

Market Report

1 October 2020

	Cı	urrent	Δ from YD			Δ from 7D Avg		
Nat Gas Prompt	\$	2.57	_	\$ (0.05	_	\$	0.31

	Cı	urrent	Δ from YD		m 7D vg
WTI Prompt	\$	39.65	\$ (0.57)	~ \$	(0.5)

	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 41.73	\$ 0.78	\$ -

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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	-2.1	-1.7	0.3	-3.4
24 Hr Chg	-0.5	2.3	-3.2	-1.4
GFS Ensemble 00z	1-5 Day	6-10 Day	11-15 Day	Total
GFS Ensemble 00z 12 Hr Chg	1-5 Day -1.1	6-10 Day 3.1	11-15 Day -6.2	Total -4.2

	Current	Δ from YD	Δ from 7D Avg
US Dry Production	85.7	▼ -0.80	0.09

	Current	Δfı	rom YD	Δf	rom 7D Avg
US ResComm	12.5		1.69		3.75

	Current	Δ from	YD	Δ from 7D Avg		
Net LNG Exports	7.0	a 0.0	0	<u></u>	0.39	

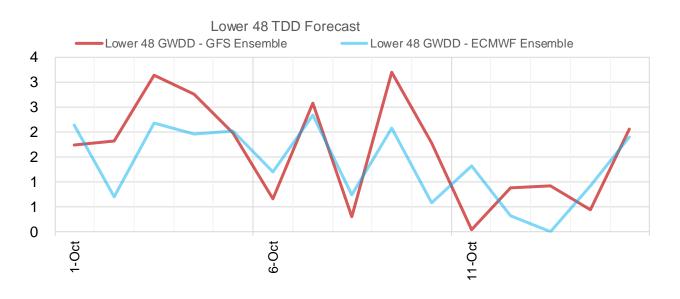
	Current	Δfı	rom YD	Δf	rom 7D Avg
US Power Burns	31.7		1.33	_	0.61

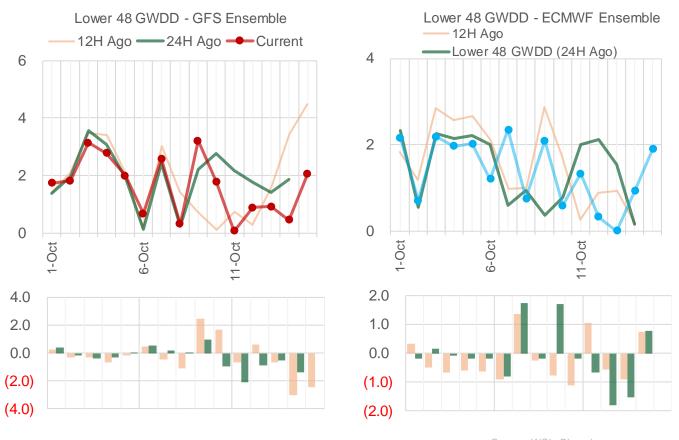
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	3.7	▼ -0.32	▼ -0.13

	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.3	▼ -0.14	▼ -0.06



Short-term Weather Model Outlooks (00z)





