;</b> \$ (0.52)	5

	Current	Δ from YD	Δ from 7D			
	Current	Δ ΙΙΟΙΙΙ ΙΙΟ	Avg			
Brent Prompt	\$ 41.85	\$ (0.50)	<b>&gt;</b> \$ (1.0)			

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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	-0.5	-0.7	3.7	2.5
24 Hr Chg	-4.3	-3.9	-0.2	-8.4
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 2.3	11-15 Day 6.0	Total 8.2

	Current	Δ from YD	Δ from 7D Avg
US Dry Production	83.4	<b>▼</b> -0.72	<b>▼</b> -1.39

	Current	Δ from YD	Δ from 7D Avg
US ResComm	7.6	▼ -0.13	<b>0.28</b>

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	3.1	<b>a</b> 0.25	<b>a</b> 0.07

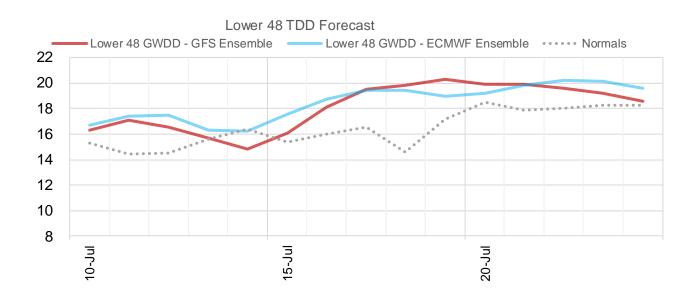
	Current	Δ from YD	Δ from 7D Avg
US Power Burns	43.3	▼ -0.88	<b>1.60</b>

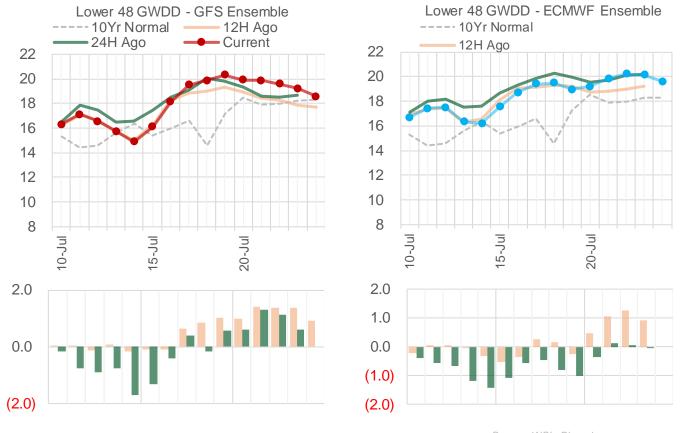
		Current	Δf	rom YD	Δf	rom 7D Avg
	Canadian Imports	4.7	$\overline{}$	-0.19	_	0.46

	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.3	▼ -0.10	<b>0.43</b>



# Short-term Weather Model Outlooks (00z)





Source: WSI , Bloomberg



# **Market Report**

# Lower 48 Component Models

#### **Daily Balances**

	4-Jul	5-Jul	6-Jul	7-Jul	8-Jul	9-Jul	10-Jul	DoD	vs.7D
Lower 48 Dry Production	85.2	85.2	85.2	84.1	84.3	84.1	83.4	<b>▽</b> -0.7	▼ -1.3
Canadian Imports	3.8	4.0	4.3	4.4	4.5	4.9	4.7	<b>▽ -0.2</b>	<b>△</b> 0.4
L48 Power	38.2	39.3	43.3	42.9	44.1	44.2	43.3	▼ -0.9	<b>1.3</b>
L48 Residential & Commercial	6.8	7.0	7.6	7.5	7.6	7.7	7.6	▼ -0.1	<b>a</b> 0.2
L48 Industrial	18.3	18.3	18.4	18.5	18.4	18.3	18.1	▼ -0.2	▼ -0.2
L48 Lease and Plant Fuel	4.8	4.8	4.8	4.7	4.7	4.7	4.7	▼ 0.0	▼ -0.1
L48 Pipeline Distribution	2.0	2.1	2.3	2.3	2.4	2.4	2.3	▼ 0.0	<b>0.1</b>
L48 Regional Gas Consumption	70.0	71.5	76.3	75.9	77.2	77.4	76.0	▼ -1.3	<b>1.3</b>
Net LNG Exports	3.2	3.0	3.1	3.1	3.0	2.9	3.1	<b>△</b> 0.3	<b>△</b> 0.1
Total Mexican Exports	5.5	5.3	5.7	6.1	6.2	6.4	6.3	<b>▽ -0.1</b>	<b>△</b> 0.4
Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error	10.3	9.4	4.4	3.5	2.3	2.4	2.7		

