

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 2.92 ▲	\$ 0.08 ▲	\$ 0.09

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 45.17 ▼	\$ (0.36) ▲	\$ 0.0

	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 47.67 ▼	\$ (0.51) ▼	\$ (0.2)

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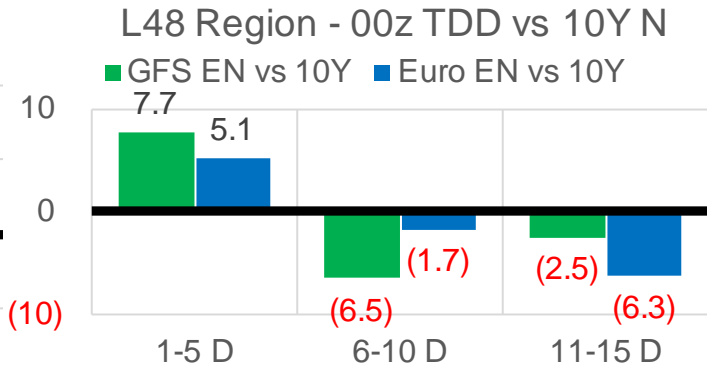
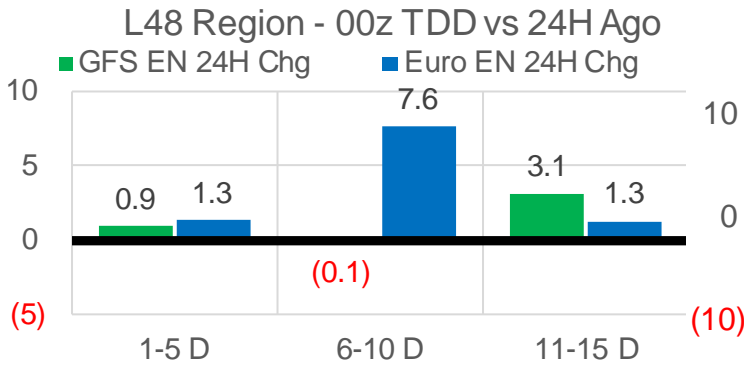
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	Current	Δ from YD	Δ from 7D Avg
US Dry Production	92.1 ▼	-0.25 ▼	-0.25

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	23.4 ▼	-0.69 ▼	-0.61

	Current	Δ from YD	Δ from 7D Avg
US ResComm	32.0 ▼	-0.07 ▲	2.86

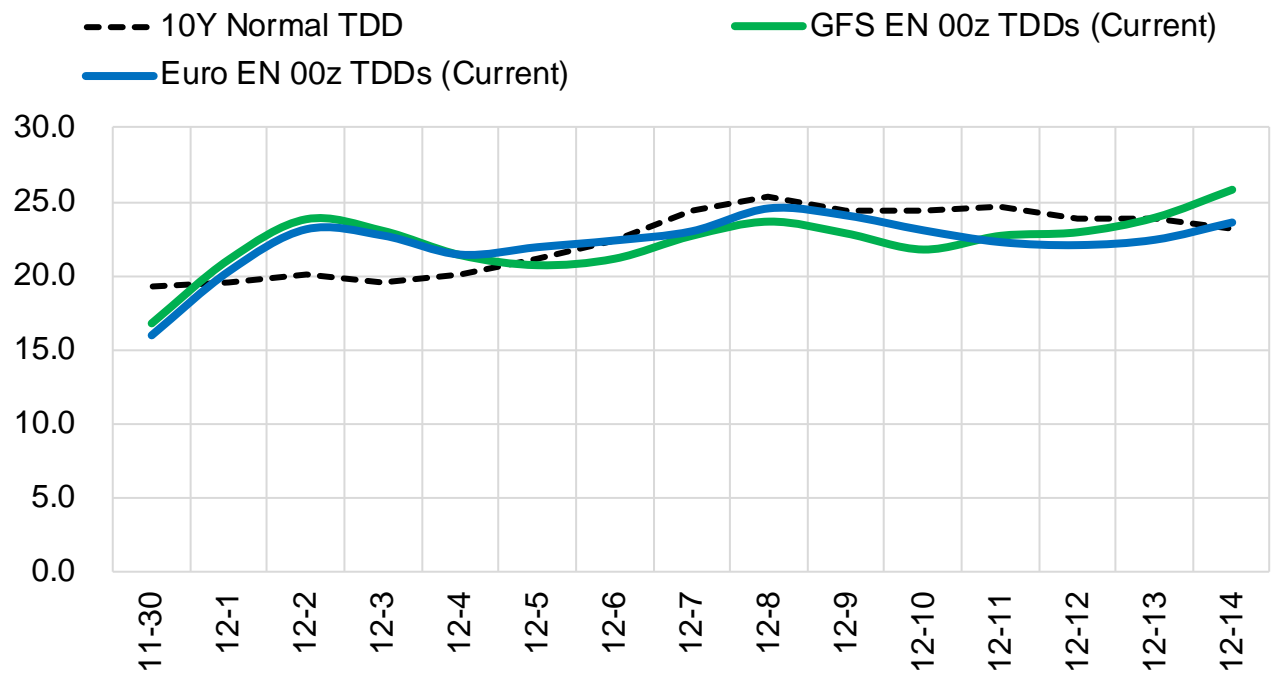
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	4.7 ▼	-0.08 ▲	0.06

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	10.7 ▲	0.30 ▲	0.76

	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.3 ▲	0.02 ▼	-0.12

Short-term Weather Model Outlooks (00z)

