

Page Menu

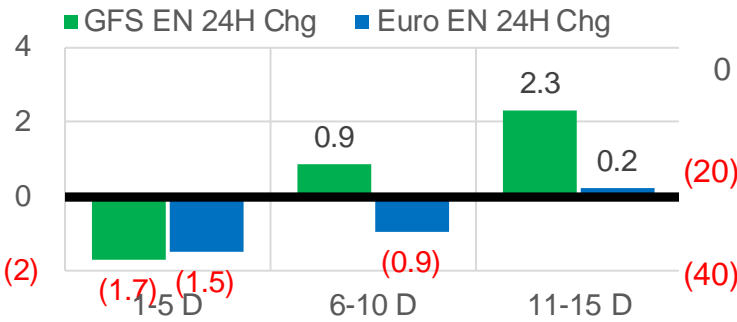
- [Short-term Weather Model Outlooks](#)
- [Lower 48 Component Models](#)
- [Regional S/D Models Storage Projection](#)
- [Weather Model Storage Projection](#)
- [Supply – Demand Trends](#)
- [Nat Gas Options Volume and Open Interest](#)
- [Nat Gas Futures Open Interest](#)
- [Price Summary](#)

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 2.91 ▲	\$ 0.02 ▲	\$ (0.08) ▼

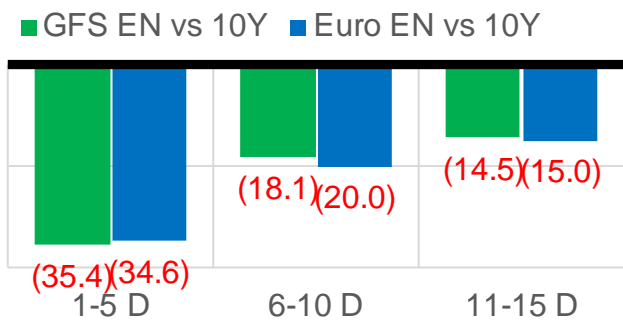
	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 40.40 ▲	\$ 3.26 ▲	\$ 2.7 ▲

	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 42.64 ▲	\$ 3.19 ▲	\$ 2.8 ▲

L48 Region - 00z TDD vs 24H Ago



L48 Region - 00z TDD vs 10Y N



	Current	Δ from YD	Δ from 7D Avg
US Dry Production	88.2 ▼	-0.35 ▼	-1.99 ▼

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	23.8 ▲	0.75 ▲	-0.52 ▼

	Current	Δ from YD	Δ from 7D Avg
US ResComm	15.6 ▲	1.53 ▲	-2.32 ▼

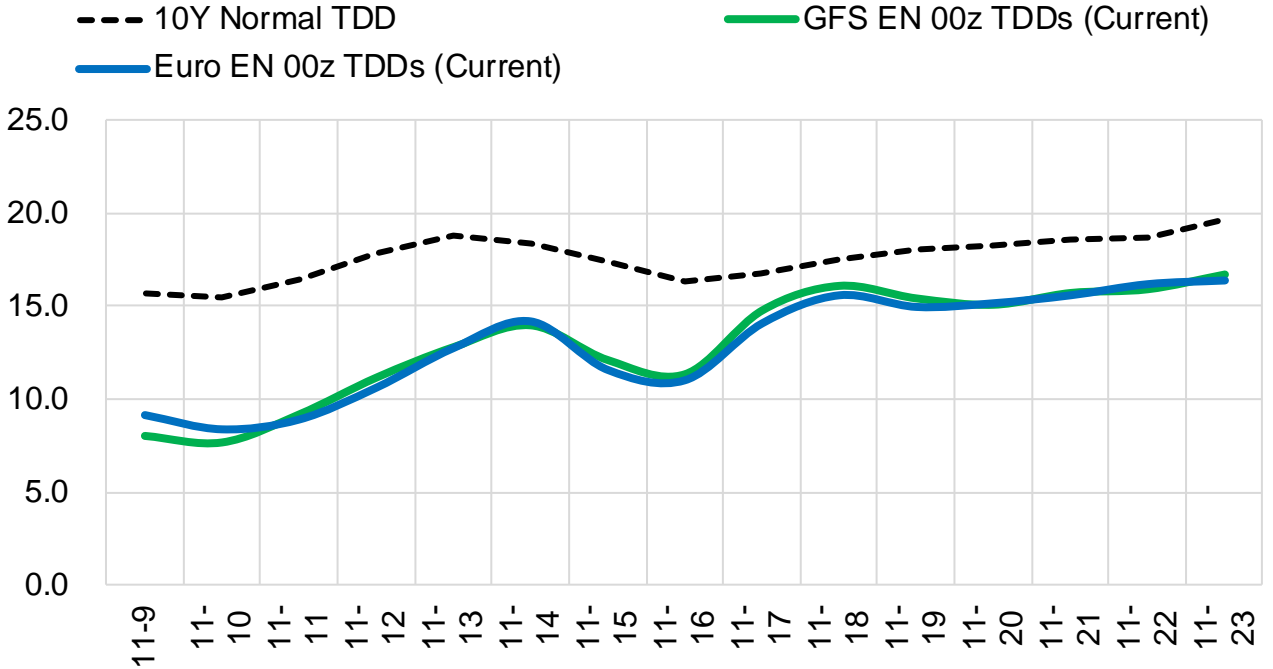
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	2.2 ▲	0.02 ▲	-1.43 ▼