Source: WSI, Bloomberg



Market Report

Lower 48 Component Models

Daily Balances

	25-Sep	26-Sep	27-Sep	28-Sep	29-Sep	30-Sep	1-Oct	DoD	vs. 7D
Lower 48 Dry Production	84.4	85.7	85.9	85.9	86.3	86.5	85.7	▽ -0.8	▼ -0.1
Canadian Imports	3.9	3.7	3.8	3.9	3.7	4.0	3.7	▼ -0.3	▽ -0.1
L48 Power	31.1	29.1	30.4	32.4	31.7	30.4	31.7	1.3	△ 0.9
L48 Residential & Commercial	7.2	6.9	7.5	10.0	11.6	10.8	12.5	1.7	3.5
L48 Industrial	19.3	19.5	19.7	20.0	20.2	20.2	20.4	△ 0.2	a 0.6
L48 Lease and Plant Fuel	4.6	4.7	4.7	4.7	4.8	4.8	4.7	▼ 0.0	▼ 0.0
L48 Pipeline Distribution	1.9	1.8	1.9	2.1	2.2	2.0	2.2	△ 0.1	0.2
L48 Regional Gas Consumption	64.2	61.9	64.3	69.2	70.4	68.3	71.5	3.3	△ 5.2
Net LNG Exports	6.5	6.9	6.6	6.3	6.9	7.0	7.0	△ 0.0	△ 0.3
Total Mexican Exports	6.6	6.4	6.2	6.5	6.2	6.5	6.3	▽ -0.1	▽ -0.1
Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error	11.0	14.3	12.6	7.9	6.6	8.8	4.5		

EIA Storage Week Balances

	21-Aug	28-Aug	4-Sep	11-Sep	18-Sep	25-Sep	WoW	vs. 4W
Lower 48 Dry Production	86.6	85.3	85.6	87.6	86.4	85.5	▽ -0.9	▼ -0.7
Canadian Imports	4.8	5.2	4.4	3.8	3.8	3.6	▽ -0.2	▼ -0.7
L48 Power	40.4	41.6	37.6	35.4	33.6	30.8	▼ -2.8	▼ -6.2
L48 Residential & Commercial	7.8	7.9	7.4	8.4	8.0	9.9	1.9	2.0
L48 Industrial	19.7	19.3	19.0	18.3	19.8	19.1	▼ -0.8	▼ 0.0
L48 Lease and Plant Fuel	4.7	4.7	4.7	4.8	4.8	4.7	▼ 0.0	▼ 0.0
L48 Pipeline Distribution	2.3	2.4	2.2	2.2	2.1	2.0	▼ 0.0	▼ -0.2
L48 Regional Gas Consumption	75.0	75.9	70.9	69.1	68.3	66.5	▼ -1.7	▼ -4.5
Net LNG Exports	4.7	3.9	3.0	5.2	7.3	5.8	▼ -1.4	1.0
Total Mexican Exports	6.2	6.6	6.5	6.4	6.2	6.4	0.2	▼ 0.0
Implied Daily Storage Activity	5.4	4.1	9.5	10.8	8.4	10.3	2.0	
EIA Reported Daily Storage Activity	6.4	5.0	10.0	12.7	9.4			
Daily Model Error	-1.0	-0.9	-0.5	-1.9	-1.1			

Monthly Balances

	2Yr Ago	LY					MTD		
	Oct-18	Oct-19	May-20	Jun-20	Jul-20	Aug-20	Sep-20	MoM	vs. LY
Lower 48 Dry Production	86.0	94.9	85.8	85.1	86.6	86.5	84.9	▼ -1.5	▽-10.0
Canadian Imports	4.7	4.6	3.9	4.0	4.4	4.9	4.5	▽ -0.3	▼ -0.1
L48 Power	28.8	30.7	26.9	34.8	43.8	40.7	37.3	▼ -3.3	△ 6.6
L48 Residential & Commercial	16.1	15.2	12.7	8.9	8.0	7.7	7.5	▼ -0.2	▼ -7.8
L48 Industrial	22.8	23.8	18.6	17.9	17.7	19.2	19.1	▼ -0.1	▼ -4.7
L48 Lease and Plant Fuel	4.9	5.2	4.8	4.8	4.9	4.7	4.7	▼ 0.0	▼ -0.5
L48 Pipeline Distribution	2.1	2.3	2.0	2.2	2.4	2.3	2.2	▼ -0.1	▼ 0.0
L48 Regional Gas Consumption	74.7	77.2	65.0	68.6	76.8	74.6	70.8	▽ -3.8	▼ -6.4
Net LNG Exports	3.3	6.7	6.7	4.0	3.3	4.0	3.0	▼ -1.0	▼ -3.6
Total Mexican Exports	5.0	5.5	4.9	5.7	6.1	6.3	6.7	△ 0.4	1.2
Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error	7.7	10.2	13.1	10.8	4.7	6.5	9.0		
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Source: Bloomberg, analytix.ai



