

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 2.68	▲ \$ 0.04	▲ \$ 0.05

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 48.34	▼ \$ (0.02)	▲ \$ 1.1

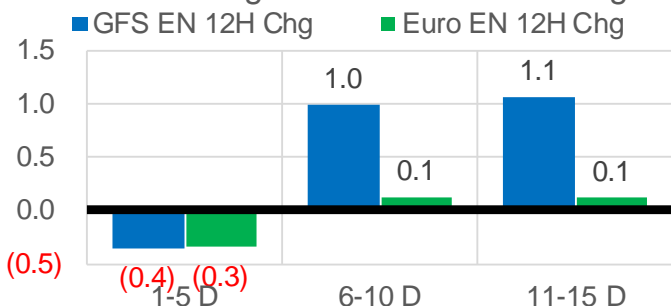
	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 51.38	▼ \$ (0.12)	▲ \$ 0.9

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](#)

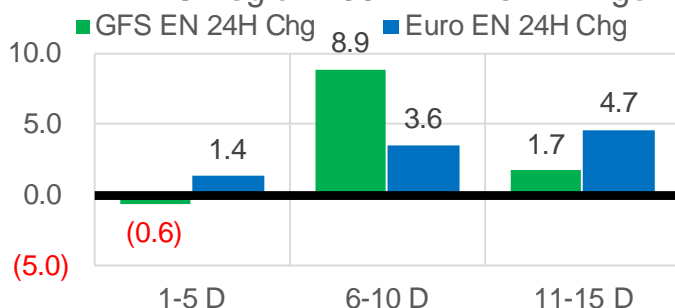
Vs. 12H Ago

L48 Region - 00z TDD vs 12H Ago



Vs. 24H Ago

L48 Region - 00z TDD vs 24H Ago



	Current	Δ from YD	Δ from 7D Avg
US Dry Production	90.4	▼ -0.01	▼ -0.56

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	27.7	▼ -0.94	▲ 0.77

	Current	Δ from YD	Δ from 7D Avg
US ResComm	44.2	▼ -1.29	▲ 3.94

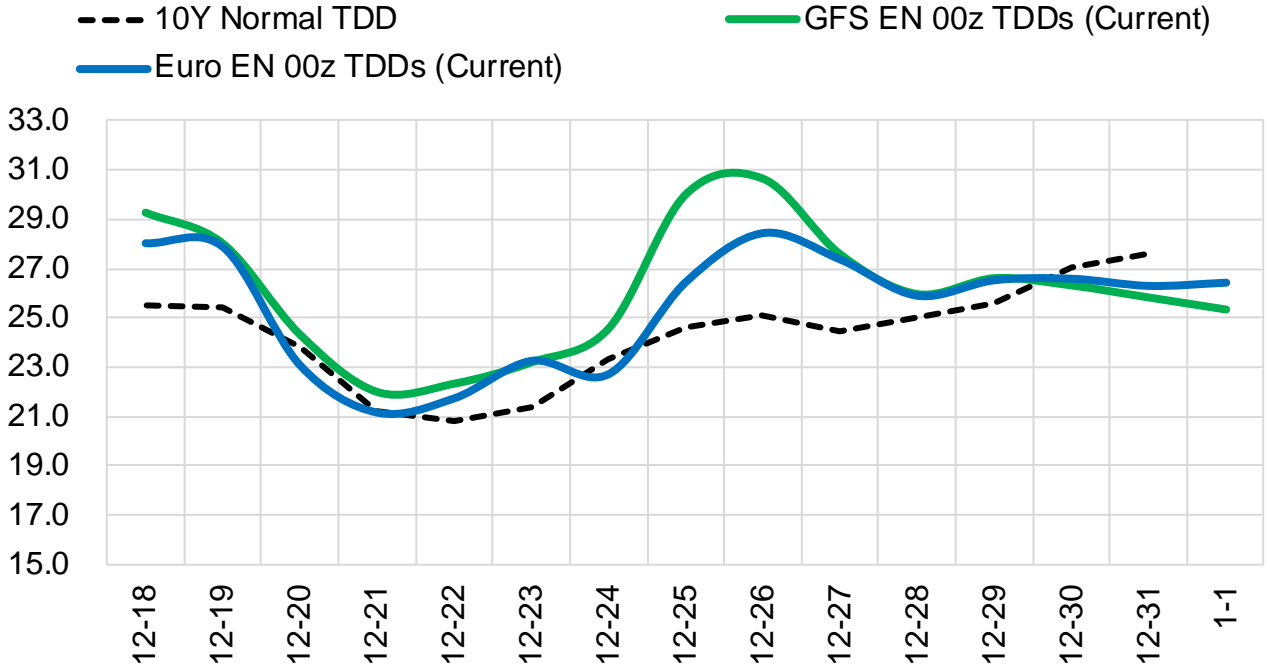
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	6.2	▼ -0.69	▲ 0.41

