

21 December 2020



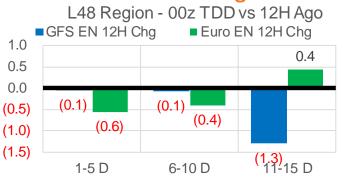
	Cu	ırrent	Δ from YD	_	m 7D va
WTI Prompt	\$	47.33	\$ (1.77)	~ \$	(1.0)

	_	urront	Δ from YD	∆ fro	m 7D
	C	urreni	עז וווסווו אַ	A	vg
Brent Prompt	\$	50 33	\$ (1.93)	* \$	(1.2)
Prompt	Ψ	50.55	Ψ ψ (1.93)	ΨΨ	(1.2)

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

Vs. 12H Ago



Vs. 24H Ago

L48 Region - 00z TDD vs 24H Ago ■ Euro EN 24H Chg 3.6 ■ GFS EN 24H Chg 4.0 3.2 2.9 3.0 1.8 2.0 1.0 0.3 0.2 0.0 1-5 D 6-10 D 11-15 D

	Current	Δ from YD	Δ from 7D Avg		
US Dry Production	90.0	▼ -0.82	- 0.81		

	Current	Δ from YD	Δ from 7D Avg
US ResComm	35.7	▼ -3.96	J

	Current	Δ from YD	Δ from 7D Avg		
Net LNG Exports	10.6	- 0.09	a 0.05		

	Current	Δ from YD	Δ from 7D Avg		
US Power Burns	26.9	a 0.56	▼ -2.69		

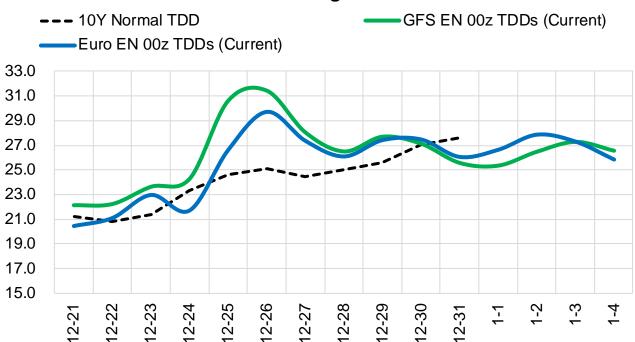
	Current	Δ from YD	Δ from 7D Avg		
Canadian Imports	6.0	▲ 0.04	▼ -0.32		

	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	5.9	a 0.22	▼ -0.21

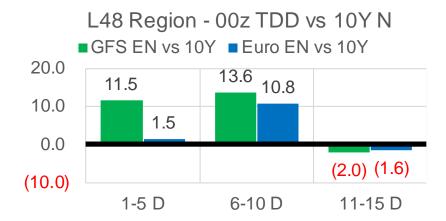


Short-term Weather Model Outlooks (00z)

L48 Region



Vs. 10Y Normal



Source: WSI, Bloomberg



Lower 48 Component Models

Daily Balances

	15-Dec	16-Dec	17-Dec	18-Dec	19-Dec	20-Dec	21-Dec	DoD	vs. 7D
Lower 48 Dry Production	90.7	90.7	90.4	91.5	90.7	90.8	90.0	▼ -0.8	▼ -0.8
Canadian Imports	6.5	6.8	6.8	6.3	6.2	6.0	6.0	▲ 0.0	▼ -0.4
L48 Power	30.1	32.6	32.1	29.2	26.9	26.3	26.9	0.6	▼ -2.6
L48 Residential & Commercial	47.7	47.3	46.7	45.4	42.8	39.7	35.7	-4.0	▼ -9.2
L48 Industrial	27.7	27.2	26.6	25.7	24.5	23.8	23.2	▼-0.6	▼ -2.7
L48 Lease and Plant Fuel	5.0	5.0	5.0	5.1	5.0	5.0	5.0	▼ 0.0	▼ 0.0
L48 Pipeline Distribution	3.6	3.6	3.6	3.4	3.2	3.0	2.9	▼ -0.2	▼ -0.5
L48 Regional Gas Consumption	114.2	115.7	114.0	108.8	102.4	97.9	93.7	▼ -4.2	▼-15.1
Net LNG Delivered	9.40	10.62	11.01	10.62	10.55	10.66	10.57	▼ -0.1	0.1
Total Mexican Exports	6.3	6.4	6.3	6.1	5.6	5.7	5.9	0.2	▼ -0.2
Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error	-32.7	-35.2	-34.1	-27.7	-21.6	-17.4	-14.1		