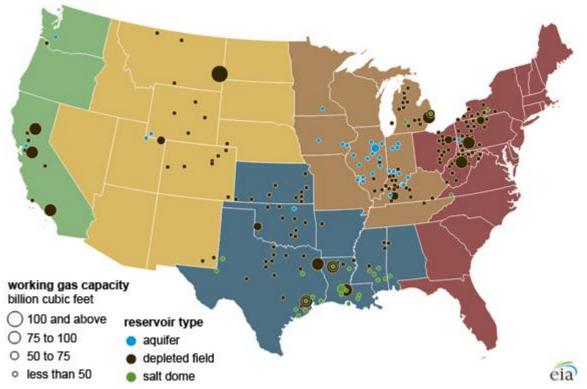
Regional S/D Models Storage Projection

Week Ending 25-Sep

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	10.1	1.4	11.5	81
East	1.1	1.6	2.7	19
Midwest	3.7	0.0	3.8	26
Mountain	3.9	-2.9	1.0	7
South Central	0.3	3.1	3.4	24
Pacific	1.1	-0.3	0.7	5

^{*}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								
2-Oct	102								
9-Oct	100								
16-Oct	98								

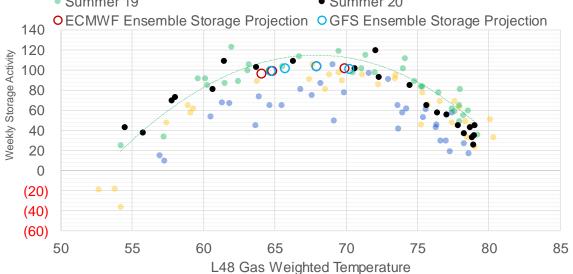
Weather Storage Model - Next 4 Week Forecast

Summer 17

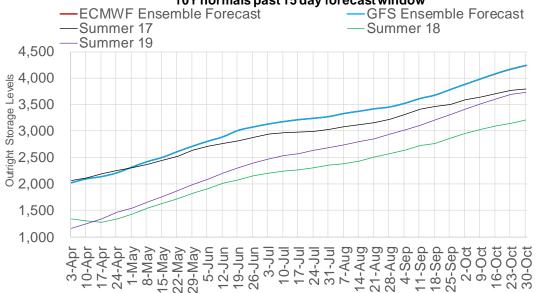
Summer 18

Summer 19

• Summer 20



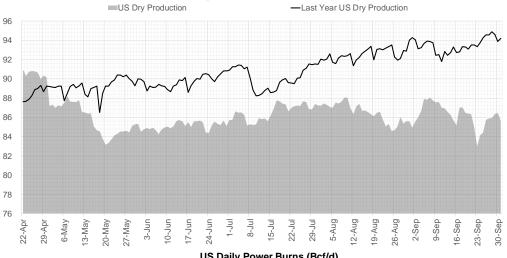
Weather Based End of Winter Projection (Bcf) 10Y normals past 15 day forecast window



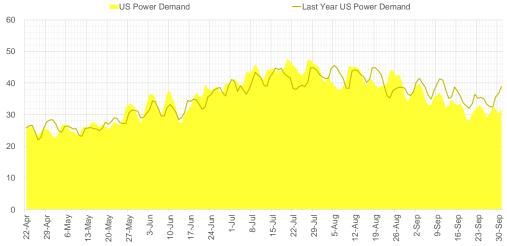


Supply - Demand Trends

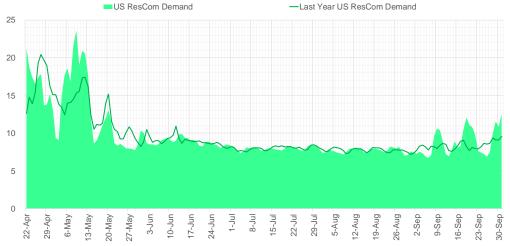
US Dry Natural Gas Production (Bcf/d)