L48 Region



Source: WSI , Bloomberg

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Lower 48 Component Models

Daily Balances

	24-Nov	25-Nov	26-Nov	27-Nov	28-Nov	29-Nov	30-Nov	DoD	vs. 7D
Lower 48 Dry Production	93.0	92.3	92.0	91.9	92.3	92.4	92.1	▼ -0.2	▼ -0.2
Canadian Imports	4.9	4.4	4.5	4.5	4.7	4.8	4.7	▼ -0.1	▲ 0.1
L48 Power	24.9	25.4	22.2	22.4	23.4	24.1	23.4	▼ -0.7	▼ -0.3
L48 Residential & Commercial	31.7	27.2	24.5	27.2	30.1	32.0	32.0	▼ -0.1	▲ 3.2
L48 Industrial	21.5	20.9	20.5	20.7	20.8	21.1	21.4	▲ 0.3	▲ 0.5
L48 Lease and Plant Fuel	5.1	5.1	5.1	5.1	5.1	5.1	5.1	▼ 0.0	▼ 0.0
L48 Pipeline Distribution	2.6	2.5	2.2	2.3	2.5	2.6	2.6	▼ 0.0	▲ 0.1
L48 Regional Gas Consumption	85.8	81.1	74.5	77.7	82.0	84.9	84.4	▼ -0.5	▲ 3.4
Net LNG Delivered	9.84	10.07	10.18	9.32	10.38	10.39	10.70	▲ 0.3	▲ 0.7
Total Mexican Exports	6.4	6.4	6.5	6.6	6.2	6.2	6.3	▲ 0.0	▼ -0.1
Implied Daily Storage Activity	-4.2	-0.8	5.3	2.8	-1.6	-4.4	-4.6		
EIA Reported Daily Storage Activity									
Daily Model Error									

EIA Storage Week Balances

	23-Oct	30-Oct	6-Nov	13-Nov	20-Nov	27-Nov	WoW	vs. 4W
Lower 48 Dry Production	90.0	88.1	90.4	89.0	91.7	92.4	▲ 0.7	▲ 2.6
Canadian Imports	3.6	4.8	4.9	3.9	5.1	4.5	▼ -0.6	▼ -0.2
L48 Power	28.5	28.1	24.8	24.5	24.6	24.7	▲ 0.1	▼ -0.8
L48 Residential & Commercial	16.8	23.3	23.6	17.2	27.5	27.0	▼ -0.6	▲ 4.1
L48 Industrial	22.4	24.1	23.1	24.2	23.6	23.2	▼ -0.4	▼ -0.6
L48 Lease and Plant Fuel	4.9	4.8	5.0	4.9	5.1	5.1	▲ 0.0	▲ 0.1
L48 Pipeline Distribution	2.2	2.5	2.3	1.9	2.4	2.4	▼ 0.0	▲ 0.1
L48 Regional Gas Consumption	75.0	82.9	78.8	72.8	83.3	82.5	▼ -0.8	▲ 3.0
Net LNG Exports	8.0	9.2	10.2	10.4	10.2	9.8	▼ -0.4	▼ -0.2
Total Mexican Exports	6.3	6.2	6.0	6.3	6.1	6.3	▲ 0.2	▲ 0.2
Implied Daily Storage Activity	4.2	-5.3	0.3	3.4	-2.8	-1.6	1.1	
EIA Reported Daily Storage Activity	4.1	-5.1	1.1	4.4	-2.6			
Daily Model Error	0.1	-0.2	-0.9	-1.0	-0.2			

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	91.1	▲ 2.9	▼ -4.1
Canadian Imports	4.1	4.5	4.4	4.9	3.8	4.3	4.6	▲ 0.3	▲ 0.0
L48 Power	25.5	27.6	43.8	40.6	33.3	29.2	24.5	▼ -4.7	▼ -3.1
L48 Residential & Commercial	32.9	32.8	7.9	7.7	8.5	16.8	24.5	▲ 7.6	▼ -8.3
L48 Industrial	24.4	24.0	19.3	20.8	21.1	22.5	22.8	▲ 0.3	▼ -1.2
L48 Lease and Plant Fuel	5.0	5.3	4.9	5.0	4.9	4.9	5.0	▲ 0.2	▼ -0.2
L48 Pipeline Distribution	2.6	2.8	2.4	2.4	2.1	2.3	2.3	▲ 0.0	▼ -0.5
L48 Regional Gas Consumption	90.3	92.5	78.3	76.4	69.8	75.7	79.0	▲ 3.3	▼ -13.4
Net LNG Exports	4.3	7.2	3.3	4.0	5.9	8.0	10.1	▲ 2.1	▲ 2.9
Total Mexican Exports	4.8	5.3	6.1	6.3	6.4	6.2	6.2	▲ 0.0	▲ 1.0
Implied Daily Storage Activity	-7.2	-5.1	4.9	6.8	10.3	2.6	0.3		
EIA Reported Daily Storage Activity									
Daily Model Error									

Source: Bloomberg, analytix.ai

Regional S/D Models Storage Projection

Week Ending 27-Nov

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	-1.9	0.8	-1.1	-7
East	-2.7	1.7	-0.9	-7
Midwest	-1.8	0.4	-1.3	-9
Mountain	3.2	-3.4	-0.1	-1
South Central	-0.2	2.0	1.8	13
Pacific	-0.5	0.0	-0.5	-3