#### **EIA Storage Week Balances**

	5-Jun	12-Jun	19-Jun	26-Jun	3-Jul	10-Jul	WoW	vs. 4W
Lower 48 Dry Production	84.4	84.2	84.5	84.4	84.4	84.8	<b>△</b> 0.3	<b>△</b> 0.4
Canadian Imports	4.2	3.9	3.8	4.2	4.1	4.3	<b>△</b> 0.2	<b>△</b> 0.3
L48 Power	31.4	33.3	30.3	37.3	38.7	41.7	<b>3.0</b>	<b>▲</b> 6.8
L48 Residential & Commercial	8.1	7.7	8.0	7.4	7.4	7.3	▼ -0.1	▼ -0.3
L48 Industrial	20.2	19.2	18.2	18.5	18.8	18.4	▼ -0.4	▼ -0.3
L48 Lease and Plant Fuel	4.7	4.7	4.8	4.8	4.7	4.7	▼ 0.0	▼ 0.0
L48 Pipeline Distribution	1.9	2.0	1.8	2.2	2.2	2.2	<b>a</b> 0.0	<b>a</b> 0.2
L48 Regional Gas Consumption	66.4	67.0	63.2	70.1	71.9	74.4	<b>2.5</b>	<b>▲ 6.4</b>
Net LNG Exports	5.1	3.9	3.8	4.0	4.0	3.0	▼ -1.0	▽ -0.9
Total Mexican Exports	5.3	5.7	5.6	5.9	5.8	5.8	<b>0.1</b>	<b>△</b> 0.1
Implied Daily Storage Activity	11.8	11.6	15.6	8.5	6.9	5.8	-1.1	
EIA Reported Daily Storage Activity	13.3	12.1	17.1	9.3	8.0			
Daily Model Error	-1.4	-0.6	-1.5	-0.8	-1.1			

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•	2Yr Ago	LY					MTD		
	Jul-18	Jul-19	Mar-20	Apr-20	May-20	Jun-20	Jul-20	MoM	vs. LY
Lower 48 Dry Production	81.9	90.1	92.2	90.7	85.1	84.3	84.6	<b>△</b> 0.2	▼ -5.5
Canadian Imports	5.6	5.0	4.1	4.0	3.9	4.0	4.3	<b>△</b> 0.3	▼ -0.7
L48 Power	39.0	40.9	28.3	25.4	26.3	34.4	41.6	<b>▲</b> 7.2	<b>△</b> 0.7
L48 Residential & Commercial	7.8	8.1	27.5	20.9	12.3	7.7	7.4	▼ -0.3	▼ -0.8
L48 Industrial	20.7	20.1	21.8	19.6	19.6	18.9	18.4	▼ -0.5	▼ -1.8
L48 Lease and Plant Fuel	4.6	5.0	5.2	5.1	4.8	4.8	4.7	▼ 0.0	▼ -0.3
L48 Pipeline Distribution	2.2	2.2	2.5	2.1	1.9	2.0	2.2	<b>△</b> 0.2	▼ 0.0
L48 Regional Gas Consumption	74.3	76.4	85.3	73.1	64.8	67.7	74.3	<b>6.6</b>	▼ -2.1
Net LNG Exports	3.3	6.0	8.5	8.2	6.7	4.0	3.1	▼ -1.0	▼ -2.9
Total Mexican Exports	5.0	5.4	5.6	4.9	4.9	5.7	5.9	<b>△</b> 0.2	<b>a</b> 0.5
Implied Daily Storage Activity EIA Reported Daily Storage Activity	5.0	7.3	-3.1	8.4	12.7	10.9	5.6		
Daily Model Error							0	Discontinu	and an aluti

Source: Bloomberg, analytix.ai



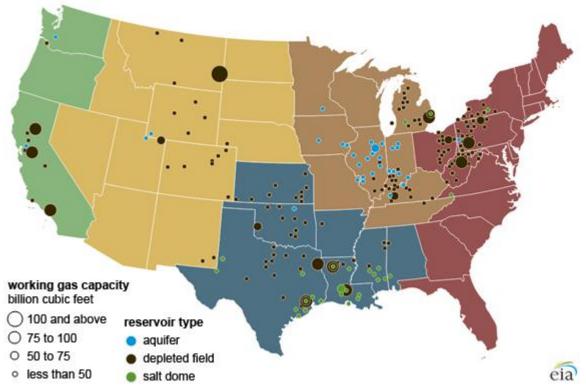
# Regional S/D Models Storage Projection