EIA Storage Week Balances

	13-Nov	20-Nov	27-Nov	4-Dec	11-Dec	18-Dec	WoW	vs. 4W
Lower 48 Dry Production	88.2	90.9	91.6	91.6	90.9	91.0	▲ 0.1	▼-0.3
Canadian Imports	3.9	5.1	4.5	5.3	5.9	5.8	▼ -0.1	0.6
L48 Power	24.4	24.7	24.8	26.5	28.1	28.4	0.2	2.3
L48 Residential & Commercial	16.8	27.2	26.7	34.4	37.3	40.9	3.6	9.5
L48 Industrial	24.0	23.3	22.2	24.2	24.1	24.7	0.6	1.2
L48 Lease and Plant Fuel	4.9	5.0	5.1	5.1	5.0	5.0	0.0	▼ 0.0
L48 Pipeline Distribution	1.9	2.4	2.4	2.8	3.0	3.2	0.2	0.5
L48 Regional Gas Consumption	72.0	82.6	81.1	93.0	97.5	102.1	4.6	▲13.6
Net LNG Exports	10.4	10.2	9.7	10.4	11.3	10.9	▼ -0.3	0.5
Total Mexican Exports	6.3	6.1	6.3	6.4	6.3	6.2	▼ -0.1	▼-0.1
Implied Daily Storage Activity EIA Reported Daily Storage Activity	3.4 4.4	-2.9 -2.6	-1.0 -0.1	-12.9 -13.0	-18.3 -17.4	-22.5	-4.2	
Daily Model Error	4.4 -1.0	-2.6 -0.3	-0.1 -0.9	0.1	-17. 4 -0.9			

Monthly Balances									
•	2Yr Ago	LY					MTD		
	Dec-18	Dec-19	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	MoM	vs. LY
Lower 48 Dry Production	87.5	95.1	88.6	87.8	87.5	90.4	91.0	0.5	▼-4.2
Canadian Imports	4.8	4.5	4.9	3.8	4.3	4.6	5.9	1.3	1.4
L48 Power	24.5	28.9	41.0	34.0	29.4	24.6	28.2	3.6	▼-0.7
L48 Residential & Commercial	39.3	39.1	7.7	8.8	16.2	24.2	39.4	15.2	0.4
L48 Industrial	22.4	24.4	20.3	19.2	22.2	23.2	25.2	2.0	8.0
L48 Lease and Plant Fuel	4.9	5.3	4.9	4.9	4.8	5.0	5.0	0.0	▼ -0.2
L48 Pipeline Distribution	2.8	3.1	2.4	2.2	2.2	2.3	3.1	8.0	▼ 0.0
L48 Regional Gas Consumption	93.9	100.7	76.3	69.1	74.9	79.3	100.9	21.7	0.2
Net LNG Exports	4.5	7.8	4.0	5.9	8.0	10.1	10.9	▲ 0.8	3.2
Total Mexican Exports	4.5	5.0	6.3	6.4	6.2	6.2	6.2	▼ 0.0	1.2
Implied Daily Storage Activity EIA Reported Daily Storage Activity	-10.7	-13.9	6.8	10.2	2.7	-0.6	-21.2		
Daily Model Error									

Source: Bloomberg, analytix.ai



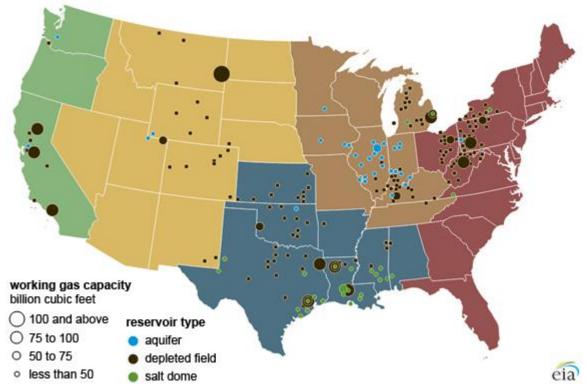
Regional S/D Models Storage Projection

Week Ending 18-Dec

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	-22.8	0.7	-22.1	-154
East	-6.6	1.7	-4.9	-35
Midwest	-7.6	8.0	-6.8	-47
Mountain	2.0	-3.9	-1.8	-13
South Central	-9.3	2.3	-7.0	-49
Pacific	-1.3	-0.3	-1.6	-11