*Adjustment Factor is calculated based on historical regional deltas

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

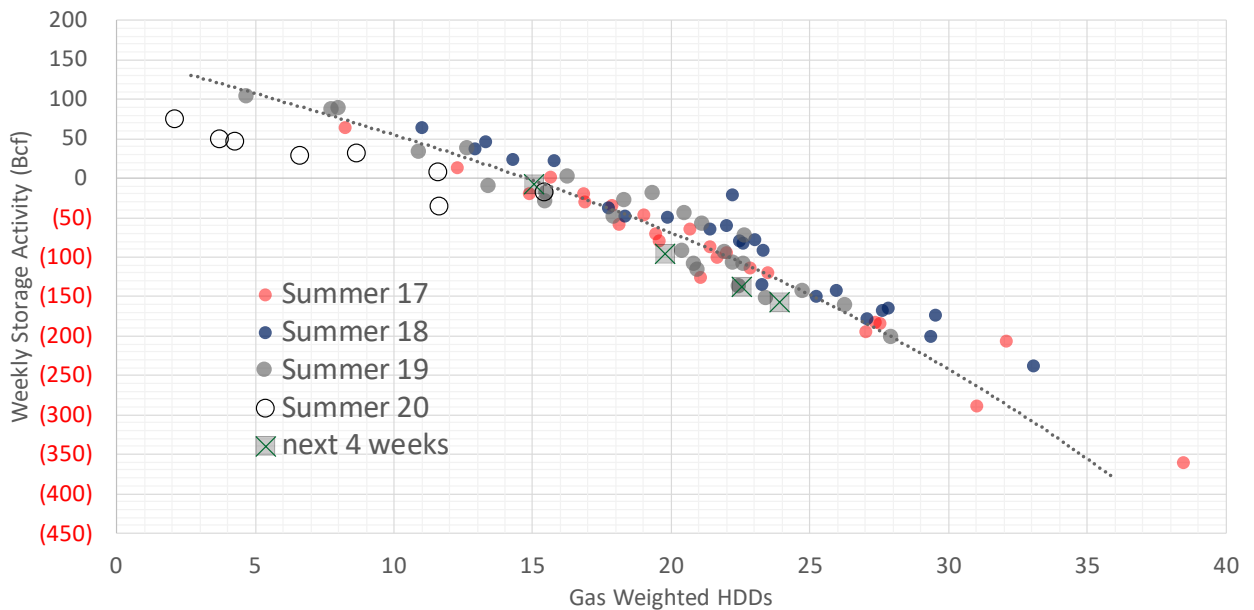


Weather Model Storage Projection

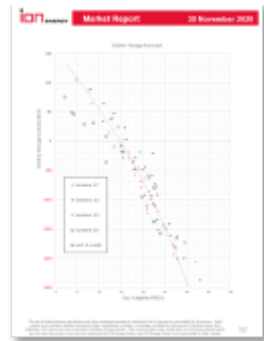
Next report
and beyond

Week Ending	Temp	Week Storage Projection
27-Nov	15.1	-7
04-Dec	19.8	-95
11-Dec	22.6	-137
18-Dec	23.9	-157