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	10.6 ▲	0.02 ▲	0.30 ▲

	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.0 ▼	-0.04 ▼	-0.12 ▼

Short-term Weather Model Outlooks (00z)

L48 Region



Source: WSI, Bloomberg

Lower 48 Component Models

Daily Balances

	3-Nov	4-Nov	5-Nov	6-Nov	7-Nov	8-Nov	9-Nov	DoD	vs. 7D
Lower 48 Dry Production	91.7	91.0	90.5	90.0	88.2	88.6	88.2	▼-0.4	▼-1.8
Canadian Imports	4.9	4.1	3.7	2.9	2.2	2.2	2.2	▲0.0	▼-1.1
L48 Power	24.5	24.0	25.5	24.1	22.8	23.0	23.8	▲0.7	▼-0.2
L48 Residential & Commercial	22.9	17.0	14.4	13.7	13.7	14.1	15.6	▲1.5	▼-0.4
L48 Industrial	25.7	25.4	25.6	25.9	26.1	26.4	26.0	▼-0.4	▲0.1
L48 Lease and Plant Fuel	5.1	5.0	5.0	5.0	4.9	4.9	4.9	▼0.0	▼-0.1
L48 Pipeline Distribution	2.2	1.9	1.9	1.8	1.7	1.7	1.8	▲0.1	▼0.0
L48 Regional Gas Consumption	80.4	73.3	72.4	70.5	69.3	70.2	72.1	▲1.9	▼-0.6
Net LNG Delivered	10.41	10.34	10.32	10.08	10.25	10.58	10.61	▲0.0	▲0.3
Total Mexican Exports	6.2	6.0	6.3	6.4	6.0	6.0	6.0	▼0.0	▼-0.2
Implied Daily Storage Activity	-0.5	5.4	5.1	6.0	4.9	4.0	1.8		
EIA Reported Daily Storage Activity									
Daily Model Error									

EIA Storage Week Balances

	2-Oct	9-Oct	16-Oct	23-Oct	30-Oct	6-Nov	WoW	vs. 4W
Lower 48 Dry Production	88.2	88.1	86.7	90.0	88.2	90.5	▲2.3	▲2.2
Canadian Imports	3.9	4.5	4.0	3.6	4.8	4.9	▲0.0	▲0.6
L48 Power	30.7	31.0	30.5	28.6	28.1	24.8	▼-3.3	▼-4.8
L48 Residential & Commercial	9.3	13.4	11.4	16.8	23.3	23.5	▲0.3	▲7.3
L48 Industrial	23.3	22.5	22.8	23.6	25.5	25.9	▲0.4	▲2.3
L48 Lease and Plant Fuel	4.8	4.8	4.8	4.9	4.8	5.0	▲0.1	▲0.1
L48 Pipeline Distribution	2.0	2.2	2.1	2.2	2.5	2.3	▼-0.2	▲0.0
L48 Regional Gas Consumption	70.1	73.9	71.6	76.2	84.3	81.5	▼-2.8	▲5.0
Net LNG Exports	6.8	7.5	6.9	8.0	9.2	10.2	▲1.0	▲2.3
Total Mexican Exports	6.3	6.2	6.2	6.3	6.2	5.9	▼-0.3	▼-0.3
Implied Daily Storage Activity	8.9	5.1	6.0	3.0	-6.7	-2.3	4.4	
EIA Reported Daily Storage Activity	10.7	6.6	7.0	4.1	-5.1			
Daily Model Error	-1.8	-1.5	-1.0	-1.2	-1.6			

Monthly Balances

	2Yr Ago Nov-18	LY Nov-19	Jul-20	Aug-20	Sep-20	Oct-20	MTD Nov-20	MoM	vs. LY
Lower 48 Dry Production	88.1	95.3	88.3	88.6	88.6	88.3	90.0	▲1.8	▼-5.2
Canadian Imports	4.1	4.5	4.4	4.9	3.8	4.3	3.7	▼-0.6	▼-0.9
L48 Power	25.4	27.5	43.7	40.7	33.3	29.3	24.2	▼-5.1	▼-3.4
L48 Residential & Commercial	32.9	32.8	7.9	7.7	8.5	16.8	18.6	▲1.8	▼-14.2
L48 Industrial	25.1	25.1	19.8	21.3	22.1	23.8	26.0	▲2.2	▲0.9
L48 Lease and Plant Fuel	5.0	5.3	4.9	5.0	4.9	4.9	5.0	▲0.1	▼-0.3
L48 Pipeline Distribution	2.6	2.8	2.4	2.4	2.1	2.3	2.0	▼-0.3	▼-0.8
L48 Regional Gas Consumption	91.0	93.5	78.8	77.0	70.7	77.0	75.7	▼-1.3	▼-17.8
Net LNG Exports	4.3	7.2	3.3	4.0	5.9	8.0	10.3	▲2.3	▲3.1
Total Mexican Exports	4.8	5.3	6.1	6.3	6.4	6.2	6.0	▼-0.2	▲0.8
Implied Daily Storage Activity	-7.8	-6.2	4.4	6.2	9.4	1.4	1.7		
EIA Reported Daily Storage Activity									
Daily Model Error									