US Daily Power Burns (Bcf/d)



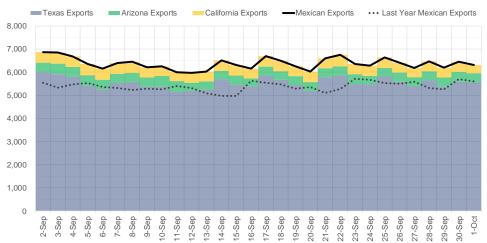
US Daily ResCom Consumption(Bcf/d)

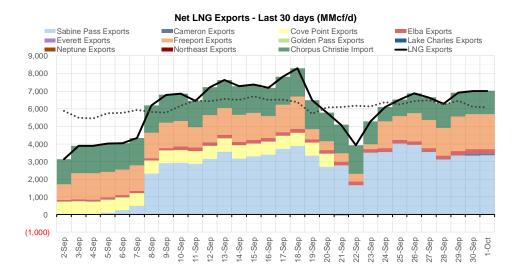


Source: Bloomberg



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
11	2020	С	3.50	7595	11	2020	Р	2.00	35329
11	2020	C	3.00	6138	4	2021	С	5.00	33447
11	2020	P	2.00	4782	3	2021	Р	2.00	33308
11	2020	C	2.75	4376	11	2020	Р	2.25	27841
12	2020	Č	4.00	4252	3	2021	С	4.00	27325
11	2020	C	4.00	3688	3	2021	С	3.25	26991
11	2020	Ċ	3.25	3574	11	2020	С	5.00	25054
11	2020	P	2.25	3529	1	2021	С	4.50	24651
11	2020	P	2.10	3248	3	2021	С	6.00	24590
11	2020	C	5.00	3000	12	2020	Р	2.00	24362
12	2020	Č	3.50	2911	11	2020	С	4.00	23694
11	2020	P	2.50	2565	12	2020	Р	2.50	23595
11	2020	Р	2.20	2546	11	2020	С	3.50	22936
11	2020	C	2.65	2207	1	2021	С	3.50	22731
1	2021	Č	5.00	2167	3	2021	С	3.00	22261
11	2020	P	2.05	2079	3	2021	С	3.50	20753
11	2020	Р	1.95	2042	11	2020	С	3.00	20181
11	2020	Р	1.75	2024	12	2020	С	4.00	20153
12	2020	C	4.50	2017	11	2020	С	3.25	18860
12	2020	P	2.50	1759	1	2021	С	5.00	18236
11	2020	P	2.40	1713	2	2021	С	5.00	17647
12	2020	P	2.40	1656	3	2021	С	7.00	17477
11	2020	C	3.30	1575	11	2020	Р	2.50	17384
11	2020	C	2.70	1513	1	2021	С	3.00	16884
11	2020	P	2.70	1313	1	2021	Р	2.50	16308
	2020	C			12	2020	С	3.75	16146
3 2	2021	C	3.50 4.00	1200 1050	1	2021	С	3.75	15953
12	2021	P	1.50	1000	11	2020	Р	2.65	14320
		C			1	2021	Р	2.25	13898
2	2021		3.50	1000	2	2021	С	3.50	13882
2 4	2021	C C	5.00	1000	1	2021	Р	2.00	13761
	2021		5.00	1000	4	2021	С	3.00	13735
3	2022	С	4.00	1000	3	2021	С	5.00	13651
11	2020	С	3.35	927	6	2021	С	4.00	13525
11	2020	С	2.80	894	12	2020	Р	1.50	13497
11	2020	Р	1.50	888	4	2021	Р	2.00	13496
1	2021	С	4.00	865	11	2020	Р	2.20	13211
1	2021	Р	3.25	850	11	2020	Р	2.80	13209
2	2021	С	3.75	850	5	2021	С	3.00	13118
12	2020	Р	2.90	831	1	2021	С	3.25	12625
1	2021	С	3.75	651	12	2020	С	3.50	12514
11	2020	С	2.55	650	12	2020	С	5.00	12505
12	2020	P	3.00	641	3	2021	Р	2.50	12503
1	2021	P	2.50	630	4	2021	С	2.75	12486
2	2021	Р	2.50	630	11	2020	Р	1.75	12485
3	2021	Р	2.50	630	11	2020	С	2.75	12405
11	2020	Р	1.70	625	1	2021	С	6.00	12183
3	2021	С	2.50	600	2	2021	С	6.00	12005
11	2020	Р	1.85	597	12	2020	С	3.00	11946
12	2020	Р	2.40	591	10	2021	С	3	11750