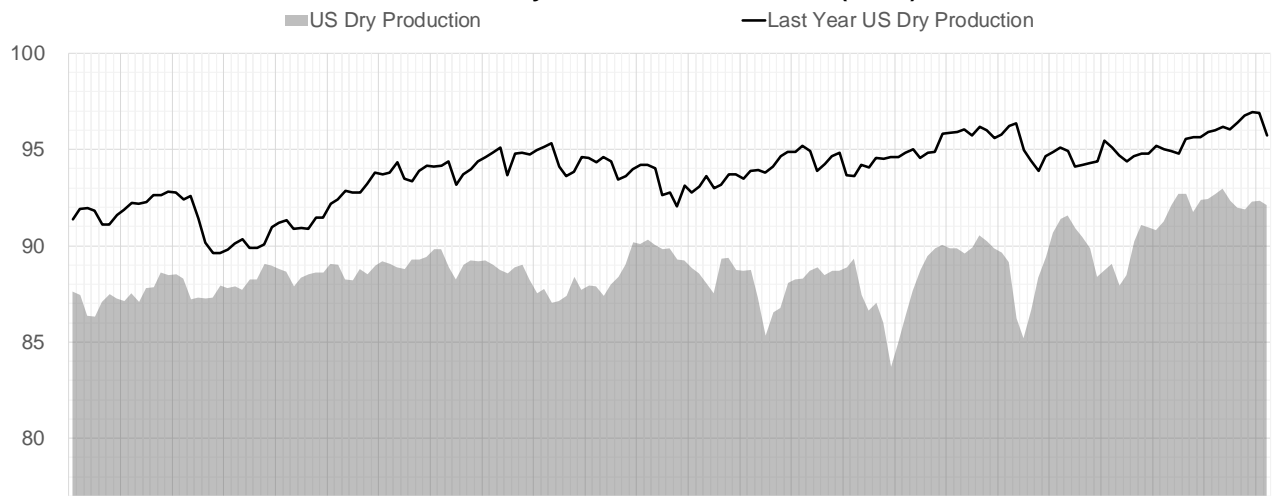
Winter Storage Forecast



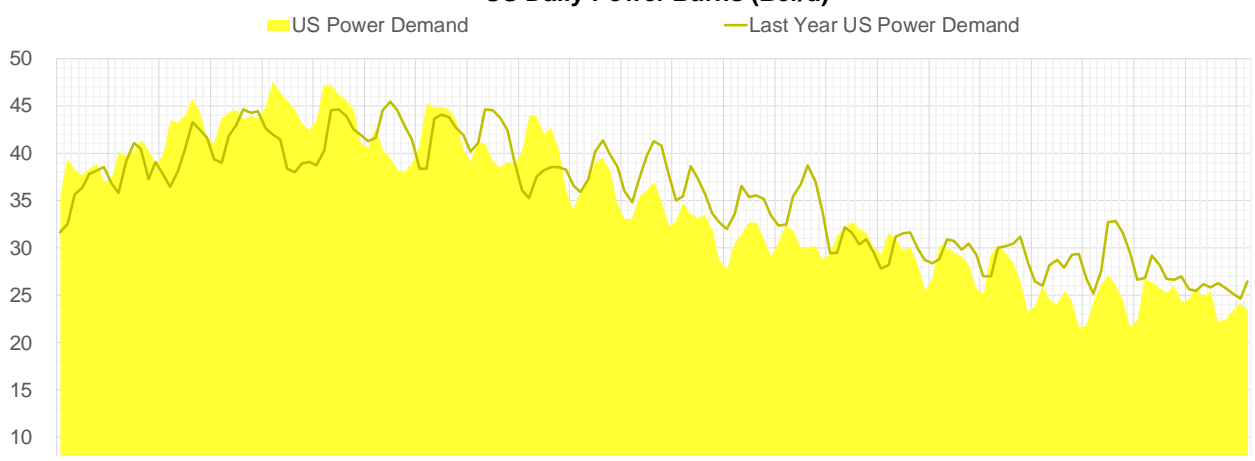
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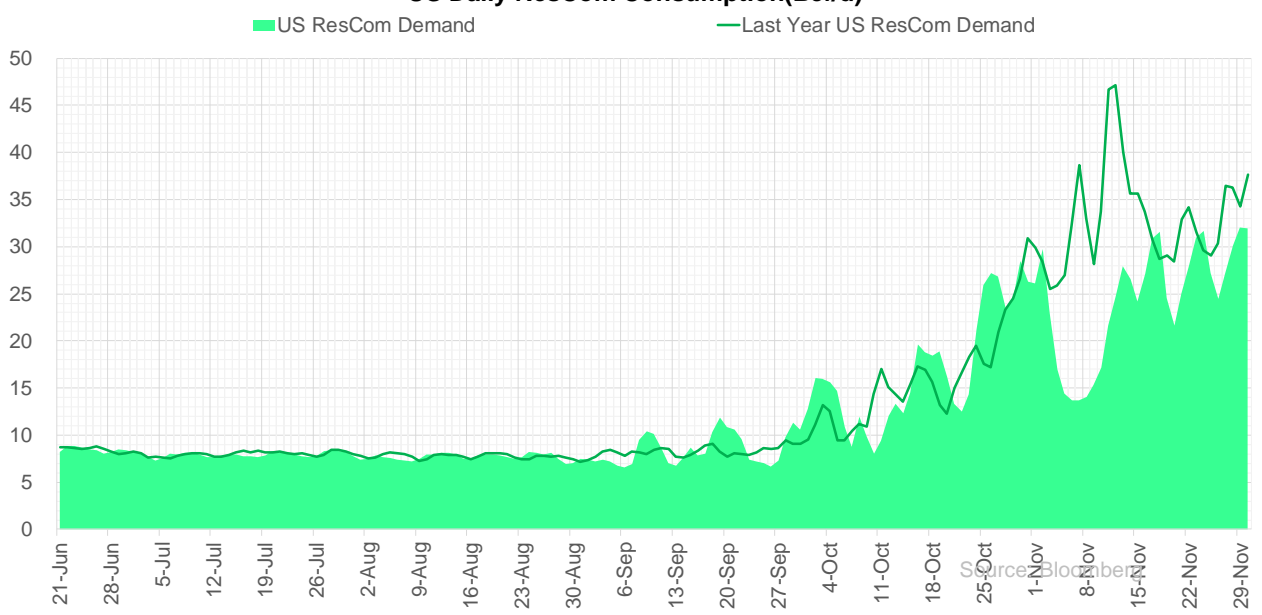
Supply – Demand Trends US Dry Natural Gas Production (Bcf/d)



US Daily Power Burns (Bcf/d)