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	10.7	▼ -0.29	▼ -0.25

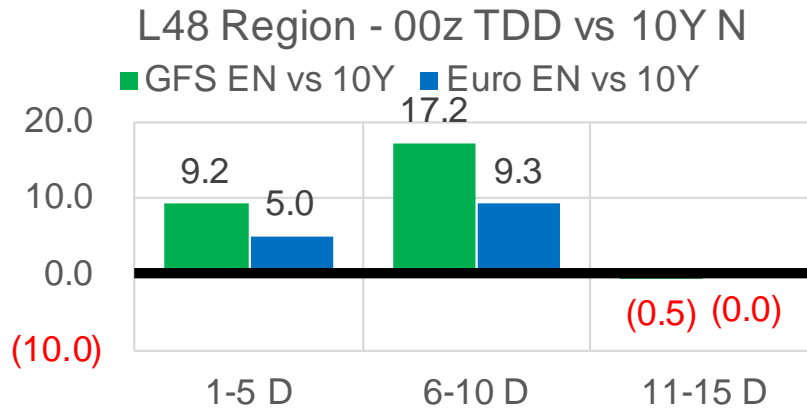
	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.3	▼ -0.04	▲ 0.10

Short-term Weather Model Outlooks (00z)

L48 Region



Vs. 10Y Normal



Source: WSI , Bloomberg

Lower 48 Component Models

Daily Balances

	12-Dec	13-Dec	14-Dec	15-Dec	16-Dec	17-Dec	18-Dec	DoD	vs. 7D
Lower 48 Dry Production	91.2	91.2	90.9	90.7	90.7	90.4	90.4	▼ 0.0	▼ -0.4
Canadian Imports	4.9	5.0	5.7	6.5	6.8	6.9	6.2	▼ -0.7	▲ 0.2
L48 Power	24.0	24.4	27.9	28.8	30.0	28.7	27.7	▼ -0.9	▲ 0.4
L48 Residential & Commercial	33.1	35.2	42.7	46.8	46.2	45.5	44.2	▼ -1.3	▲ 2.6
L48 Industrial	27.1	28.0	29.0	28.9	28.2	27.2	26.1	▼ -1.2	▼ -2.0
L48 Lease and Plant Fuel	5.1	5.1	5.0	5.0	5.0	5.0	5.0	▼ 0.0	▼ 0.0
L48 Pipeline Distribution	2.6	2.7	3.2	3.4	3.5	3.4	3.3	▼ -0.1	▲ 0.1
L48 Regional Gas Consumption	91.9	95.4	107.9	113.0	112.9	109.8	106.3	▼ -3.5	▲ 1.1
Net LNG Delivered	11.59	11.62	10.79	9.40	10.62	10.97	10.68	▼ -0.3	▼ -0.2
Total Mexican Exports	6.0	5.7	6.3	6.3	6.3	6.3	6.3	▼ 0.0	▲ 0.1
Implied Daily Storage Activity	-13.3	-16.6	-28.3	-31.5	-32.3	-29.8	-26.6		
EIA Reported Daily Storage Activity									
Daily Model Error									

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	90.9	▲ 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	26.9	▼ -1.2	▲ 0.9
L48 Residential & Commercial	16.8	27.2	26.7	34.5	37.3	40.2	▲ 2.9	▲ 8.8
L48 Industrial	24.0	23.4	22.2	24.2	24.1	27.8	▲ 3.6	▲ 4.3
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	3.1	▲ 0.1	▲ 0.4
L48 Regional Gas Consumption	72.0	82.6	81.1	93.0	97.6	103.1	▲ 5.4	▲ 14.5
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	3.4	-2.9	-1.0	-13.0	-18.4	-23.4	-5.0	
EIA Reported Daily Storage Activity	4.4	-2.6	-0.1	-13.0	-17.4			
Daily Model Error	-1.1	-0.3	-0.9	0.0	-1.0			

Monthly Balances

	2Yr Ago Dec-18	LY Dec-19	Aug-20	Sep-20	Oct-20	Nov-20	MTD 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	4.2	4.6	5.9	▲ 1.3	▲ 1.4
L48 Power	24.5	28.9	41.0	34.0	29.4	24.6	27.8	▲ 3.2	▼ -1.1
L48 Residential & Commercial	39.3	39.1	7.7	8.8	16.2	24.2	39.2	▲ 14.9	▲ 0.1
L48 Industrial	22.4	24.4	20.3	19.2	22.2	23.2	25.8	▲ 2.6	▲ 1.4
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	▲ 0.8	▼ 0.0
L48 Regional Gas Consumption	93.9	100.7	76.3	69.1	74.9	79.3	100.9	▲ 21.6	▲ 0.1
Net LNG Exports	4.5	7.8	4.0	5.9	8.0	10.1	11.0	▲ 0.9	▲ 3.2
Total Mexican Exports	4.5	5.0	6.3	6.4	6.2	6.2	6.3	▲ 0.1	▲ 1.3
Implied Daily Storage Activity	-10.7	-13.9	6.8	10.2	2.6	-0.6	-21.3		
EIA Reported Daily Storage Activity									
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	-23.7	0.8	-22.9	-161
East	-5.7	1.8	-4.0	-28
Midwest	-8.0	0.8	-7.3	-51
Mountain	1.9	-3.8	-1.9	-13
South Central	-10.2	2.4	-7.9	-55
Pacific	-1.6	-0.3	-1.9	-13