Source: Bloomberg, analytix.ai

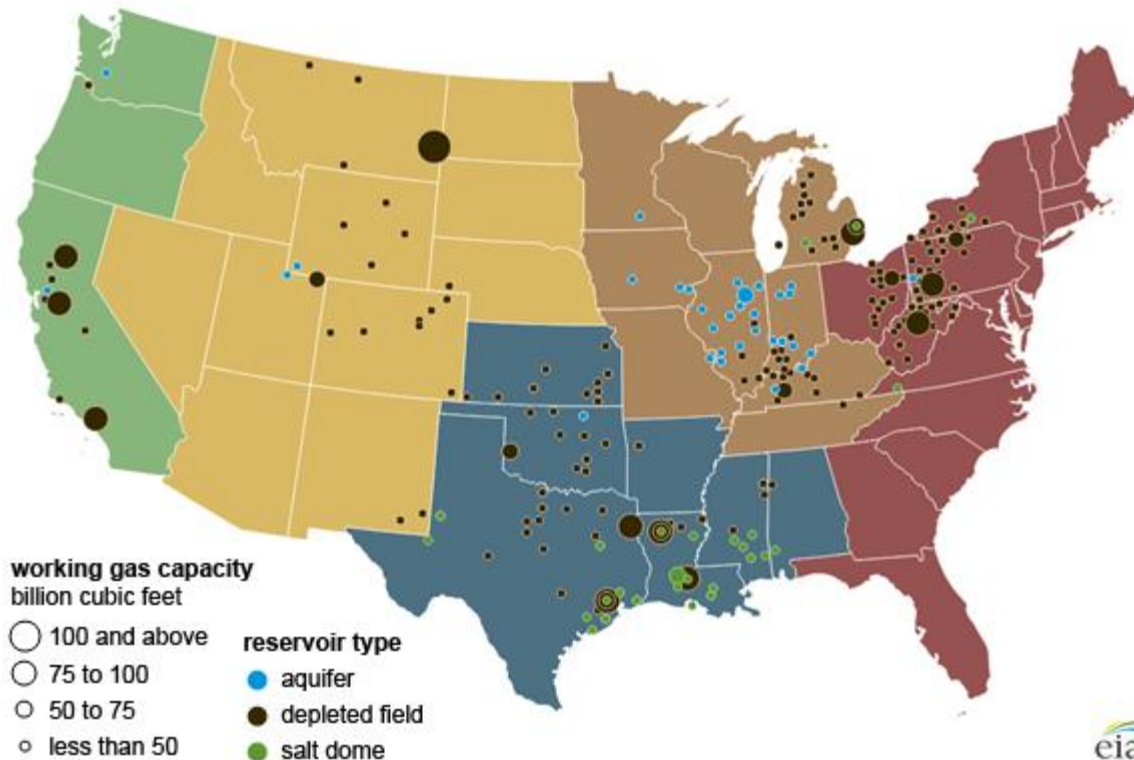
Regional S/D Models Storage Projection

Week Ending 6-Nov

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	-2.6	1.7	-0.9	-7
East	-3.4	2.3	-1.1	-8
Midwest	-0.6	1.6	1.0	7
Mountain	4.0	-3.0	1.0	7
South Central	-2.8	0.5	-2.3	-16
Pacific	0.2	0.3	0.5	4

*Adjustment Factor is calculated based on historical regional deltas

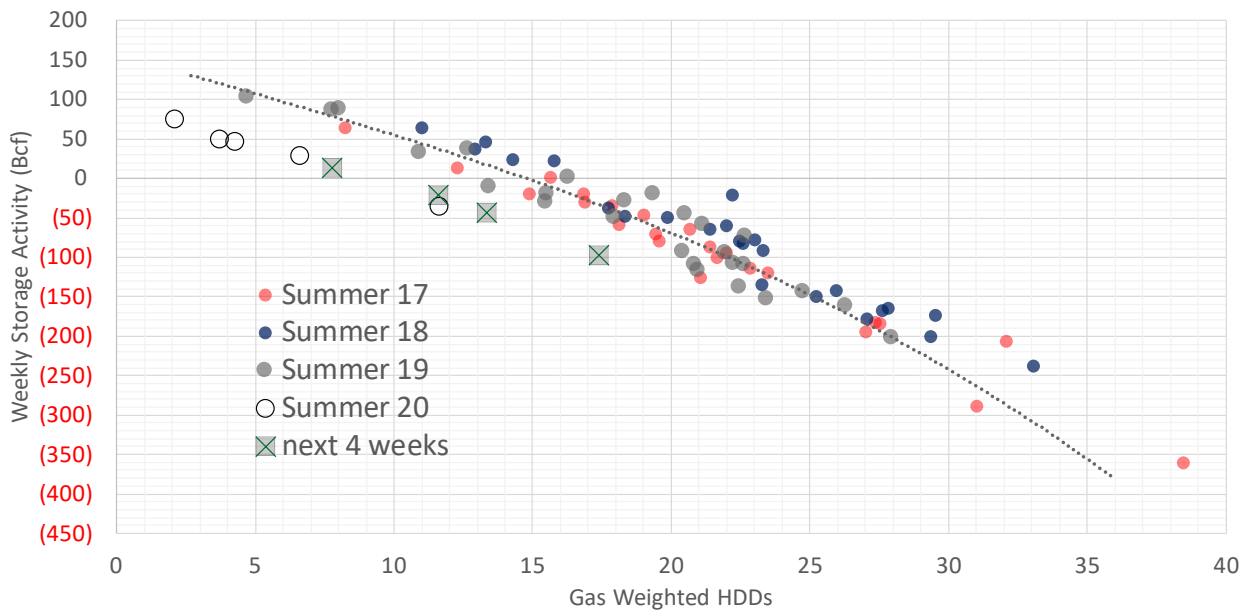
U.S. underground natural gas storage facilities by type (July 2015)