Source: CME, Nasdaq, ICE

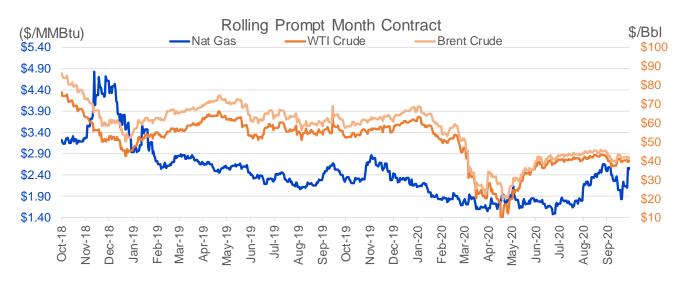


Nat Gas Futures Open Interest

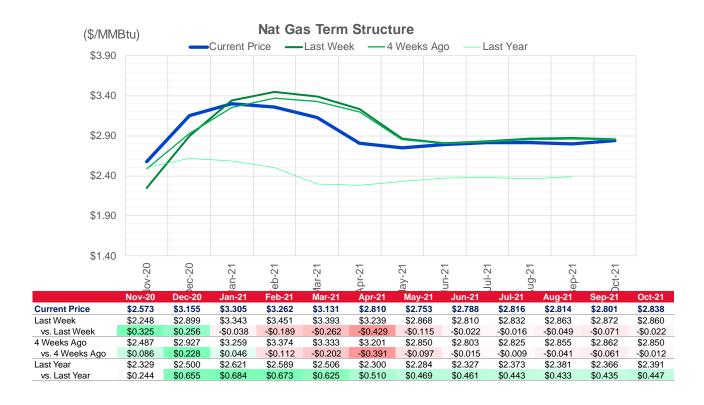
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CME	000		$C_{\alpha}m_{\alpha}$	المصطني
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CME Henry	CME Henry Hub Futures (10,000 MMBtu) CME Henry Hub Futures Contract Equivalent (10,000 MM							
	Current	Prior		FOR JUNE 26	Current	Prior	Daily Change	
NOV 20	296800	296379	421	NOV 20	83570	87873	-4303.25	
DEC 20	144538	143125	1413	DEC 20	78387	77700	687	
JAN 21	142071	139290	2781	JAN 21	86836	86928	-91.25	
FEB 21	63687	63338	349	FEB 21	60885	61399	-514	
MAR 21	118260	117376	884	MAR 21	80467	81204	-737.5	
APR 21	83992	84209	-217	APR 21	64592	64199	393	
MAY 21	47562	47685	-123	MAY 21	58609	58697	-88	
JUN 21	32510	32222	288	JUN 21	53038	52982	56	
JUL 21	20780	20623	157	JUL 21	55329	55436	-106.75	
AUG 21	25917	25967	-50	AUG 21	58564	58559	5.5	
SEP 21	33889	34042	-153	SEP 21	52764	52690	73.75	
OCT 21	78923	78778	145	OCT 21	78632	78281	351	
NOV 21	29617	29529	88	NOV 21	45429	45353	76.75	
DEC 21	25662	25331	331	DEC 21	44509	44525	-16.25	
JAN 22	26309	26422	-113	JAN 22	39180	38975	205.25	
FEB 22	15080	14989	91	FEB 22	33284	33126	158.25	
MAR 22	18697	18656	41	MAR 22	35689	35488	201.5	
APR 22	23524	23092	432	APR 22	36510	36324	186.75	
MAY 22	7145	7141	4	MAY 22	25936	25937	-0.25	
JUN 22	3873	3859	14	JUN 22	24604	24484	120	
JUL 22	3398	3339	59	JUL 22	26399	26079	320.25	
AUG 22	2312	2310	2	AUG 22	24977	24928	48.5	
SEP 22	2232	2226	6	SEP 22	23769	23604	165	
OCT 22	3636	3553	83	OCT 22	26074	25935	139.5	
NOV 22	2770	2718	52	NOV 22	23283	23247	35.75	
DEC 22	2891	2864	27	DEC 22	25963	25925	38	
JAN 23	2833	2836	-3	JAN 23	13439	13064	375.5	
FEB 23	882	885	-3	FEB 23	12653	12537	115.75	
MAR 23	900	911	-11	MAR 23	12826	12622	204	
APR 23	2451	2449	2	APR 23	12034	11764	270.75	