Week Ending 10-Jul

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	5.5	1.3	6.9	48
East	-0.2	1.4	1.2	8
Midwest	3.7	-0.5	3.3	23
Mountain	2.3	-1.9	0.3	2
South Central	-1.2	2.7	1.5	10
Pacific	0.9	-0.4	0.6	4

<sup>\*</sup>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 Storage							
Week Ending	Projection							
17-Jul	20							
24-Jul	-2							
31-Jul	55							

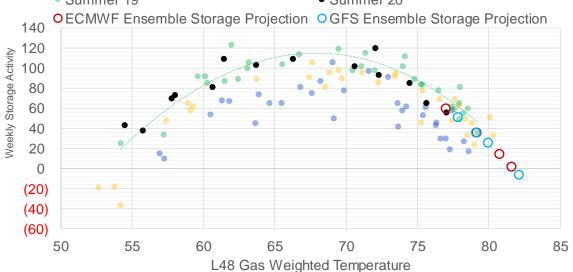
#### Weather Storage Model - Next 4 Week Forecast

Summer 17

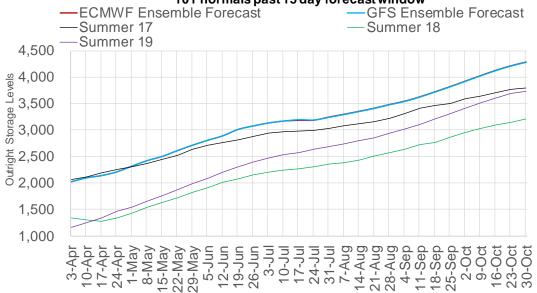
Summer 18

Summer 19

• Summer 20



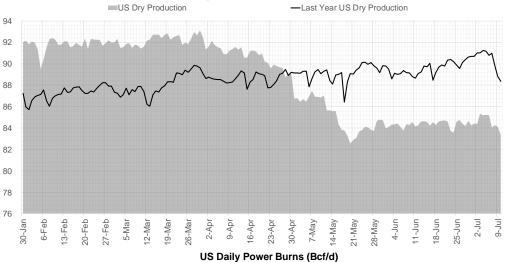
#### Weather Based End of Winter Projection (Bcf) 10Y normals past 15 day forecast window

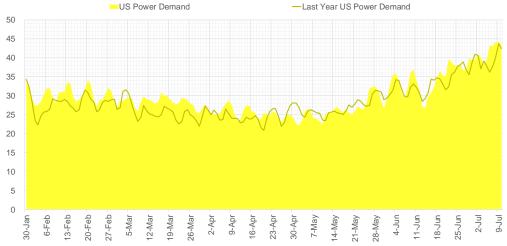




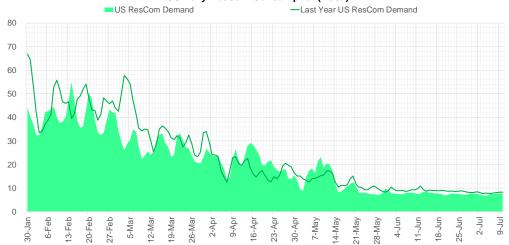
### Supply - Demand Trends

#### US Dry Natural Gas Production (Bcf/d)





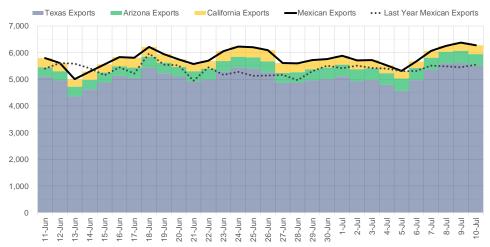
#### US Daily ResCom Consumption(Bcf/d)



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 7,000 6.000 5.000 4.000 3,000 2,000 1,000 (1,000)