*Adjustment Factor is calculated based on historical regional deltas

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

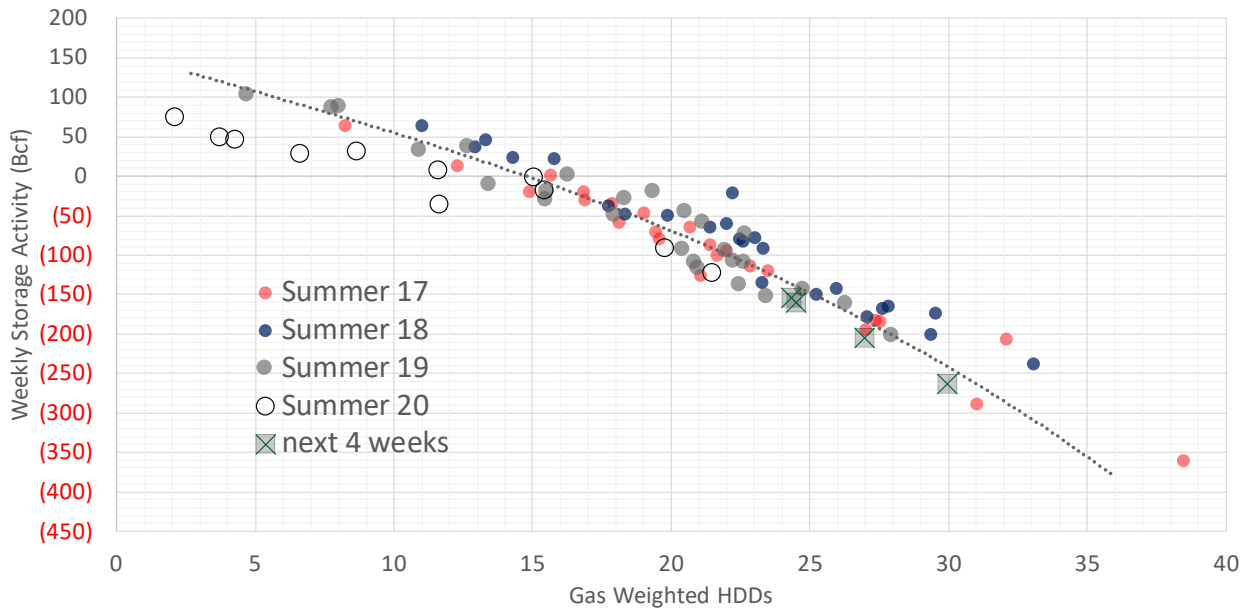


Weather Model Storage Projection

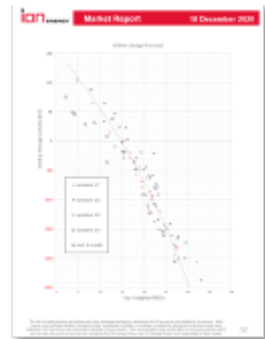
Next report
and beyond

Week Ending	Temp	Week Storage Projection
18-Dec	24.5	-161
25-Dec	24.3	-154
01-Jan	27.0	-205
08-Jan	30.0	-263