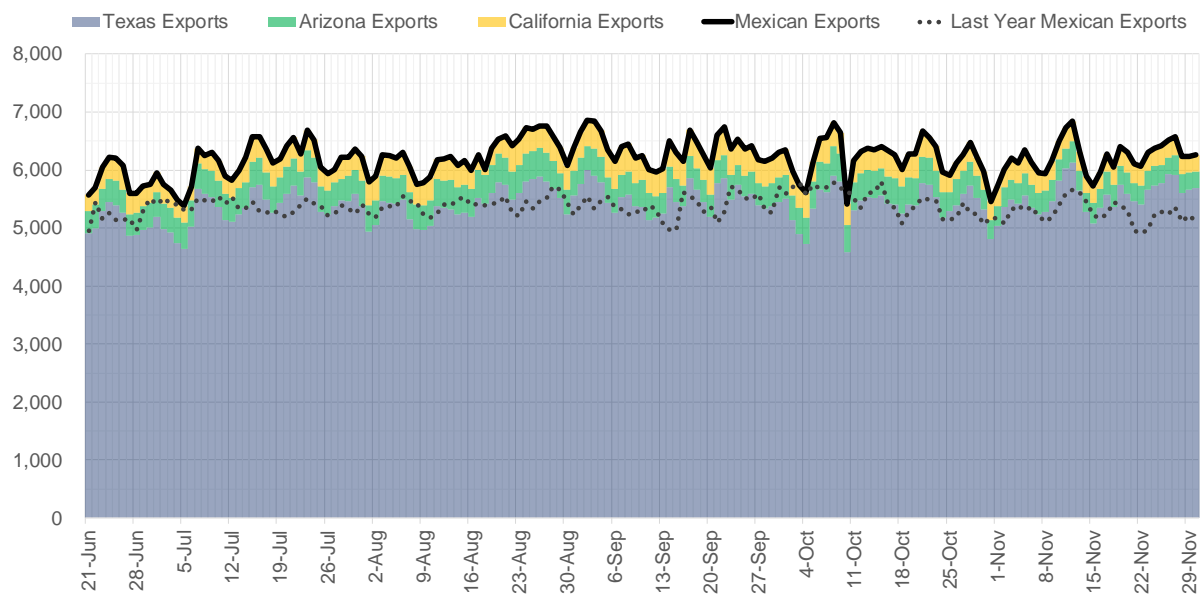


US Daily ResCom Consumption (Bcf/d)

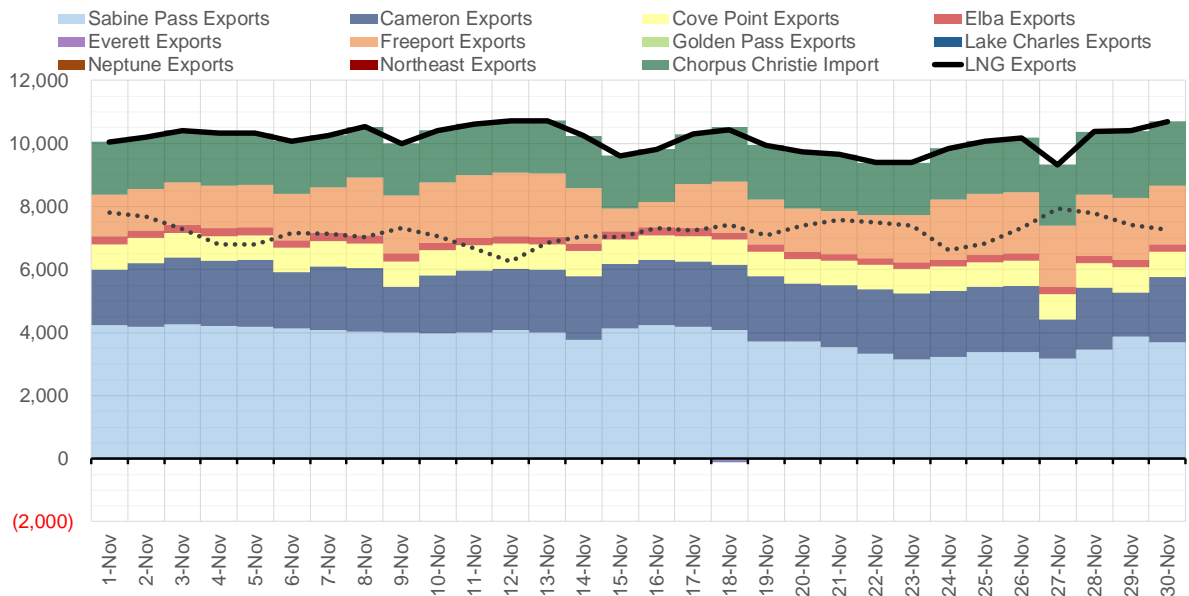


Source: Bloomberg

Mexican Exports (MMcf/d)



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



Source: Bloomberg

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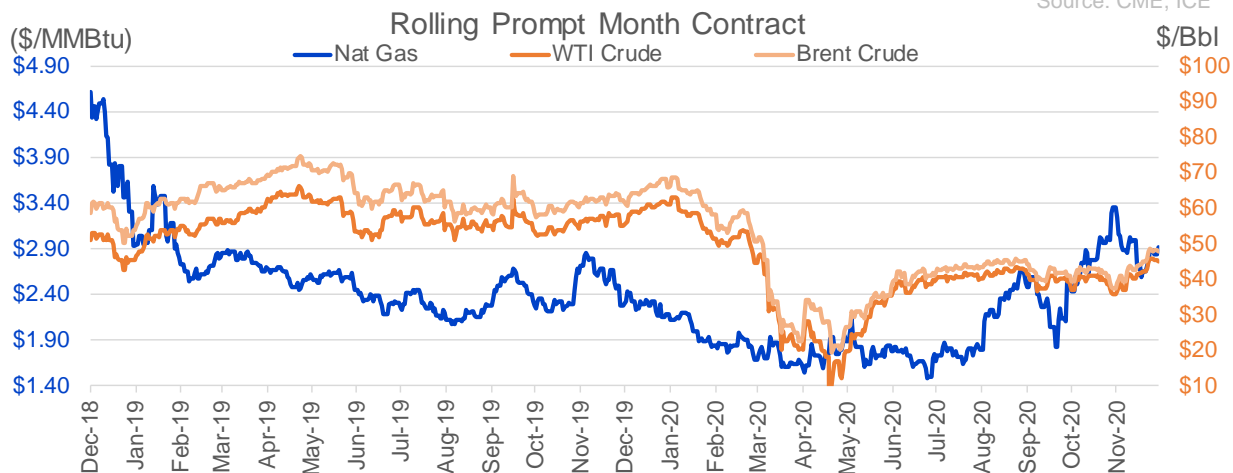
Nat Gas Options Volume and Open Interest CME, ICE and Nasdaq Combined

