

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 2.77 ▲	\$ 0.06 ▲	\$ 0.08

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 47.51 ▼	\$ (0.23) ▼	\$ (0.9)

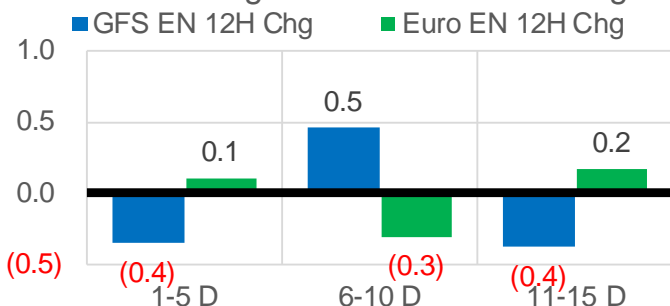
	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 50.53 ▼	\$ (0.38) ▼	\$ (1.0)

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- [Supply – Demand Trends](#)
- [Nat Gas Options Volume and Open Interest](#)
- [Nat Gas Futures Open Interest](#)
- [Price Summary](#)

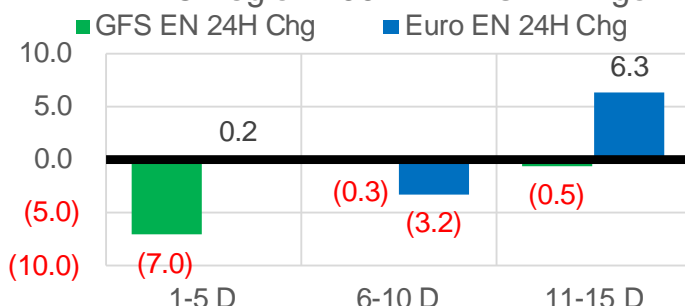
Vs. 12H Ago

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	90.8 ▼	-0.08 ▼	-0.03

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	26.2 ▼	-0.54 ▼	-2.91

	Current	Δ from YD	Δ from 7D Avg
US ResComm	37.2 ▲	1.21 ▲	(6.39) ▼

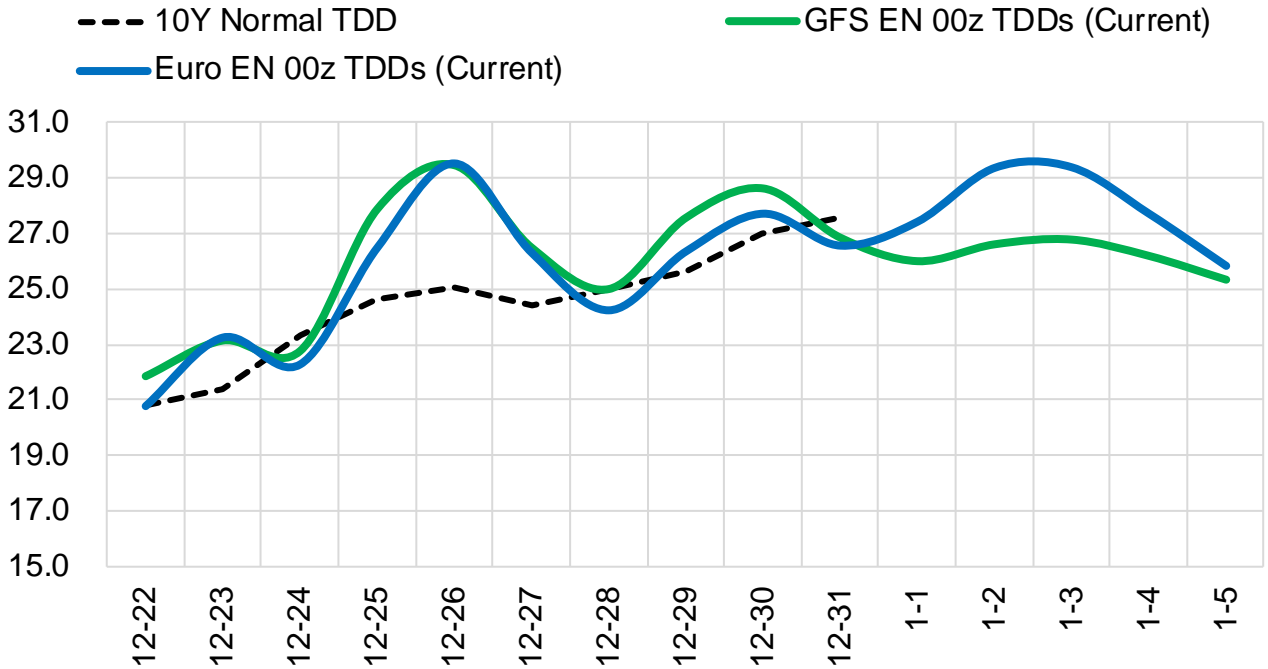
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	5.4 ▼	-0.44 ▼	(0.94) ▼