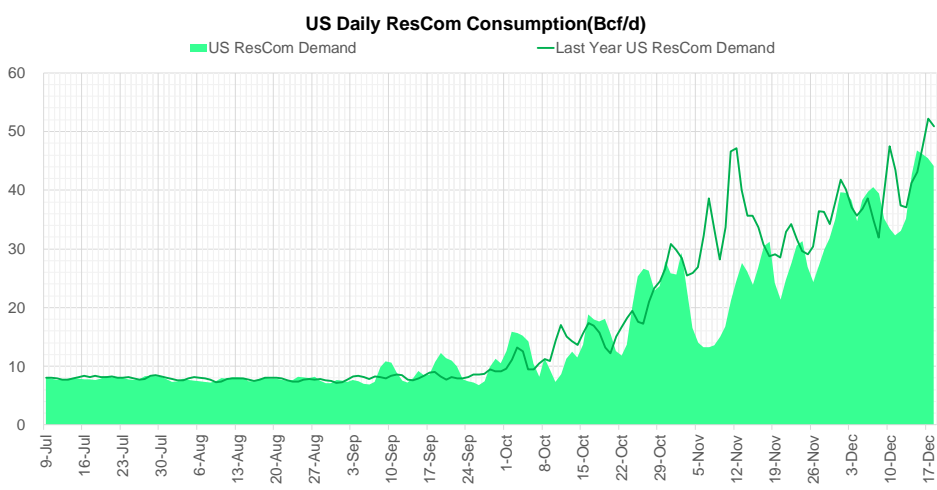
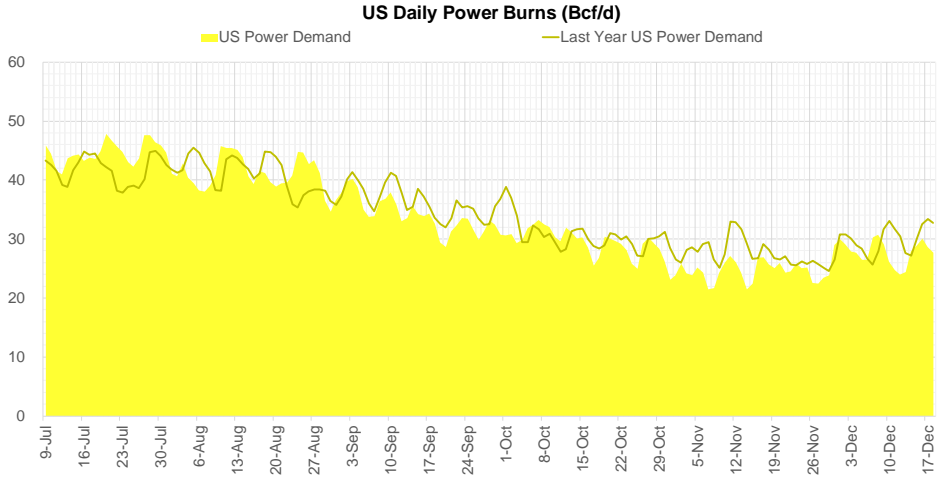
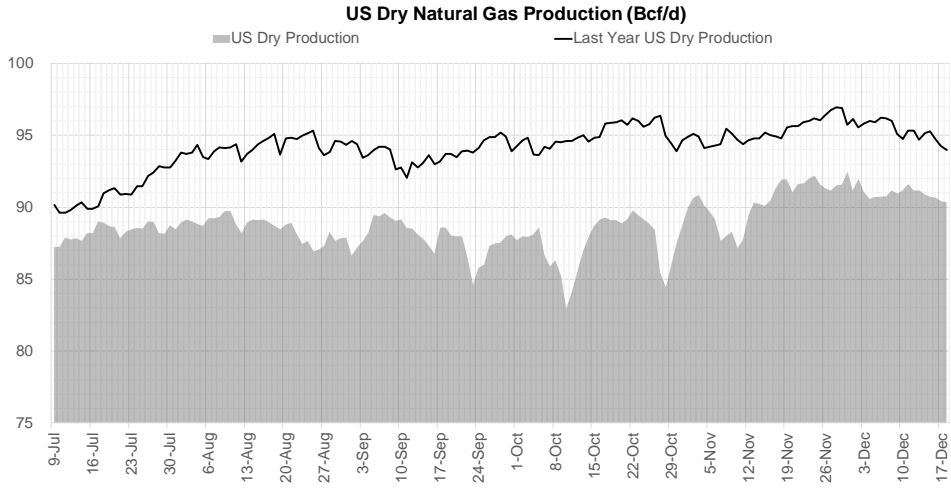
Winter Storage Forecast



[Go to larger image](#)