Source: CME, ICE







	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	1.35	1.53	0.18
TETCO M3	\$/MMBtu	0.99	1.27	0.28
FGT Zone 3	\$/MMBtu	1.18	2.23	1.05
Zone 6 NY	\$/MMBtu	1.18	1.23	0.05
Chicago Citygate	\$/MMBtu	1.43	2.00	0.57
Michcon	\$/MMBtu	1.44	1.92	0.48
Columbia TCO Pool	\$/MMBtu	1.15	1.35	0.20
Ventura	\$/MMBtu	1.30	2.04	0.74
Rockies/Opal	\$/MMBtu	2.43	1.91	-0.52
El Paso Permian Basin	\$/MMBtu	0.78	1.40	0.62
Socal Citygate	\$/MMBtu	4.22	2.52	-1.70
Malin	\$/MMBtu	2.36	2.36	0.00
Houston Ship Channel	\$/MMBtu	1.85	2.19	0.34
Henry Hub Cash	\$/MMBtu	1.63	1.95	0.32
AECO Cash	C\$/GJ	1.36	2.00	0.64
Station2 Cash	C\$/GJ	1.35	2.84	1.49
Dawn Cash	C\$/GJ	1.39	1.94	0.55

Source: CME, Bloomberg



					VS	s. 4 Weeks		
	Units	Current Price	VS.	Last Week		Ago	VS	s. Last Year
NatGas Jan/Apr	\$/MMBtu	-0.50	_	0.088	_	0.029	$\overline{}$	-0.064
NatGas Mar/Apr	\$/MMBtu	-0.321	_	0.050	$\overline{}$	-0.672	$\overline{}$	-0.587
NatGas Oct/Nov	\$/MMBtu	0.47	$\overline{}$	-0.180	_	0.031		0.405
NatGas Oct/Jan	\$/MMBtu	1.20	_	0.001	A	0.317		0.855
WTI Crude	\$/Bbl	39.65	$\overline{}$	-0.660	$\overline{}$	-1.720	$\overline{}$	-12.800
Brent Crude	\$/Bbl	41.73	$\overline{}$	-0.210	$\overline{}$	-2.340	$\overline{}$	-15.980
Fuel Oil, NY Harbour 1%	\$/Bbl	98.03	_	0.000	_	0.000		0.000
Heating Oil	cents/Gallon	113.96	_	2.290	$\overline{}$	-2.810	$\overline{}$	-73.640
Propane, Mt. Bel	cents/Gallon	0.49	_	0.001	$\overline{}$	-0.002		0.060
Ethane, Mt. Bel	cents/Gallon	0.20	$\overline{}$	-0.001	A	0.009		0.004
Coal, PRB	\$/MTon	12.30		0.000	_	0.000		0.100
Coal, ILB	\$/MTon	31.05	_	0.000	_	0.000	$\overline{}$	-4.500