Weather Model Storage Projection

Next report and beyond		
Week Ending	Temp	Week Storage Projection
06-Nov	11.6	-7
13-Nov	7.8	14
20-Nov	13.4	-43
27-Nov	17.4	-96

Winter Storage Forecast

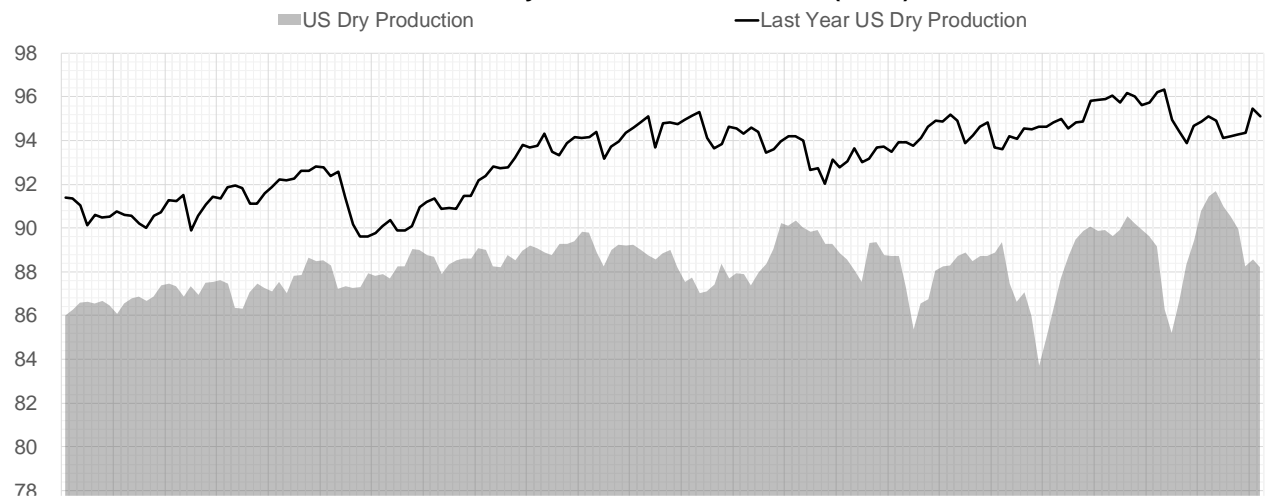


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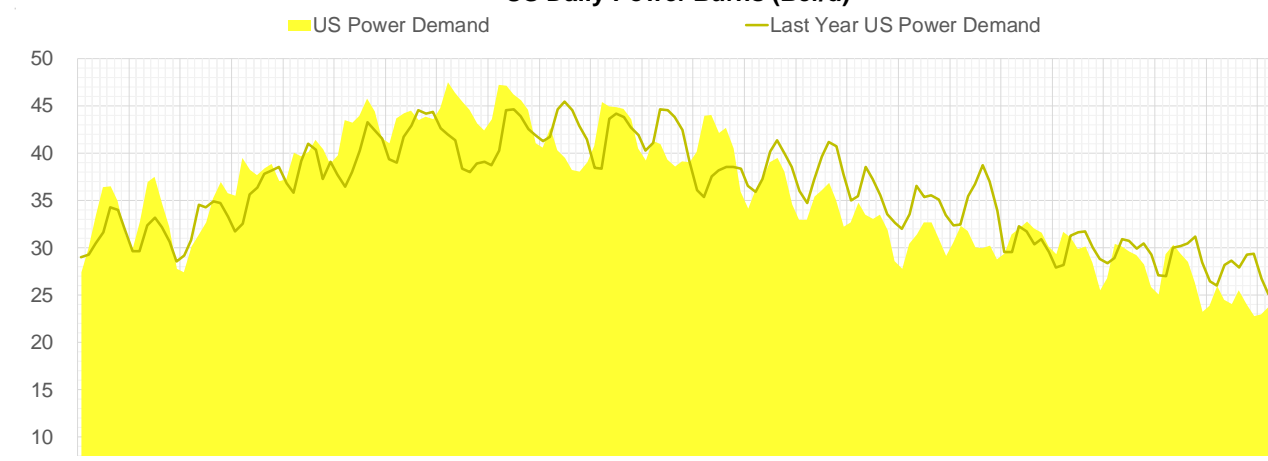