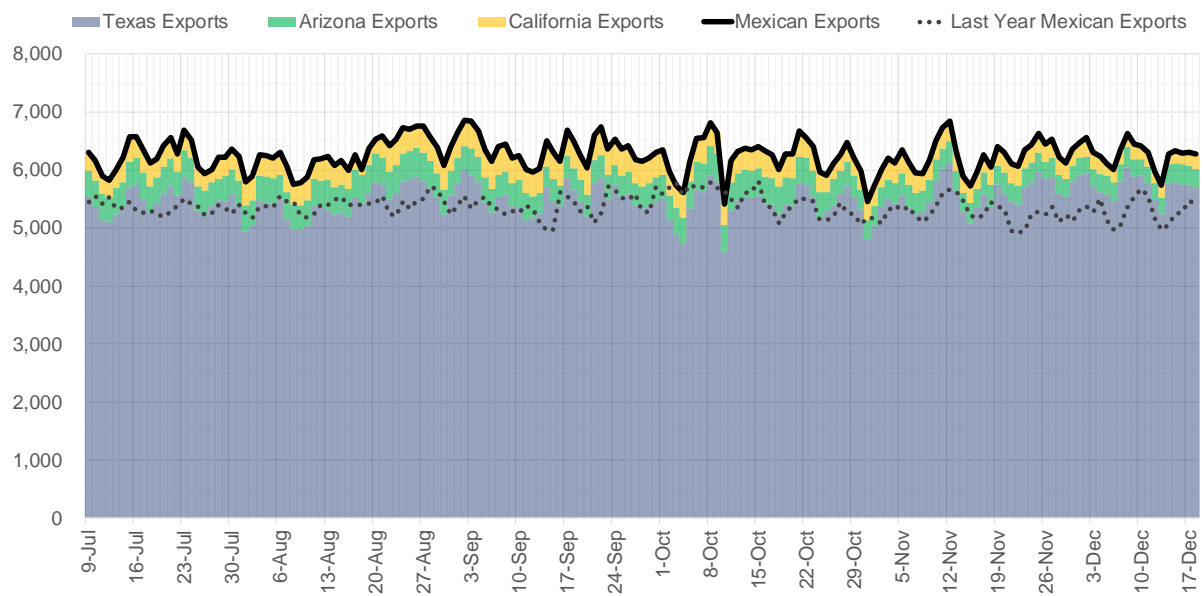
Supply – Demand Trends



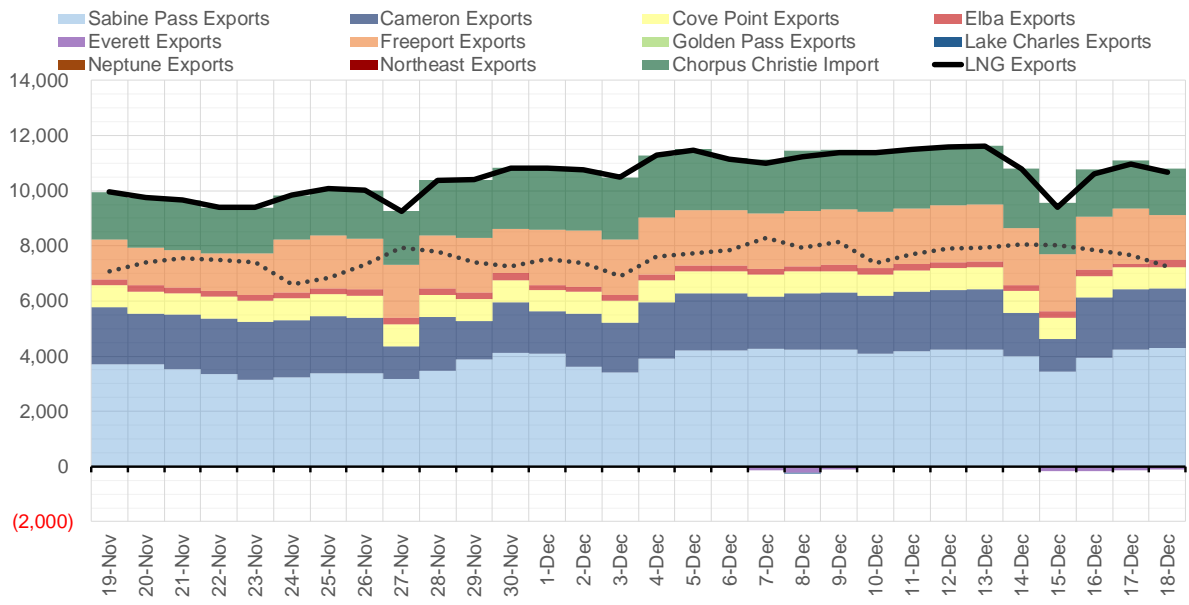
Source: Bloomberg

The risk of trading futures and options and other derivatives involves a substantial risk of loss and is not suitable for all persons. Each person must consider whether a particular trade, combination of trades, or strategy is suitable for that person's financial means and objectives. Past results are not necessarily indicative of future results. This communication may contain links to third party websites which are not under the control of and are not maintained by ION Energy Group, and ION Energy Group is not responsible for their content.

Mexican Exports (MMcf/d)



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



Source: Bloomberg

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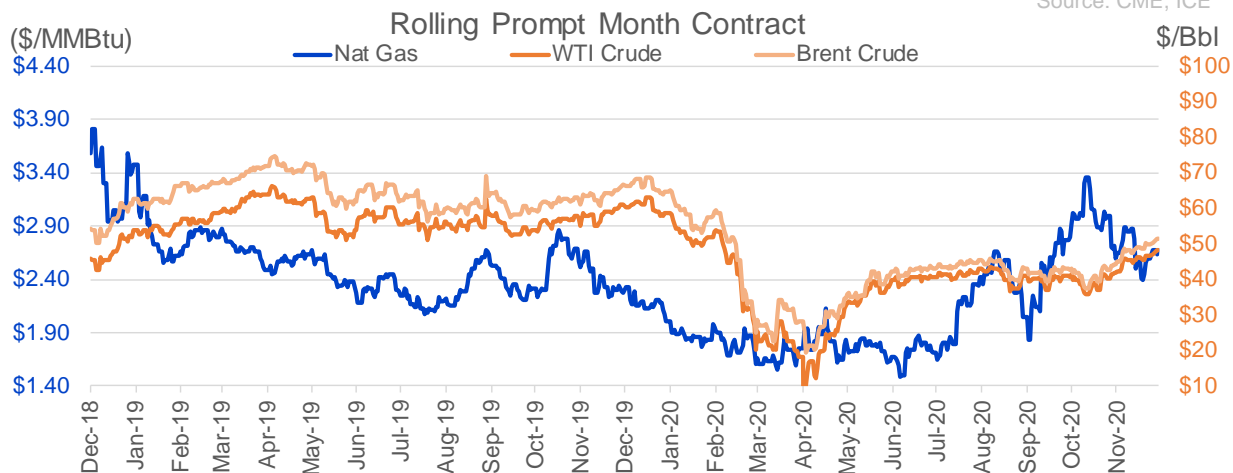
Nat Gas Options Volume and Open Interest CME, ICE and Nasdaq Combined