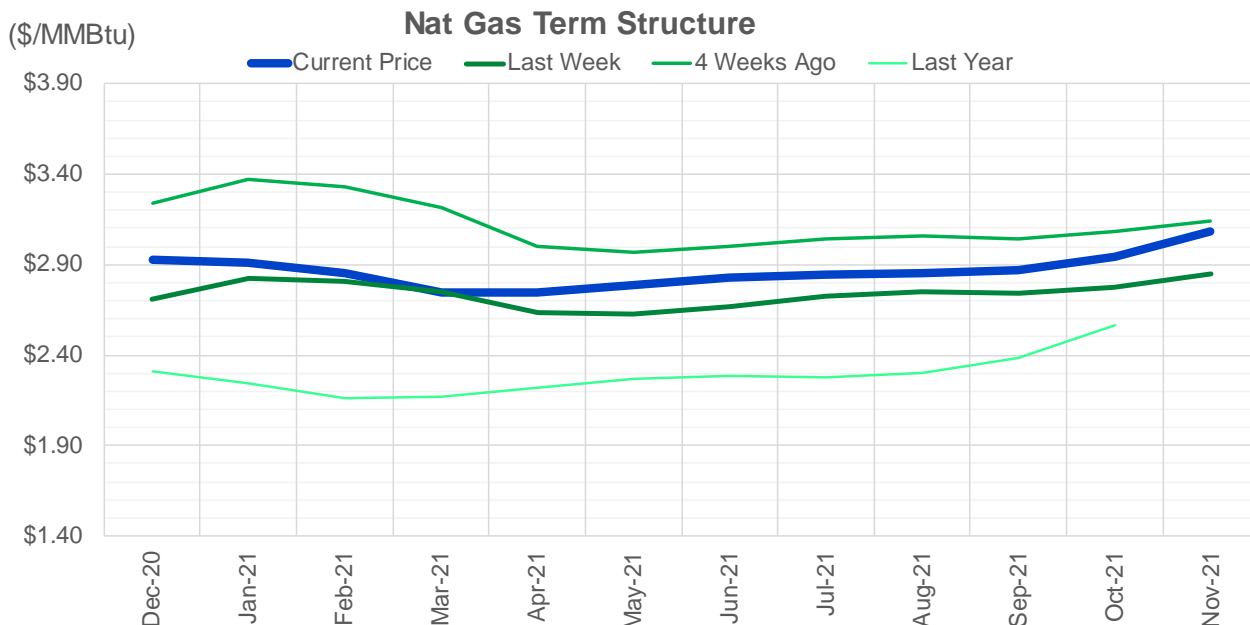
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
1	2021	C	3.50	4954	3	2021	P	2.00	40822
1	2021	P	2.50	4805	1	2021	C	3.50	38136
1	2021	C	4.00	3798	3	2021	C	4.00	35959
1	2021	C	3.25	3175	1	2021	P	2.50	29601
4	2021	C	2.75	3000	4	2021	C	4.00	29072
1	2021	C	3.00	2993	1	2021	C	4.50	28738
1	2021	P	2.25	2107	3	2021	C	3.25	28599
1	2021	P	2.60	1892	10	2021	C	4.00	28510
1	2021	C	4.50	1595	4	2021	C	3.50	28121
4	2021	C	3.00	1500	3	2021	C	6.00	26159
4	2021	C	3.25	1500	1	2021	C	5.00	25400
4	2021	C	3.50	1500	10	2021	C	3.25	24996
2	2021	C	4.50	1459	2	2021	P	2.25	24971
2	2021	P	2.25	1296	3	2021	C	5.00	24761
3	2021	P	2.75	1246	3	2021	C	7.00	23836
1	2021	C	3.15	1216	3	2021	C	3.00	23355
1	2021	P	2.70	1116	3	2021	C	4.50	22466
2	2021	C	5.00	1115	3	2021	C	3.50	22252
8	2021	C	3.25	1100	1	2021	C	3.00	22199
8	2021	P	2.50	1100	3	2021	P	2.50	22160
3	2021	P	2.40	1090	1	2021	C	3.75	21643
2	2021	C	4.75	1087	2	2021	C	3.50	21433
3	2021	P	2.00	1085	1	2021	C	6.00	21129
1	2021	P	2.75	1050	4	2021	C	3.25	20830
1	2021	C	3.40	1034	1	2021	C	4.00	19984
1	2021	P	2.00	973	2	2021	P	2.50	19758
1	2021	P	2.40	885	8	2021	C	4.00	19519
1	2021	P	2.80	843	4	2021	C	5.00	18828
2	2021	P	2.50	774	1	2021	P	2.00	18671
1	2021	C	3.75	762	10	2021	C	5.00	18623
2	2021	P	2.75	760	2	2021	C	4.00	18435
2	2021	C	3.00	749	1	2021	P	2.25	18228
1	2021	P	2.20	613	8	2021	P	2.25	18217
3	2021	C	3.50	553	5	2021	C	3.00	18113
2	2021	C	4.25	513	2	2021	C	5.00	17209
2	2021	C	6.00	500	4	2021	C	3.00	16523
6	2021	P	2.25	500	1	2021	C	3.25	15476
3	2021	P	2.50	491	4	2021	P	2.00	15460
2	2021	C	4.00	487	10	2021	C	3.00	15389
1	2021	P	2.65	366	2	2021	C	4.50	15225
1	2021	P	1.75	359	4	2021	C	2.75	15050
3	2021	C	3.10	345	5	2021	C	3.50	14763
2	2021	C	5.50	305	1	2021	C	7.00	13542
1	2021	C	4.25	290	6	2021	C	4.00	13530
1	2021	P	3.00	281	5	2021	C	3.25	13426
7	2021	C	3.25	250	6	2021	P	2.50	13210
7	2021	P	2.50	250	2	2021	C	3.00	13106
2	2021	C	3.75	247	1	2021	P	3.00	13064
1	2021	P	2.30	237	2	2021	P	2.00	12957
					3	2021	P	2.25	12712