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	11.0 ▲	0.27 ▲	0.53 ▲

	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.2 ▲	0.27 ▲	0.22 ▲

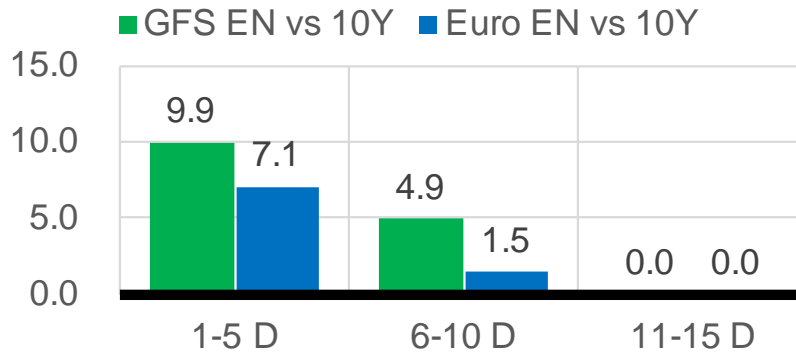
Short-term Weather Model Outlooks (00z)

L48 Region



Vs. 10Y Normal

L48 Region - 00z TDD vs 10Y N



Source: WSI , Bloomberg

Lower 48 Component Models

Daily Balances

	16-Dec	17-Dec	18-Dec	19-Dec	20-Dec	21-Dec	22-Dec	DoD	vs. 7D
Lower 48 Dry Production	90.7	90.4	91.6	90.7	90.8	90.9	90.8	▼ -0.1	▼ -0.1
Canadian Imports	6.8	6.8	6.3	6.2	6.0	5.9	5.4	▼ -0.5	▼ -0.9
L48 Power	32.5	32.1	29.2	26.9	26.1	26.7	26.2	▼ -0.5	▼ -2.7
L48 Residential & Commercial	47.3	46.7	45.4	42.7	39.4	36.0	37.2	▲ 1.2	▼ -5.7
L48 Industrial	25.5	25.1	24.5	23.6	23.0	22.6	22.6	▲ 0.0	▼ -1.4
L48 Lease and Plant Fuel	5.0	5.0	5.1	5.0	5.0	5.0	5.0	▼ 0.0	▼ 0.0
L48 Pipeline Distribution	3.6	3.6	3.4	3.2	3.0	2.9	2.9	▲ 0.0	▼ -0.4
L48 Regional Gas Consumption	113.9	112.5	107.6	101.4	96.5	93.2	93.9	▲ 0.7	▼ -10.3
Net LNG Delivered	10.62	11.01	10.62	10.55	10.67	10.78	11.05	▲ 0.3	▲ 0.3
Total Mexican Exports	6.4	6.3	6.1	5.6	5.5	6.0	6.2	▲ 0.3	▲ 0.3
Implied Daily Storage Activity	-33.4	-32.5	-26.4	-20.6	-15.9	-13.1	-15.0		
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	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	28.3	▲ 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	23.4	22.2	24.2	24.1	25.2	▲ 1.1	▲ 1.8
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	82.7	81.1	93.0	97.5	102.7	▲ 5.2	▲ 14.1
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	-12.9	-18.3	-23.0	-4.8	
EIA Reported Daily Storage Activity	4.4	-2.6	-0.1	-13.0	-17.4			
Daily Model Error	-1.0	-0.3	-0.9	0.1	-0.8			