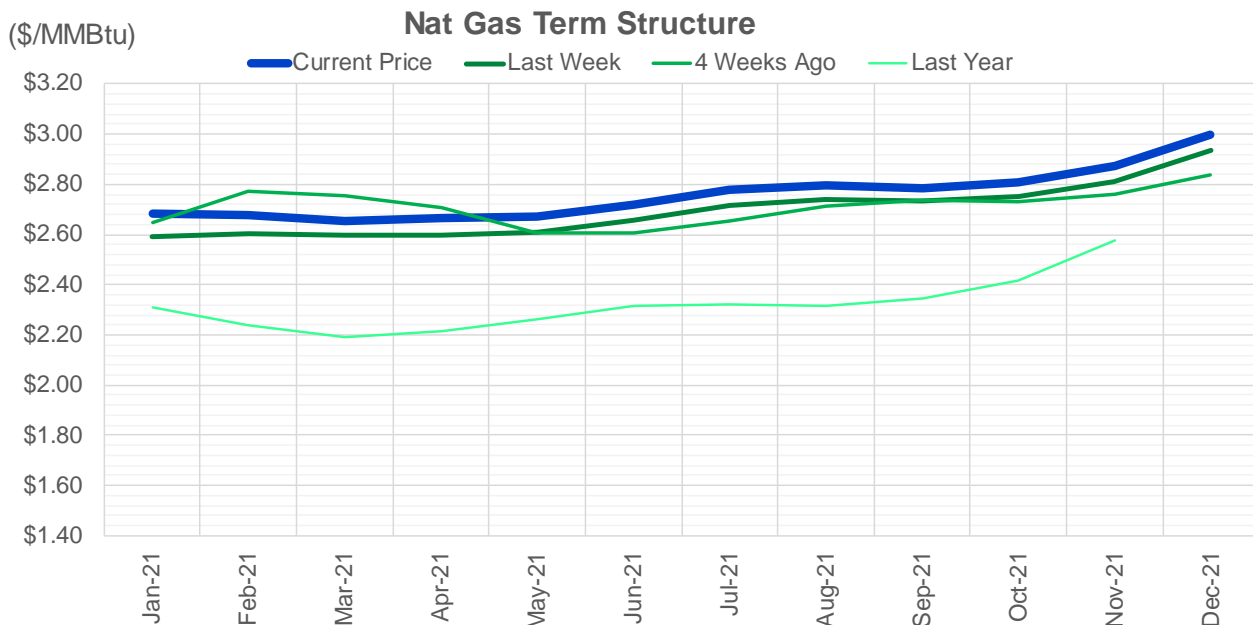
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
1	2021	P	2.25	8901	3	2021	P	2.00	42342
1	2021	C	3.00	8051	1	2021	C	3.50	41782
12	2021	P	2.00	8000	1	2021	C	3.00	39723
3	2021	C	3.00	6069	3	2021	C	5.00	38825
1	2021	C	3.25	5086	3	2021	C	6.00	36568
1	2021	C	2.75	4461	3	2021	C	3.50	34805
12	2021	C	4.00	4000	1	2021	P	2.50	34315
12	2021	P	1.25	4000	3	2021	C	4.00	33662
12	2021	P	2.75	4000	4	2021	C	3.00	31145
1	2021	C	3.50	3959	1	2021	P	2.25	30790
1	2021	P	2.50	3779	3	2021	C	3.00	28614
2	2021	C	3.00	3374	3	2021	C	3.25	28362
1	2021	C	2.90	2837	1	2021	C	4.50	27881
3	2021	C	4.00	2759	10	2021	C	4.00	27686
3	2021	C	3.50	2652	2	2021	P	2.25	26118
1	2021	P	2.40	2494	3	2021	C	4.50	26072
4	2021	C	3.00	2448	1	2021	C	5.00	25397
3	2021	C	6.00	2330	4	2021	C	4.00	24581
3	2021	C	2.75	2315	1	2021	C	4.00	24219
1	2021	C	2.85	2157	10	2021	C	3.25	24184
2	2021	C	3.25	2138	3	2021	P	2.50	23172
3	2021	C	5.00	2096	1	2021	C	3.75	22499
1	2021	C	3.10	2016	4	2021	C	3.25	21987
1	2021	C	2.80	1941	3	2021	C	7.00	21706
1	2021	P	2.20	1817	2	2021	C	4.00	21331
3	2021	P	2.50	1707	1	2021	C	6.00	21138
1	2021	C	2.95	1666	8	2021	C	4.00	20978
2	2021	P	2.50	1620	1	2021	C	2.75	20674
10	2021	P	2.50	1525	2	2021	P	2.50	20052
7	2021	P	2.00	1500	2	2021	C	3.50	19863
1	2021	P	2.30	1441	1	2021	P	2.00	19790
2	2021	C	3.50	1437	10	2021	C	5.00	19595
6	2021	C	3.50	1350	4	2021	C	2.75	19461
3	2021	P	2.25	1316	1	2021	C	3.25	18686
4	2021	P	2.50	1275	4	2021	C	5.00	18653
10	2021	C	3.50	1250	8	2021	P	2.25	18417
5	2021	P	2.50	1175	5	2021	C	3.00	18412
6	2021	P	2.50	1175	4	2021	P	2.00	16840
7	2021	P	2.50	1175	2	2021	P	2.00	16826
8	2021	P	2.50	1175	6	2021	C	4.00	16551
9	2021	P	2.50	1175	2	2021	C	5.00	16522
5	2022	C	3.00	1100	2	2021	C	3.00	15495
4	2021	C	3.25	905	2	2021	C	4.50	15438
2	2021	P	2.40	879	4	2021	P	2.25	15160
4	2021	C	3.50	866	4	2021	C	3.50	15119
1	2021	P	2.60	860	5	2021	C	3.50	14878
7	2021	C	3.50	854	1	2021	P	2.75	14728
5	2021	C	3.50	850	10	2021	P	2.00	14692
8	2021	C	3.50	850	10	2021	C	3.00	14516
					1	2021	P	3	14154.25