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

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



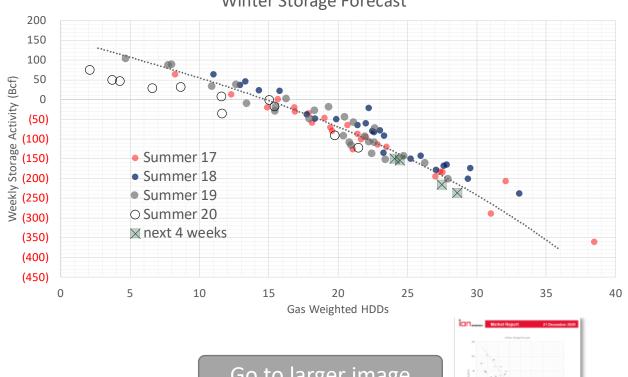


Weather Model Storage Projection

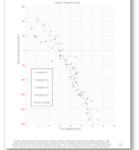
Next report and beyond	
Week Ending	

Week Storage **Temp Projection** 18-Dec 24.5 -154 25-Dec 24.1 -149 01-Jan 27.5 -215 08-Jan 28.6 -235

Winter Storage Forecast



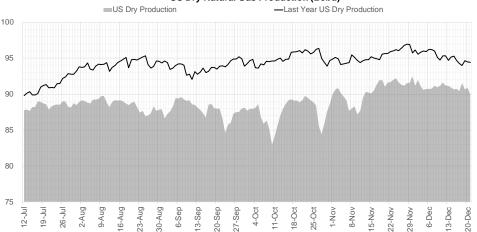
Go to larger image



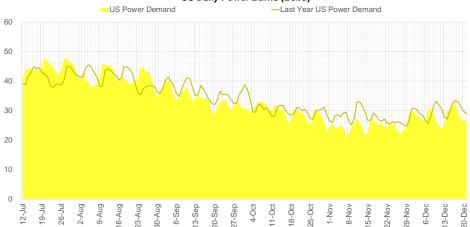


Supply - Demand Trends

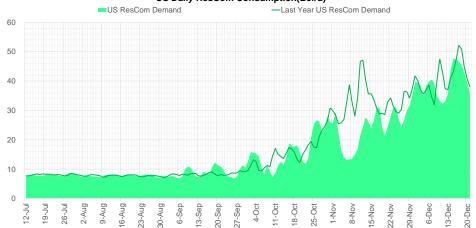
US Dry Natural Gas Production (Bcf/d)



US Daily Power Burns (Bcf/d)



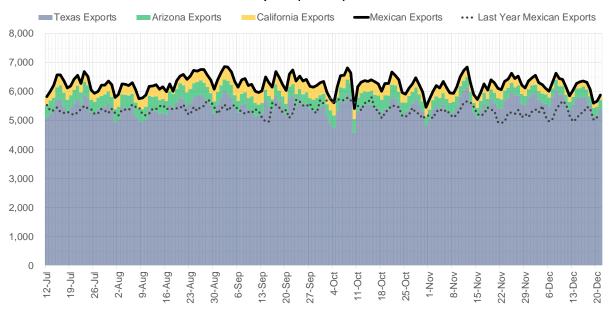
US Daily ResCom Consumption(Bcf/d)



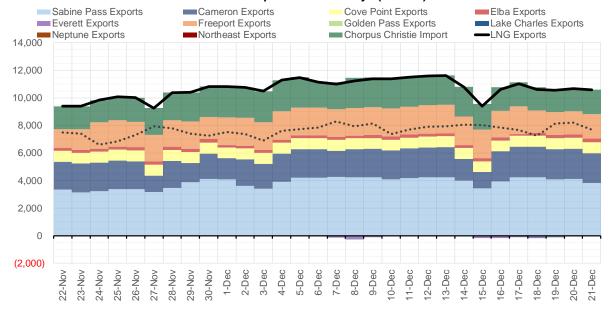
Source: Bloomberg



Mexican Exports (MMcf/d)