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			
WONTH	TEAR			VOL					
8	2020	Р	1.50	5197		10			
8	2020	С	2.00	5116	8		2020		
8	2020	Р	1.60	3887	8		2020		
10	2020	С	2.70	2648	10		2020		
8	2020	С	2.25	2361	10		2020		
8	2020	Р	1.75	2335	3		2021		
9	2020	С	2.00	2127	10		2020		
10	2020	Р	1.10	2075	9		2020		
3	2021	С	3.00	1951	10		2020		
9	2020	Р	1.50	1909	10		2020		
8	2020	С	2.05	1818	9		2020		
3	2021	Р	2.25	1802	10		020		
10	2020	Р	1.50	1795	10	2020			
10	2020	Р	1.60	1751	9	2020		С	
8	2020	C	1.90	1696	9	2020		Р	
8	2020	P	1.65	1640	8	2020		С	
8	2020	Р	1.70	1581	9	2020		Р	
3	2021	P	2.00	1460	9	2020		Р	
3	2021	Ċ	3.50	1450	8	2020		С	
2	2021	Č	6.00	1400	8	2020		Р	P 1.30
9	2020	P	1.80	1387	9	2020		С	C 2.75
	2020	C	2.00	1342	9	2020		Р	P 1.25
10					10	2020		С	C 3.25
9	2020	С	2.50	1303	10	2020		Р	P 2.10
8	2020	С	1.95	1161	1	2021		С	
8	2020	С	1.70	1084	10	2020		C	
8	2020	P	1.55	1083	10	2020		P	
10	2020	Р	1.85	1047	3	2021		C	
10	2020	С	3.00	1019	10	2020		Č	
9	2020	С	1.85	1016	8	2020		P	
10	2020	Р	2.00	1014	8	2020		Р	
11	2020	С	2.75	1001	1	2020		Ċ	
9	2020	С	1.70	1000	9	2021		Č	
10	2020	С	3.50	1000	9	2020		C	
2	2021	C	5.00	1000	8	2020		P	
8	2020	C	2.10	961	8	2020		P P	
9	2020	P	1.85	960	8 10	2020		P P	
8	2020	P	1.80	945				P P	
10	2020	Ċ	4.00	865	8	2020		P P	
2	2021	Č	7.00	850	12	2020		P P	
8	2021	C	1.75	773	8	2020		•	
					4	2021		С	
8	2020	С	1.85	771	8	2020		С	
10	2020	P	1.25	755	3	2021		C	
9	2020	P	1.25	731	10	2020		P	
9	2020	С	2.15	654	9	2020		Р	
10	2020	P	1.00	650	8	2020		С	
9	2020	C	1.75	563	9	2020		Р	
3	2022	С	3.00	550	8	2020		С	
9	2020	С	2.20	539	10	2020		С	
10	2020	С	2.05	519	11	2020		С	C 3.5

Source: CME, Nasdaq, ICE

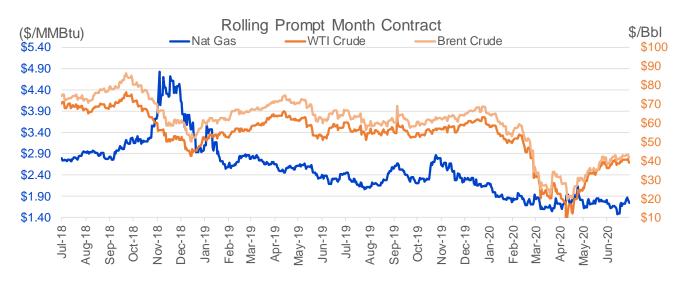


# Nat Gas Futures Open Interest

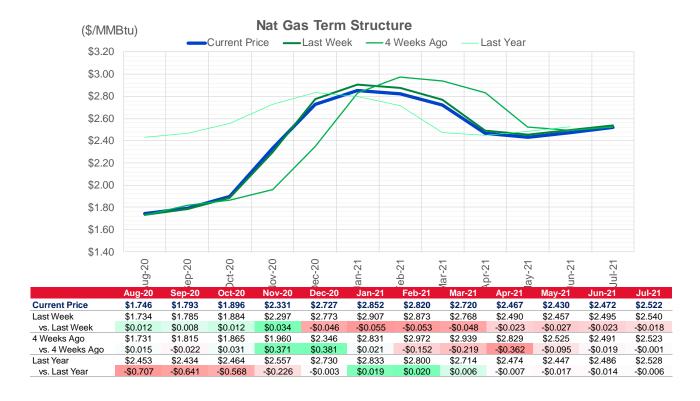
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CME Henry	Hub Futures (1)				Futures Co	ntract Equiva	lent (10,000 MM
	Current	Prior	Daily Change	FOR JUNE 26	Current	Prior	Daily Change
AUG 20	220359	239758	-19399	AUG 20	84373	84028	344.5
SEP 20	229165	220082	9083	SEP 20	74739	76078	-1339
OCT 20	118299	116437	1862	OCT 20	82638	79939	2699
NOV 20	78427	76109	2318	NOV 20	66961	66059	901.75
DEC 20	75403	73235	2168	DEC 20	61782	60516	1265.25
JAN 21	113078	112532	546	JAN 21	77193	75871	1321.75
FEB 21	40923	40808	115	FEB 21	47964	47665	299.5
MAR 21	80923	79590	1333	MAR 21	64321	63785	536
APR 21	76795	76631	164	APR 21	51765	51298	467
MAY 21	33008	33390	-382	MAY 21	46585	46274	311.25
JUN 21	19385	18609	776	JUN 21	44871	44493	377.75
JUL 21	16819	16847	-28	JUL 21	45505	45058	447.25
AUG 21	13114	13294	-180	AUG 21	46002	45544	458
SEP 21	15811	15787	24	SEP 21	43961	43553	407.75
OCT 21	39412	38788	624	OCT 21	64565	64149	415.25
NOV 21	21326	21253	73	NOV 21	37418	37097	321.75
DEC 21	15094	15386	-292	DEC 21	38304	37891	412.25
JAN 22	13610	13924	-314	JAN 22	30482	30257	225
FEB 22	8558	8286	272	FEB 22	27184	27014	169.25
MAR 22	13517	13556	-39	MAR 22	28824	28663	160.75
APR 22	12671	12576	95	APR 22	28175	27775	399.5
MAY 22	5251	5255	-4	MAY 22	22882	22778	103.5
JUN 22	1922	1924	-2	JUN 22	22994	22633	361
JUL 22	1799	1796	3	JUL 22	22535	22513	21.5
AUG 22	1255	1254	1	AUG 22	22415	22386	29.25
SEP 22	1756	1755	1	SEP 22	21968	21947	21
OCT 22	2129	2144	-15	OCT 22	23795	23695	100
NOV 22	1472	1487	-15	NOV 22	20449	20386	63.5
DEC 22	1301	1301	0	DEC 22	21012	20980	32.25
JAN 23	2514	2464	50	JAN 23	11164	11158	5.25