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	79422	85806	-6384	JAN 21	93944	89533	4410.25
FEB 21	188116	177811	10305	FEB 21	77104	74280	2824
MAR 21	244621	243765	856	MAR 21	99740	101146	-1406
APR 21	101114	101618	-504	APR 21	85280	85628	-347.25
MAY 21	60007	60879	-872	MAY 21	76684	76979	-295.5
JUN 21	38909	39145	-236	JUN 21	63272	63569	-297.25
JUL 21	30917	30681	236	JUL 21	64843	65116	-273.5
AUG 21	28254	28884	-630	AUG 21	67456	67370	86
SEP 21	46029	46570	-541	SEP 21	62348	62585	-237.25
OCT 21	96064	97366	-1302	OCT 21	77672	78029	-357
NOV 21	43071	43550	-479	NOV 21	51235	51073	162
DEC 21	43354	42948	406	DEC 21	51798	51963	-164.5
JAN 22	39862	38613	1249	JAN 22	50542	50328	214.25
FEB 22	24232	24339	-107	FEB 22	39070	38983	86.75
MAR 22	27023	27369	-346	MAR 22	40635	40633	2
APR 22	24995	25557	-562	APR 22	39348	39494	-146.5
MAY 22	13347	13033	314	MAY 22	33355	33529	-174
JUN 22	6786	6772	14	JUN 22	31663	31657	5.75
JUL 22	5888	5878	10	JUL 22	33311	33244	67
AUG 22	5171	5103	68	AUG 22	32126	32064	62.75
SEP 22	4550	4552	-2	SEP 22	31584	31553	31.5
OCT 22	9311	9298	13	OCT 22	37137	37034	103.25
NOV 22	6411	6409	2	NOV 22	31685	31619	66.75
DEC 22	6940	6937	3	DEC 22	34240	34164	76.25
JAN 23	4446	4443	3	JAN 23	16107	16111	-3.5
FEB 23	1340	1330	10	FEB 23	14685	14653	32.25
MAR 23	2233	2230	3	MAR 23	14264	14229	35.25
APR 23	2748	2748	0	APR 23	13682	13614	68
MAY 23	1768	1768	0	MAY 23	12805	12696	109.25
JUN 23	557	557	0	JUN 23	12805	12745	59.5