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
JAN 21	295831	293695	2136	JAN 21	102720	101825	895
FEB 21	94878	91814	3064	FEB 21	70739	70419	319.75
MAR 21	195905	194836	1069	MAR 21	90404	90259	145
APR 21	85520	83695	1825	APR 21	70704	70889	-185
MAY 21	56602	56805	-203	MAY 21	72600	72375	224.75
JUN 21	37313	36708	605	JUN 21	60661	60427	233.25
JUL 21	30917	31435	-518	JUL 21	62110	62270	-159.75
AUG 21	26053	25881	172	AUG 21	63898	63735	162.75
SEP 21	39138	39468	-330	SEP 21	58622	58516	106.25
OCT 21	92738	93353	-615	OCT 21	72656	72560	96
NOV 21	40015	40104	-89	NOV 21	51675	51630	45
DEC 21	33170	33359	-189	DEC 21	49865	49732	133
JAN 22	33116	32804	312	JAN 22	47616	47585	31
FEB 22	23073	23001	72	FEB 22	38223	38223	0
MAR 22	26295	26383	-88	MAR 22	40882	40902	-20
APR 22	23984	23887	97	APR 22	40535	40512	22.5
MAY 22	12273	12209	64	MAY 22	31791	31815	-23.25
JUN 22	6516	6504	12	JUN 22	30655	30655	0
JUL 22	5657	5658	-1	JUL 22	32363	32363	0
AUG 22	4835	4837	-2	AUG 22	30918	30993	-75
SEP 22	4232	4232	0	SEP 22	30728	30728	0
OCT 22	7994	7994	0	OCT 22	34938	34938	0
NOV 22	5252	5252	0	NOV 22	31393	31378	15
DEC 22	5640	5639	1	DEC 22	33731	33715	15.5
JAN 23	4799	4799	0	JAN 23	15155	15152	3
FEB 23	1134	1134	0	FEB 23	14131	14128	3
MAR 23	2555	2555	0	MAR 23	14077	14074	3
APR 23	2368	2368	0	APR 23	13209	13206	3
MAY 23	451	451	0	MAY 23	12338	12335	3
JUN 23	517	451	66	JUN 23	12264	12261	3