Source: Bloomberg



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

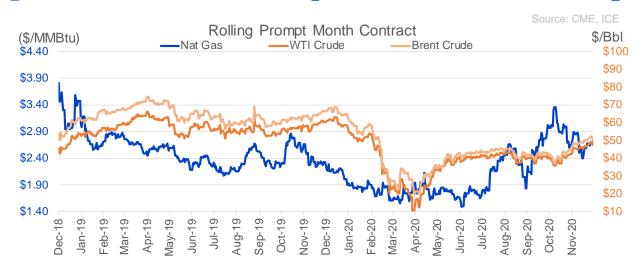
ONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL		CONTRACT MONTH			
1	2021	Р	2.50	6891		1	1 2021	1 2021 C	1 2021 C 3.50
4	2021	С	3.00	5595		3			
3	2021	С	5.00	4359		3	3 2021	3 2021 C	3 2021 C 5.00
1	2021	C	3.00	3976		1	1 2021	1 2021 C	1 2021 C 3.00
4	2021	Č	4.00	3715		3	3 2021	3 2021 C	3 2021 C 6.00
2	2021	P	2.25	3585		3	3 2021	3 2021 C	3 2021 C 4.00
4	2021	C	3.25	3546		1	1 2021	1 2021 P	1 2021 P 2.50
1	2021	P	2.40	3480		3	3 2021	3 2021 C	3 2021 C 3.50
4	2021	C	3.50	3377		1	1 2021	1 2021 P	1 2021 P 2.25
2	2021	P	2.50	2593		4			
1	2021	C	2.75	2493		3			
						3			
3	2021	С	4.00	2312		1			
6	2021	P	2.00	2201	2		2021		
5	2021	С	2.75	2000	10		2021		
5	2021	С	3.25	2000	3		2021		
1	2021	Р	2.00	1933	3 1		2021		
1	2021	С	2.90	1861					
1	2021	Р	2.30	1796	4		2021		
3	2021	С	3.50	1792	1		2021		
3	2021	C	4.50	1736	10	202			
1	2021	P	2.25	1712	3	2021		P	
1	2021	Р	2.65	1676	1	2021		С	
7	2021	C	3.25	1550	3	2021		С	C 7.00
8	2021	C	3.25	1550	4	2021		С	
8 1	2021	C			2	2021		С	
		C	2.85	1536	1	2021		Р	P 2.00
2	2021	С	3.50	1491	1	2021		С	C 6.00
1	2021	С	3.25	1352	8	2021		С	C 4.00
2	2021	С	3.00	1327	2	2021		P	
1	2021	С	2.80	1239	10	2021		С	
1	2021	С	3.15	1234	4	2021		Ċ	
2	2021	Р	2.35	1072	2	2021		Č	
5	2021	С	4.00	1050	1	2021		Č	
1	2021	С	3.50	994	i	2021		Č	
3	2021	С	3.00	871	4	2021		Č	
1	2021	Р	2.60	850	8	2021		P	
1	2021	Р	2.45	839	5	2021		C	
3	2021	P	2.25	812	2	2021		P	
2	2021	Р	2.75	769	4			P P	
2	2021	P	2.00	748		2021			
5	2021	C	3.50	746 725	2	2021		С	
3	2021	C			6	2021		С	
			2.75	699	2	2021		C	
2	2021	С	3.05	681	2	2021		С	
1	2021	С	2.70	669	4	2021		С	
1	2021	С	3.05	628	4	2021		Р	
2	2021	С	3.25	584	5	2021		С	
2	2021	Р	2.45	571	1	2021		Р	P 2.75
2	2021	Р	2.10	525	10	2021		Р	P 2.00
1	2021	Р	2.55	518	10	2021		С	C 3.00
1	2021	С	2.50	506	1	2021			
-		-			•			Source	P 3 Source: CME, ICE