Supply – Demand Trends

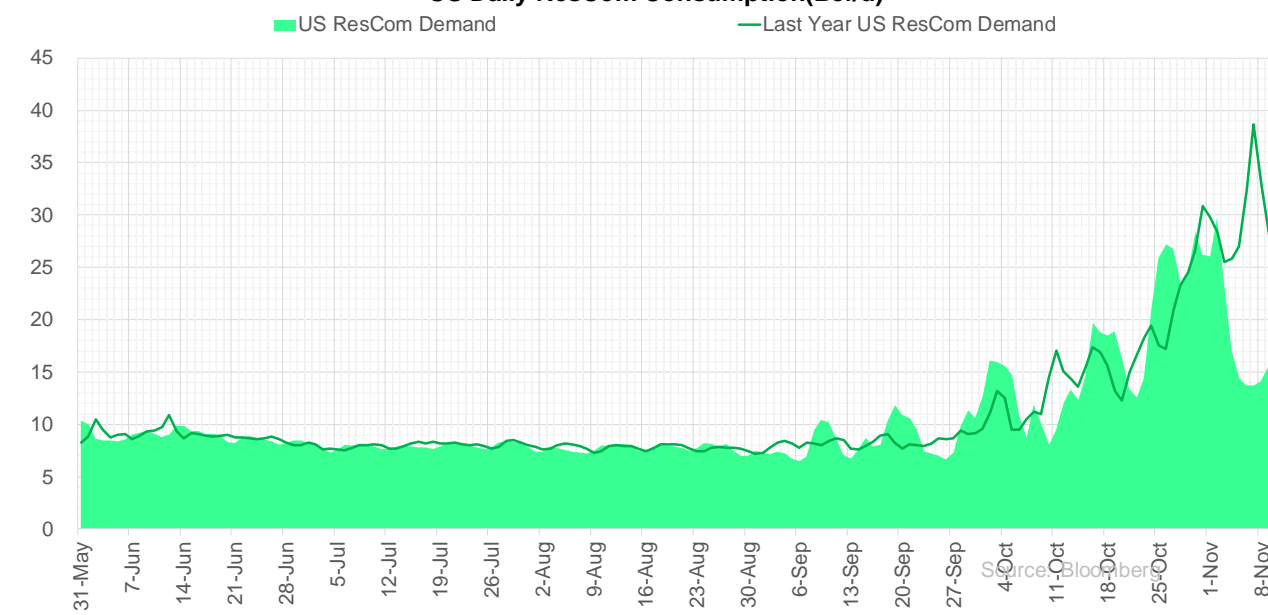
US Dry Natural Gas Production (Bcf/d)



US Daily Power Burns (Bcf/d)

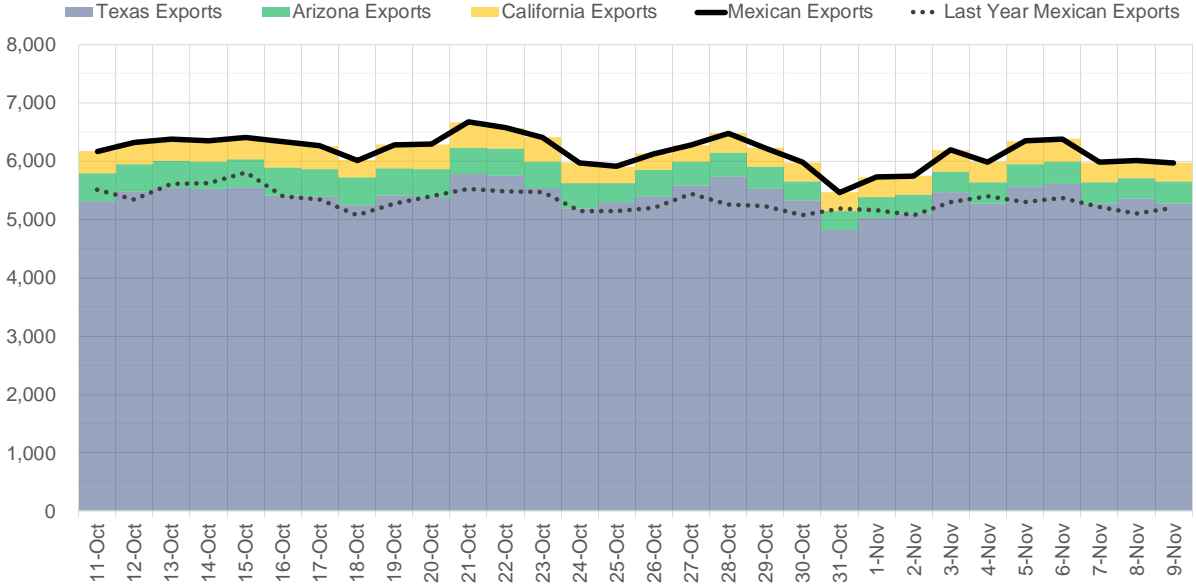


US Daily ResCom Consumption (Bcf/d)