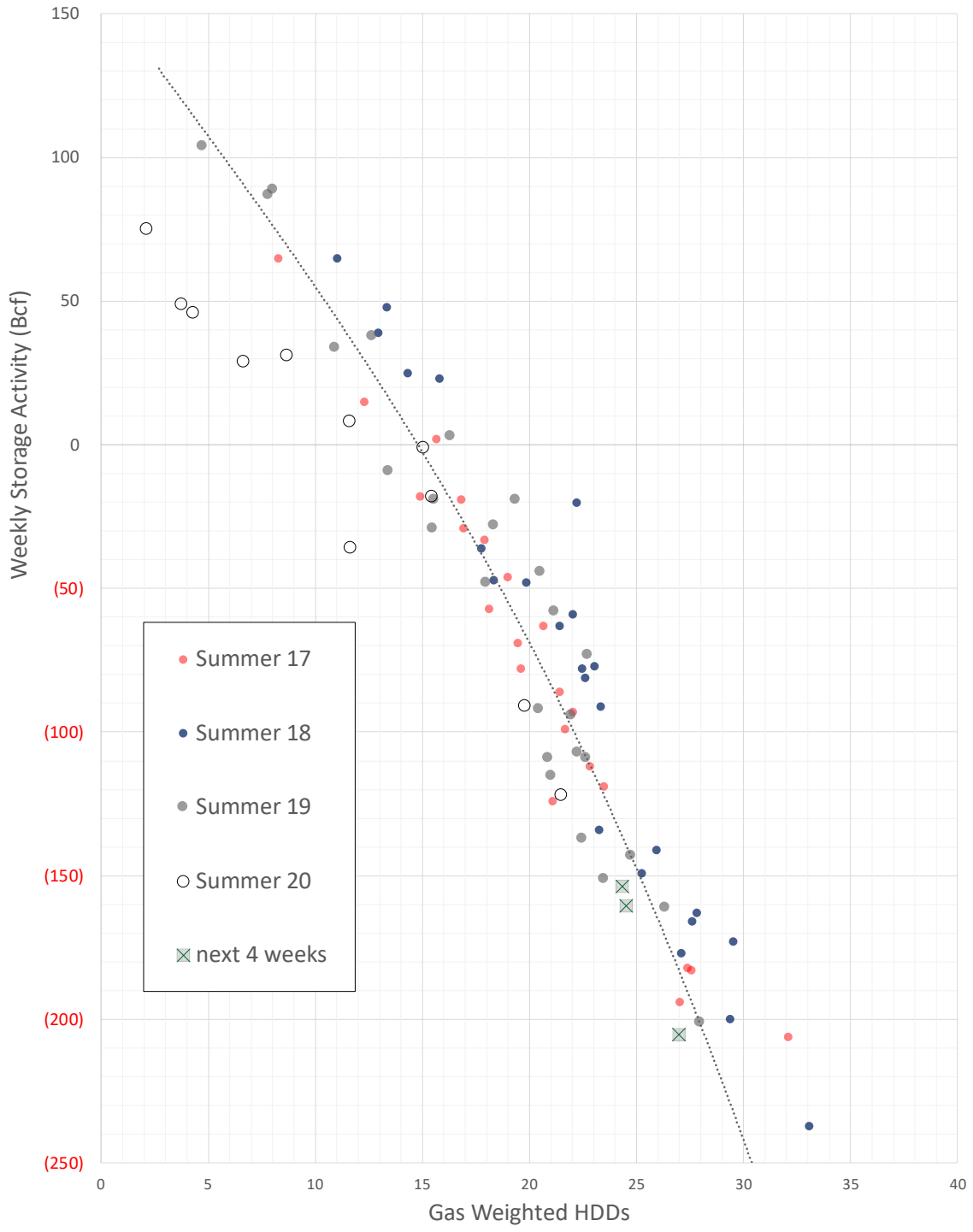
	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21
Current Price	\$2.681	\$2.675	\$2.654	\$2.665	\$2.673	\$2.719	\$2.778	\$2.797	\$2.785	\$2.807	\$2.873	\$2.996
Last Week	\$2.591	\$2.603	\$2.597	\$2.596	\$2.612	\$2.658	\$2.716	\$2.740	\$2.731	\$2.751	\$2.811	\$2.935
vs. Last Week	\$0.090	\$0.072	\$0.057	\$0.069	\$0.061	\$0.061	\$0.062	\$0.057	\$0.054	\$0.056	\$0.062	\$0.061
4 Weeks Ago	\$2.650	\$2.770	\$2.755	\$2.709	\$2.608	\$2.608	\$2.652	\$2.710	\$2.734	\$2.732	\$2.762	\$2.836
vs. 4 Weeks Ago	\$0.031	-\$0.095	-\$0.101	-\$0.044	\$0.065	\$0.111	\$0.126	\$0.087	\$0.051	\$0.075	\$0.111	\$0.160
Last Year	\$2.328	\$2.310	\$2.240	\$2.194	\$2.215	\$2.264	\$2.315	\$2.324	\$2.314	\$2.346	\$2.415	\$2.578
vs. Last Year	\$0.353	\$0.365	\$0.414	\$0.471	\$0.458	\$0.455	\$0.463	\$0.473	\$0.471	\$0.461	\$0.458	\$0.418

	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	11.18	5.02	-6.16
TETCO M3	\$/MMBtu	5.50	3.39	-2.11
FGT Zone 3	\$/MMBtu	5.33	2.59	-2.75
Zone 6 NY	\$/MMBtu	5.33	3.99	-1.34
Chicago Citygate	\$/MMBtu	2.53	2.54	0.01
Michcon	\$/MMBtu	2.51	2.38	-0.14
Columbia TCO Pool	\$/MMBtu	2.32	2.09	-0.23
Ventura	\$/MMBtu	2.50	2.77	0.27
Rockies/Opal	\$/MMBtu	3.44	2.35	-1.09
El Paso Permian Basin	\$/MMBtu	2.51	2.37	-0.15
Socal Citygate	\$/MMBtu	4.80	3.17	-1.63
Malin	\$/MMBtu	3.41	3.10	-0.31
Houston Ship Channel	\$/MMBtu	2.62	2.58	-0.04
Henry Hub Cash	\$/MMBtu	2.70	2.43	-0.27
AECO Cash	C\$/GJ	2.17	2.07	-0.10
Station2 Cash	C\$/GJ	2.09	3.30	1.21
Dawn Cash	C\$/GJ	2.53	2.42	-0.11

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks Ago	vs. Last Year
NatGas Jan21/Apr21	\$/MMBtu	-0.016	▼ -0.021	▲ 0.146	▲ 0.403
NatGas Mar21/Apr21	\$/MMBtu	0.011	▲ 0.012	▼ -0.090	▼ -0.245
NatGas Oct21/Nov21	\$/MMBtu	0.066	▲ 0.006	▼ -0.008	▲ 0.000
NatGas Apr21/Oct21	\$/MMBtu	0.142	▲ 0.302	▲ 0.134	▼ -0.206
WTI Crude	\$/Bbl	48.34	▲ 1.770	▲ 6.190	▼ -12.100
Brent Crude	\$/Bbl	51.38	▲ 1.410	▲ 6.420	▼ -14.760
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18	▲ 0.000	▲ 0.000	▲ 0.000
Heating Oil	cents/Gallon	149.15	▲ 5.460	▲ 20.520	▼ -53.030
Propane, Mt. Bel	cents/Gallon	0.63	▲ 0.043	▲ 0.090	▲ 0.121
Ethane, Mt. Bel	cents/Gallon	0.20	▲ 0.000	▼ -0.019	▲ 0.020
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			

Winter Storage Forecast



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