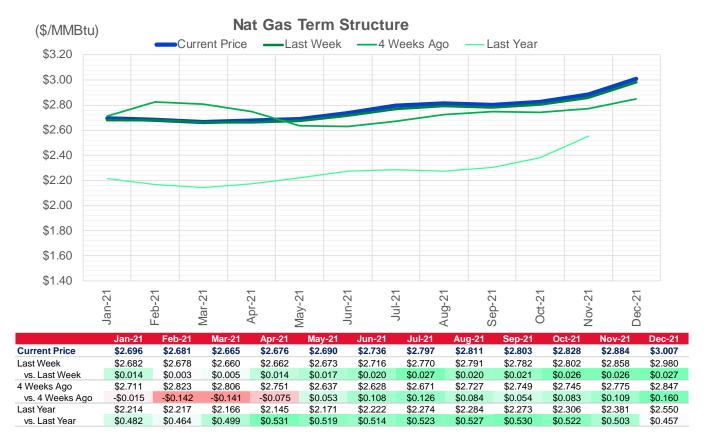
Nat Gas Futures Open Interest

CME, and ICE Combined

CME Henry Hub Futures (10,000 MMBtu) ICE Henry Hub Futures Contract Equivalent (10,000 MM							
	Current	Prior			Current	Prior	Daily Change
JAN 21	63158	75506	-12348	JAN 21	92981	93944	-962.25
FEB 21	198468	187366	11102	FEB 21	79017	77104	1913
MAR 21	246696	244595	2101	MAR 21	99562	99740	-178
APR 21	101722	101111	611	APR 21	85465	85280	184.25
MAY 21	60829	60006	823	MAY 21	77060	76684	376.75
JUN 21	39560	38909	651	JUN 21	63558	63272	286.5
JUL 21	31743	30917	826	JUL 21	65466	64843	623.5
AUG 21	28499	28253	246	AUG 21	67691	67456	235
SEP 21	46811	46027	784	SEP 21	62701	62348	352.5
OCT 21	97008	96064	944	OCT 21	78169	77672	497.25
NOV 21	42543	43071	-528	NOV 21	51461	51235	226.5
DEC 21	42976	43354	-378	DEC 21	52279	51798	480.75
JAN 22	39848	39862	-14	JAN 22	50878	50542	336
FEB 22	24157	24232	-75	FEB 22	38979	39070	-91
MAR 22	27131	27023	108	MAR 22	40757	40635	122
APR 22	24715	24995	-280	APR 22	38652	39348	-696
MAY 22	13304	13347	-43	MAY 22	33446	33355	90.75
JUN 22	6776	6786	-10	JUN 22	31709	31663	46.5
JUL 22	5868	5888	-20	JUL 22	33494	33311	183.5
AUG 22	5190	5171	19	AUG 22	32186	32126	59.5
SEP 22	4537	4550	-13	SEP 22	31595	31584	10.75
OCT 22	9345	9311	34	OCT 22	37269	37137	131.5
NOV 22	6422	6411	11	NOV 22	31652	31685	-33.25
DEC 22	6962	6940	22	DEC 22	34293	34240	52.25
JAN 23	4444	4446	-2	JAN 23	16269	16107	161.25
FEB 23	1380	1340	40	FEB 23	15010	14685	325.5
MAR 23	1763	2233	-470	MAR 23	14369	14264	104.5
APR 23	3383	2748	635	APR 23	13794	13682	112.25
MAY 23	1773	1768	5	MAY 23	12880	12805	75.25
JUN 23	557	557	0	JUN 23	12924	12805	119.75







		Cash Prompt		Cash to
	Units	Settled	Settle	Prompt
AGT Citygate	\$/MMBtu	7.41	5.42	-1.99
TETCO M3	\$/MMBtu	2.73	3.53	0.80
FGT Zone 3	\$/MMBtu	2.77	2.66	-0.11
Zone 6 NY	\$/MMBtu	2.77	4.09	1.32
Chicago Citygate	\$/MMBtu	2.56	2.62	0.06
Michcon	\$/MMBtu	2.53	2.47	-0.06
Columbia TCO Pool	\$/MMBtu	2.37	2.16	-0.21
Ventura	\$/MMBtu	2.50	2.84	0.34
Rockies/Opal	\$/MMBtu	3.17	2.46	-0.71
El Paso Permian Basin	\$/MMBtu	2.47	2.44	-0.03
Socal Citygate	\$/MMBtu	4.28	3.28	-1.00
Malin	\$/MMBtu	3.41	3.21	-0.20
Houston Ship Channel	\$/MMBtu	2.67	2.66	-0.01
Henry Hub Cash	\$/MMBtu	2.70	2.50	-0.20
AECO Cash	C\$/GJ	2.16	2.10	-0.06
Station2 Cash	C\$/GJ	2.16	3.41	1.25
Dawn Cash	C\$/GJ	2.55	2.50	-0.05

Source: CME, Bloomberg



						s. 4 Weeks		
	Units	Current Price	vs.	Last Week	V	Ago	VS	s. Last Year
NatGas Jan21/Apr21	\$/MMBtu	-0.019		0.001		0.167		0.382
NatGas Mar21/Apr21	\$/MMBtu	0.011		0.009	•	-0.103		-0.237
NatGas Oct21/Nov21	\$/MMBtu	0.056		0.000	•	-0.016		-0.013
NatGas Apr21/Oct21	\$/MMBtu	0.152		0.272		0.104		-0.177
WTI Crude	\$/Bbl	47.33		0.340		4.270		-13.190
Brent Crude	\$/Bbl	50.33		0.040		4.270		-16.060
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18		0.000		0.000		0.000
Heating Oil	cents/Gallon	145.44		0.000		14.390		-56.780
Propane, Mt. Bel	cents/Gallon	0.64		0.053		0.102		0.139
Ethane, Mt. Bel	cents/Gallon	0.20		-0.003	•	-0.019		0.021
Coal, PRB	\$/MTon	12.30		0.000		0.000		0.050
Coal, PRB	\$/MMBtu	0.70						
Coal, ILB	\$/MTon	31.05		0.000		0.000		-4.000
Coal, ILB	\$/MMBtu	1.32						