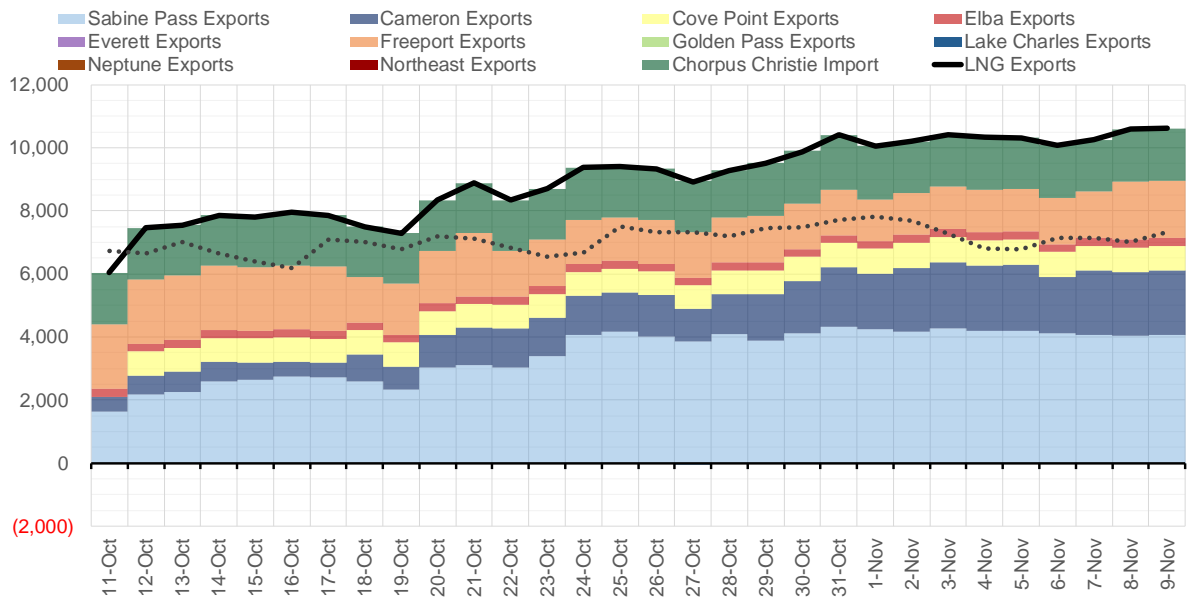


Source: Bloomberg

Mexican Exports - Last 30 days (MMcf/d)



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



Source: Bloomberg

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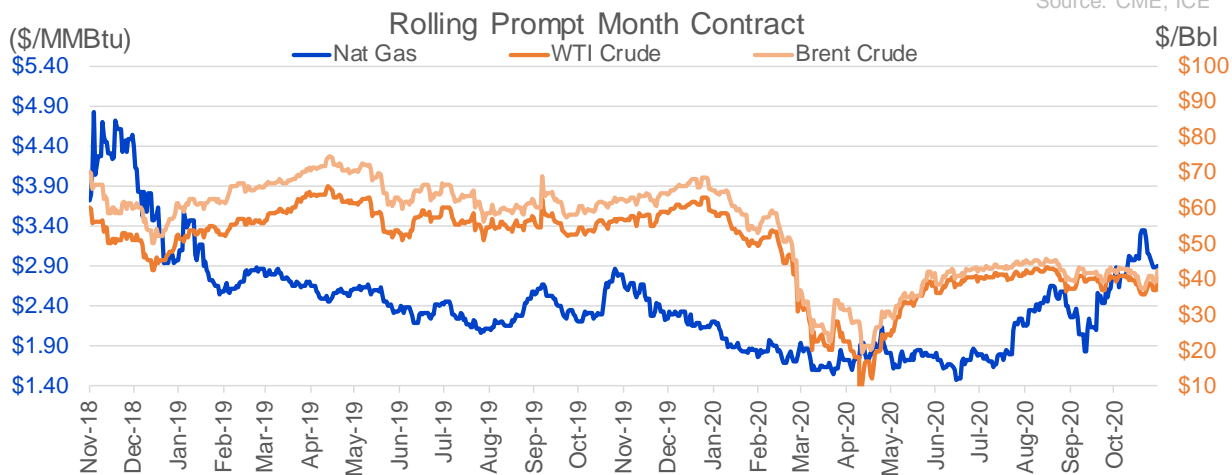
Nat Gas Options Volume and Open Interest CME, ICE and Nasdaq Combined

CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
12	2020	C	3.25	8032	3	2021	P	2.00	38288
1	2021	C	5.00	5721	12	2020	P	2.00	33053
1	2021	C	6.00	5707	12	2020	C	4.00	32558
1	2021	P	2.00	5563	1	2021	C	4.50	30186
4	2021	C	3.25	5288	3	2021	C	3.25	29674
12	2020	P	2.45	5150	4	2021	C	4.00	28850
4	2021	C	4.00	5000	10	2021	C	4.00	28615
1	2021	P	2.50	4542	3	2021	C	6.00	28496
12	2020	P	2.75	4486	1	2021	C	3.50	28007
12	2020	C	3.50	4199	3	2021	C	4.00	27891
12	2020	C	3.00	4159	12	2020	P	2.50	27239
12	2020	P	2.70	3722	10	2021	C	3.25	27120
12	2020	C	3.75	3707	4	2021	C	5.00	26847
1	2021	P	2.75	3389	3	2021	C	7.00	24914
1	2021	C	3.50	2854	12	2020	C	3.75	24637
8	2021	C	3.50	2850	3	2021	C	4.50	23878
1	2021	C	4.00	2847	3	2021	C	5.00	23869
1	2021	C	7.00	2778	1	2021	C	3.75	22641
1	2021	C	4.50	2675	1	2021	P	2.50	22584
12	2020	C	3.20	2500	12	2020	C	3.50	22121
2	2021	C	4.25	2444	3	2021	C	3.50	21594
12	2020	P	2.50	2346	3	2021	C	3.00	21464
1	2021	C	4.25	2287	12	2020	C	4.50	20856
1	2021	P	1.75	2154	12	2020	P	2.75	20451
3	2021	C	3.50	2144	2	2021	P	2.25	20016
12	2020	P	2.90	1959	1	2021	C	5.00	19611
1	2021	P	2.25	1841	8	2021	C	4.00	19601
12	2020	C	3.10	1750	1	2021	C	4.00	19466
3	2021	C	6.00	1718	2	2021	C	5.00	18908
1	2021	P	2.90	1706	12	2020	P	3.00	18886
12	2020	C	4.00	1685	1	2021	C	6.00	18550
1	2021	C	3.00	1637	1	2021	C	3.00	18389
2	2021	C	4.00	1611	3	2021	P	2.50	18201
12	2020	P	2.25	1581	1	2021	P	2.25	17970
8	2021	C	3.25	1390	2	2021	C	4.00	17901
1	2021	P	3.00	1336	8	2021	P	2.25	17742
1	2021	C	3.25	1191	2	2021	C	3.50	17436
4	2021	C	3.00	1185	2	2021	P	2.50	17116
12	2020	P	3.00	1182	10	2021	C	5.00	16778
12	2020	P	2.35	1172	2	2021	C	4.50	16421
3	2021	C	4.00	1131	1	2021	P	2.00	15946
4	2021	P	2.50	1103	12	2020	C	5.00	15830
2	2021	C	8.00	1044	12	2020	C	3.25	14987
12	2020	P	2.30	1026	4	2021	C	3.00	14784
12	2020	C	3.05	1014	10	2021	C	3.00	14661
12	2020	C	3.40	1011	12	2020	P	1.50	14450
3	2021	C	4.25	1003	1	2021	C	7.00	14284
4	2021	P	2.65	1000	5	2021	C	3.00	13811
3	2023	C	4.00	1000	4	2021	P	2.00	13802
					1	2021	C	3.25	13749