Source: CME, ICE







	Units	Cash Settled	Prompt Settle	Cash to
		1		Prompt
AGT Citygate	\$/MMBtu	1.60	1.73	0.13
TETCO M3	\$/MMBtu	1.75	1.58	-0.17
FGT Zone 3	\$/MMBtu	1.76	1.81	0.05
Zone 6 NY	\$/MMBtu	1.76	1.57	-0.19
Chicago Citygate	\$/MMBtu	1.80	1.72	-0.08
Michcon	\$/MMBtu	1.78	1.64	-0.14
Columbia TCO Pool	\$/MMBtu	1.68	1.50	-0.18
Ventura	\$/MMBtu	1.45	1.66	0.21
Rockies/Opal	\$/MMBtu	1.66	1.53	-0.14
El Paso Permian Basin	\$/MMBtu	1.67	1.44	-0.23
Socal Citygate	\$/MMBtu	2.01	1.94	-0.07
Malin	\$/MMBtu	1.65	1.60	-0.05
Houston Ship Channel	\$/MMBtu	1.85	1.74	-0.11
Henry Hub Cash	\$/MMBtu	1.78	1.65	-0.13
AECO Cash	C\$/GJ	1.52	1.38	-0.14
Station2 Cash	C\$/GJ	1.54	1.68	0.14
Dawn Cash	C\$/GJ	1.82	1.70	-0.13

Source: CME, Bloomberg



					VS	s. 4 Weeks		
	Units	<b>Current Price</b>	vs.	Last Week		Ago	VS	. Last Year
NatGas Jan/Apr	\$/MMBtu	-0.39	<b>A</b>	0.032	<b>A</b>	0.062		0.013
NatGas Mar/Apr	\$/MMBtu	-0.253	_	0.025	$\overline{}$	-0.557	$\overline{}$	-0.508
NatGas Oct/Nov	\$/MMBtu	0.43	_	0.021	_	0.048	_	0.374
NatGas Oct/Jan	\$/MMBtu	0.96	$\overline{}$	-0.068	$\overline{}$	-0.057		0.635
WTI Crude	\$/Bbl	39.10	$\overline{}$	-1.550	_	2.840	$\overline{}$	-21.110
Brent Crude	\$/Bbl	41.85	$\overline{}$	-0.950	<b>A</b>	3.120	$\overline{}$	-24.870
Fuel Oil, NY Harbour 1%	\$/Bbl	98.03	_	0.000	_	0.000	_	0.000
Heating Oil	cents/Gallon	121.40	$\overline{}$	-1.710	_	11.260	$\overline{}$	-76.610
Propane, Mt. Bel	cents/Gallon	0.48	<b>A</b>	0.016	$\overline{}$	-0.015	$\overline{}$	-0.013
Ethane, Mt. Bel	cents/Gallon	0.22	<b>A</b>	0.016	$\overline{}$	-0.008		0.060
Coal, PRB	\$/MTon	12.30	<b>A</b>	0.000	<b>A</b>	0.000	_	0.000
Coal, ILB	\$/MTon	31.05	_	0.000	_	0.000	$\overline{}$	-7.500