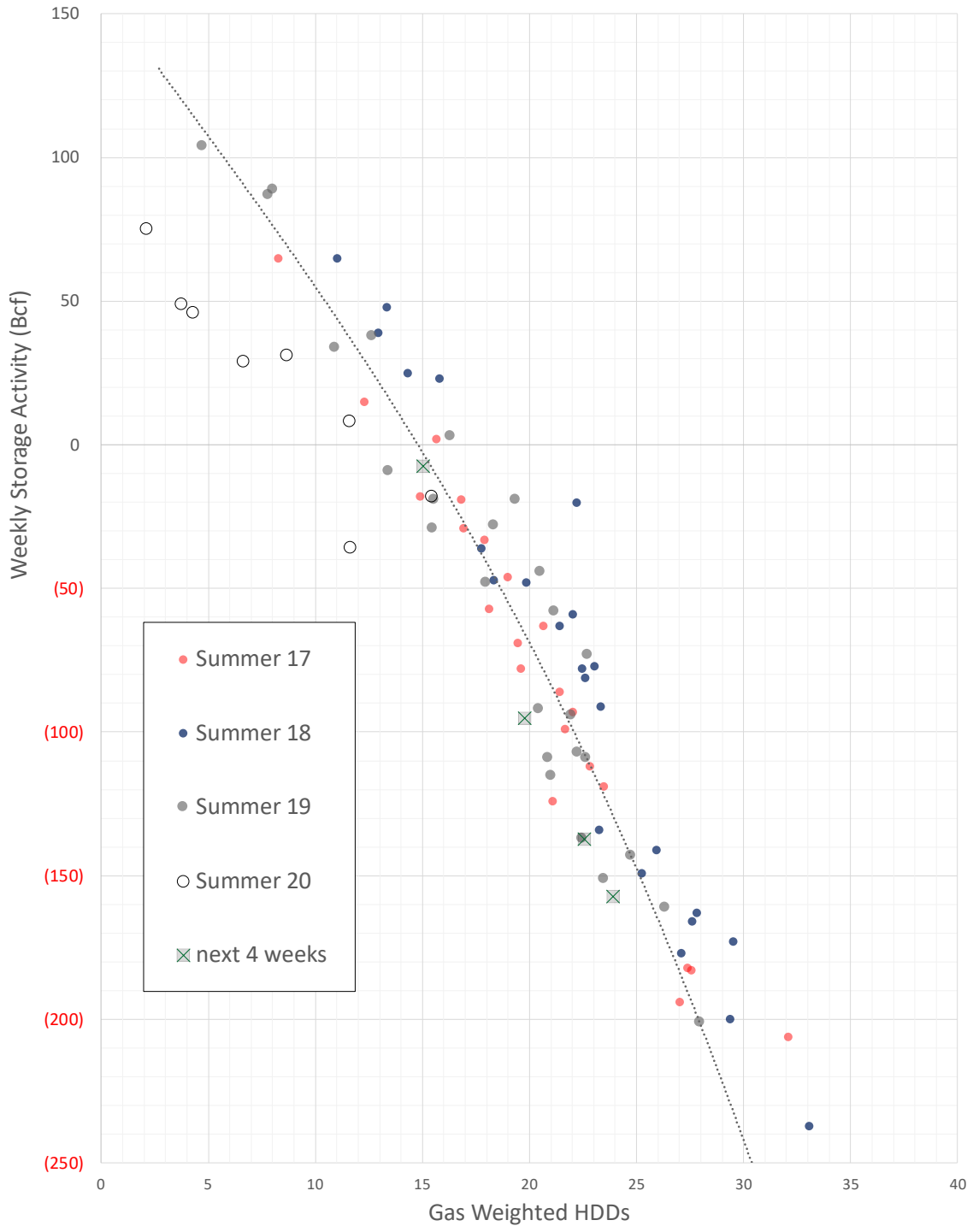
	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21
Current Price	\$2.923	\$2.907	\$2.849	\$2.748	\$2.742	\$2.784	\$2.829	\$2.848	\$2.849	\$2.866	\$2.945	\$3.086
Last Week	\$2.711	\$2.823	\$2.806	\$2.751	\$2.637	\$2.628	\$2.671	\$2.727	\$2.749	\$2.745	\$2.775	\$2.847
vs. Last Week	\$0.212	\$0.084	\$0.043	-\$0.003	\$0.105	\$0.156	\$0.158	\$0.121	\$0.100	\$0.121	\$0.170	\$0.239
4 Weeks Ago	\$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. 4 Weeks Ago	-\$0.321	-\$0.468	-\$0.483	-\$0.471	-\$0.260	-\$0.183	-\$0.172	-\$0.197	-\$0.208	-\$0.179	-\$0.135	-\$0.054
Last Year	\$2.329	\$2.308	\$2.242	\$2.165	\$2.171	\$2.217	\$2.272	\$2.287	\$2.275	\$2.304	\$2.382	\$2.564
vs. Last Year	\$0.594	\$0.599	\$0.607	\$0.583	\$0.571	\$0.567	\$0.557	\$0.561	\$0.574	\$0.562	\$0.563	\$0.522

	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	1.30	3.60	2.30
TETCO M3	\$/MMBtu	1.29	2.19	0.90
FGT Zone 3	\$/MMBtu	2.20	2.73	0.53
Zone 6 NY	\$/MMBtu	2.20	2.48	0.28
Chicago Citygate	\$/MMBtu	2.44	2.59	0.15
Michcon	\$/MMBtu	2.21	2.43	0.22
Columbia TCO Pool	\$/MMBtu	1.96	1.85	-0.11
Ventura	\$/MMBtu	2.22	2.60	0.38
Rockies/Opal	\$/MMBtu	3.12	2.47	-0.65
El Paso Permian Basin	\$/MMBtu	2.13	2.28	0.15
Socal Citygate	\$/MMBtu	3.59	3.26	-0.33
Malin	\$/MMBtu	3.20	3.12	-0.08
Houston Ship Channel	\$/MMBtu	2.38	2.65	0.27
Henry Hub Cash	\$/MMBtu	2.23	2.46	0.23
AECO Cash	C\$/GJ	2.08	2.21	0.13
Station2 Cash	C\$/GJ	2.05	3.83	1.78
Dawn Cash	C\$/GJ	2.16	2.45	0.29

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks Ago	vs. Last Year
NatGas Jan21/Apr21	\$/MMBtu	-0.175	▲ 0.011	▲ 0.198	▲ 0.229
NatGas Mar21/Apr21	\$/MMBtu	-0.101	▲ 0.013	▼ -0.318	▼ -0.351
NatGas Oct21/Nov21	\$/MMBtu	0.079	▲ 0.007	▲ 0.019	▲ 0.007
NatGas Apr21/Oct21	\$/MMBtu	0.118	▲ 0.070	▼ -0.177	▼ -0.215
WTI Crude	\$/Bbl	45.17	▲ 2.110	▲ 8.360	▼ -10.790
Brent Crude	\$/Bbl	47.67	▲ 1.610	▲ 8.700	▼ -13.250
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18	▲ 0.000	▲ 0.000	▲ 0.000
Heating Oil	cents/Gallon	136.09	▲ 5.040	▲ 24.860	▼ -52.510
Propane, Mt. Bel	cents/Gallon	0.55	▲ 0.004	▼ -0.002	▲ 0.000
Ethane, Mt. Bel	cents/Gallon	0.22	▲ 0.000	▼ -0.009	▲ 0.034
Coal, PRB	\$/MTon	12.30	▲ 0.000	▲ 0.000	▲ 0.000
Coal, PRB	\$/MMBtu	0.70			
Coal, ILB	\$/MTon	31.05	▲ 0.000	▲ 0.000	▼ -4.000
Coal, ILB	\$/MMBtu	1.32			

Winter Storage Forecast



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