Source: CME, ICE

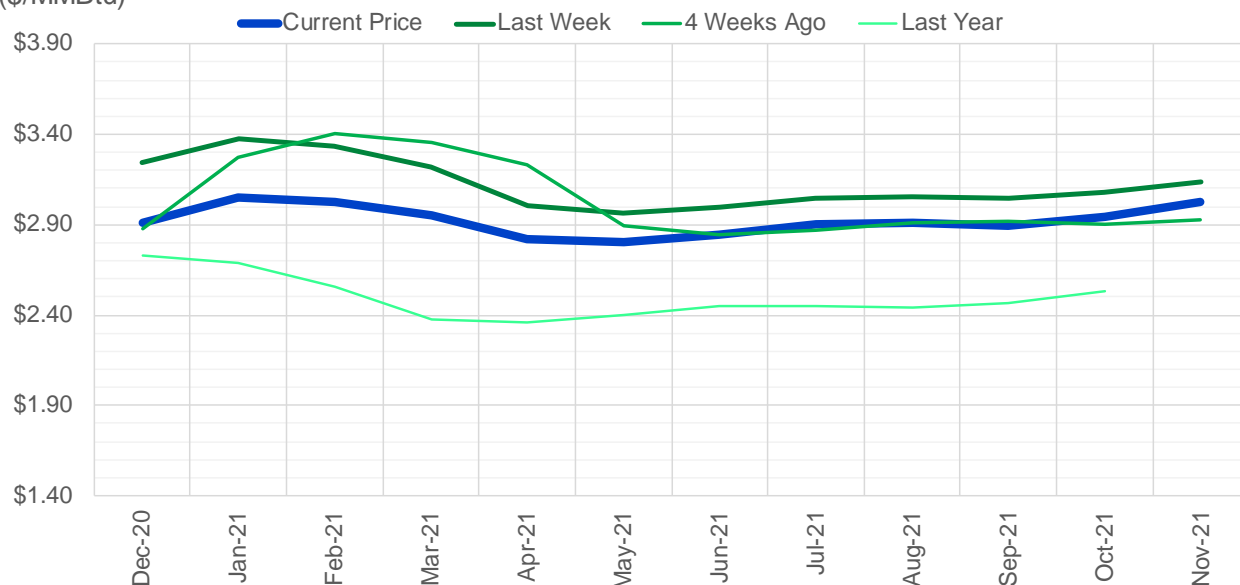
Nat Gas Futures Open Interest CME, and ICE Combined

CME Henry Hub Futures (10,000 MMBtu)				ICE Henry Hub Futures Contract Equivalent (10,000 MM			
	Current	Prior	Daily Change	FOR JUNE 26	Current	Prior	Daily Change
DEC 20	150281	153959	-3678	DEC 20	74225	76669	-2444.25
JAN 21	232374	219532	12842	JAN 21	93265	92763	501.25
FEB 21	92169	90486	1683	FEB 21	66096	66514	-418.5
MAR 21	142419	141777	642	MAR 21	89884	93414	-3529.75
APR 21	78478	77622	856	APR 21	71953	70193	1759.75
MAY 21	57295	56541	754	MAY 21	71866	71560	306.25
JUN 21	33746	33322	424	JUN 21	57920	58211	-291.5
JUL 21	27852	28878	-1026	JUL 21	60592	60444	147.75
AUG 21	28780	29224	-444	AUG 21	64784	64707	76.75
SEP 21	37583	37912	-329	SEP 21	58686	58440	246.25
OCT 21	92159	91254	905	OCT 21	68497	68526	-29.25
NOV 21	36167	35883	284	NOV 21	54302	54460	-157.5
DEC 21	30712	31007	-295	DEC 21	47992	48205	-213.25
JAN 22	30942	32447	-1505	JAN 22	46291	46547	-255.75
FEB 22	23599	23540	59	FEB 22	37620	37572	48
MAR 22	24041	23333	708	MAR 22	41010	40811	199.5
APR 22	25682	25225	457	APR 22	41128	41439	-311.25
MAY 22	10550	10625	-75	MAY 22	30012	29942	70.5
JUN 22	5669	5674	-5	JUN 22	29562	29425	136.5
JUL 22	4723	4699	24	JUL 22	30595	30560	34.75
AUG 22	3647	3646	1	AUG 22	29187	29184	3
SEP 22	3513	3404	109	SEP 22	29268	29207	61.5
OCT 22	4931	5091	-160	OCT 22	33546	33450	95.75
NOV 22	4416	4410	6	NOV 22	29190	29182	8
DEC 22	4718	4705	13	DEC 22	31522	31482	40.25
JAN 23	4321	4303	18	JAN 23	14937	14982	-45.25
FEB 23	1029	1029	0	FEB 23	13857	13870	-12.75
MAR 23	2305	2305	0	MAR 23	13908	13938	-30
APR 23	1557	1557	0	APR 23	12811	12817	-6.5
MAY 23	444	444	0	MAY 23	11446	11454	-7.75



(\$/MMBtu)

Nat Gas Term Structure



	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21
Current Price	\$2.909	\$3.048	\$3.025	\$2.951	\$2.818	\$2.805	\$2.847	\$2.901	\$2.911	\$2.898	\$2.946	\$3.024
Last Week	\$3.244	\$3.375	\$3.332	\$3.219	\$3.002	\$2.967	\$3.001	\$3.045	\$3.057	\$3.045	\$3.080	\$3.140
vs. Last Week	-\$0.335	-\$0.327	-\$0.307	-\$0.268	-\$0.184	-\$0.162	-\$0.154	-\$0.144	-\$0.146	-\$0.147	-\$0.134	-\$0.116
4 Weeks Ago	\$2.881	\$3.271	\$3.401	\$3.355	\$3.233	\$2.893	\$2.841	\$2.869	\$2.908	\$2.916	\$2.903	\$2.929
vs. 4 Weeks Ago	\$0.028	-\$0.223	-\$0.376	-\$0.404	-\$0.415	-\$0.088	\$0.006	\$0.032	\$0.003	-\$0.018	\$0.043	\$0.095
Last Year	\$2.637	\$2.728	\$2.687	\$2.559	\$2.373	\$2.355	\$2.400	\$2.447	\$2.453	\$2.438	\$2.467	\$2.531
vs. Last Year	\$0.272	\$0.320	\$0.338	\$0.392	\$0.445	\$0.450	\$0.447	\$0.454	\$0.458	\$0.460	\$0.479	\$0.493

	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	0.78	5.33	4.55
TETCO M3	\$/MMBtu	0.17	3.48	3.31
FGT Zone 3	\$/MMBtu	0.34	3.27	2.93
Zone 6 NY	\$/MMBtu	0.34	4.16	3.82
Chicago Citygate	\$/MMBtu	1.96	3.26	1.30
Michcon	\$/MMBtu	1.99	3.00	1.01
Columbia TCO Pool	\$/MMBtu	0.40	2.65	2.25
Ventura	\$/MMBtu	2.00	3.47	1.47
Rockies/Opal	\$/MMBtu	2.97	3.17	0.20
El Paso Permian Basin	\$/MMBtu	1.82	2.93	1.11
Socal Citygate	\$/MMBtu	4.80	4.20	-0.60
Malin	\$/MMBtu	3.02	3.89	0.87
Houston Ship Channel	\$/MMBtu	2.64	3.17	0.53
Henry Hub Cash	\$/MMBtu	2.67	3.08	0.41
AECO Cash	C\$/GJ	2.04	2.49	0.45
Station2 Cash	C\$/GJ	2.22	5.28	3.06
Dawn Cash	C\$/GJ	2.00	3.12	1.12

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks Ago	vs. Last Year
NatGas Jan21/Apr21	\$/MMBtu	-0.230	▲ 0.143	▲ 0.278	▲ 0.251
NatGas Mar21/Apr21	\$/MMBtu	-0.133	▲ 0.084	▼ -0.473	▼ -0.420
NatGas Oct21/Nov21	\$/MMBtu	0.078	▲ 0.018	▲ 0.028	▲ 0.014
NatGas Apr21/Oct21	\$/MMBtu	0.128	▼ -0.167	▼ -0.344	▼ -0.292
WTI Crude	\$/Bbl	40.40	▲ 3.590	▲ 0.970	▼ -16.460
Brent Crude	\$/Bbl	42.64	▲ 3.670	▲ 0.920	▼ -19.540
Fuel Oil, NY Harbour 1%	\$/Bbl	98.03	▲ 0.000	▲ 0.000	▲ 0.000
Heating Oil	cents/Gallon	122.22	▲ 10.990	▲ 6.510	▼ -69.200
Propane, Mt. Bel	cents/Gallon	0.55	▲ 0.006	▲ 0.040	▲ 0.036
Ethane, Mt. Bel	cents/Gallon	0.22	▼ -0.005	▲ 0.014	▲ 0.022
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	▼ -4.500
Coal, ILB	\$/MMBtu	1.32			

Winter Storage Forecast