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	4.3	4.6	5.9	▲ 1.3	▲ 1.4
L48 Power	24.5	28.9	41.0	34.0	29.4	24.6	28.1	▲ 3.4	▼ -0.8
L48 Residential & Commercial	39.3	39.1	7.7	8.8	16.2	24.2	39.3	▲ 15.1	▲ 0.2
L48 Industrial	22.4	24.4	20.3	19.2	22.2	23.2	24.4	▲ 1.2	▼ 0.0
L48 Lease and Plant Fuel	4.9	5.3	4.9	4.9	4.8	5.0	5.0	▲ 0.1	▼ -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	99.9	▲ 20.6	▼ -0.9
Net LNG Exports	4.5	7.8	4.0	5.9	8.0	10.1	11.0	▲ 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	-10.7	-13.9	6.8	10.2	2.7	-0.6	-20.1		
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	-23.3	0.7	-22.6	-158
East	-6.7	1.7	-5.0	-35
Midwest	-7.8	0.8	-7.0	-49
Mountain	2.0	-3.9	-1.8	-13
South Central	-9.5	2.3	-7.2	-50
Pacific	-1.3	-0.3	-1.6	-11

*Adjustment Factor is calculated based on historical regional deltas

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

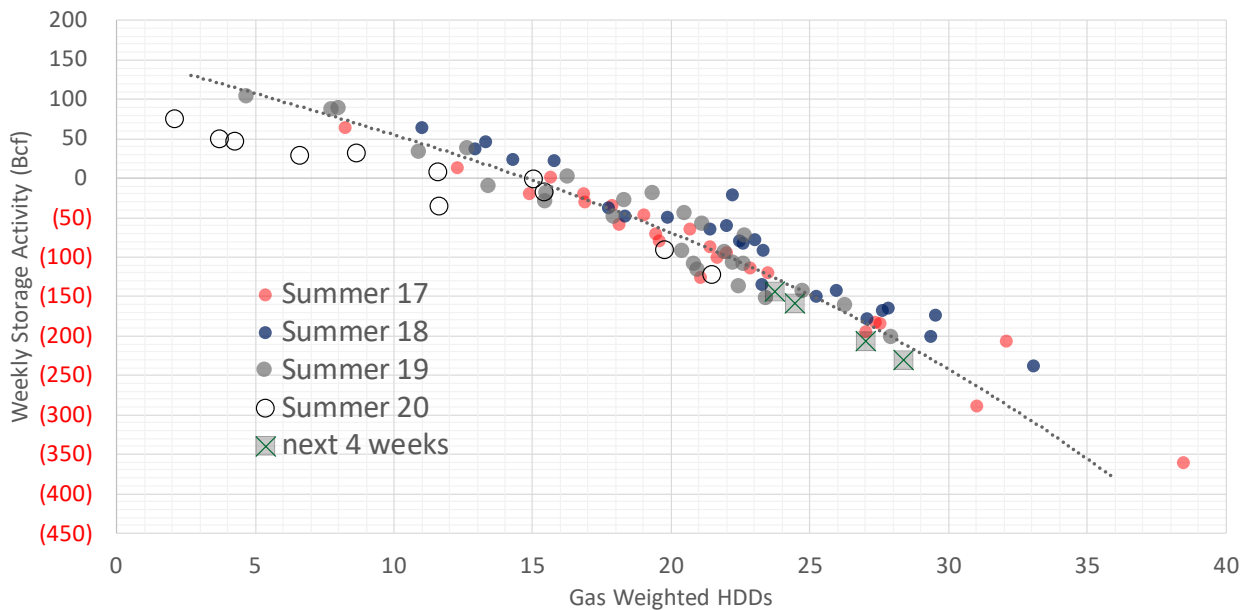


Weather Model Storage Projection

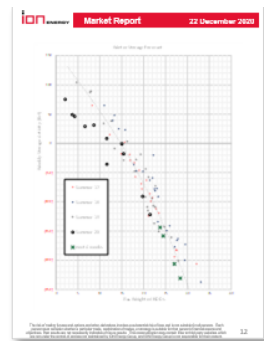
Next report
and beyond

Week Ending	Temp	Week Storage Projection
18-Dec	24.5	-158
25-Dec	23.8	-144
01-Jan	27.0	-206
08-Jan	28.4	-231

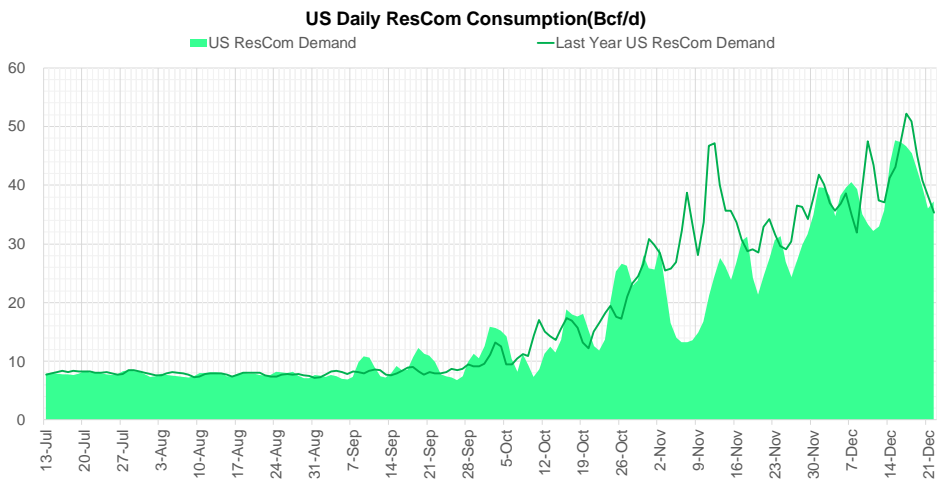
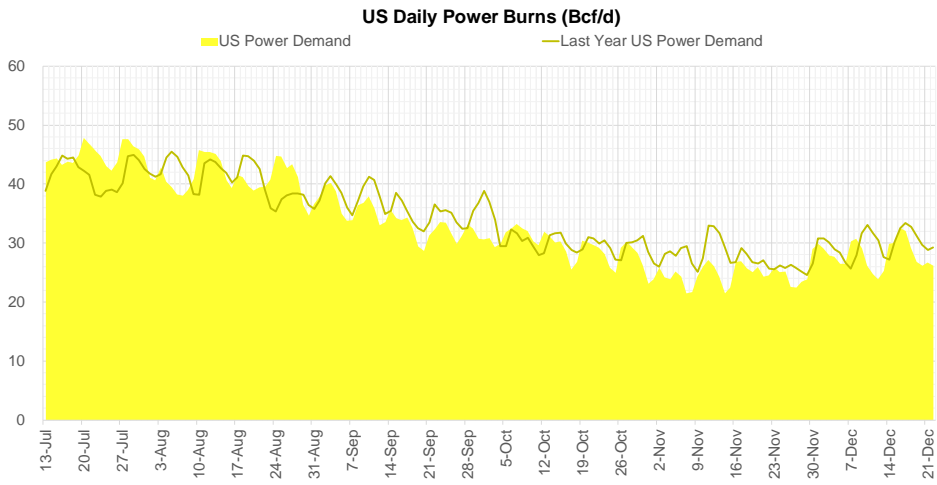
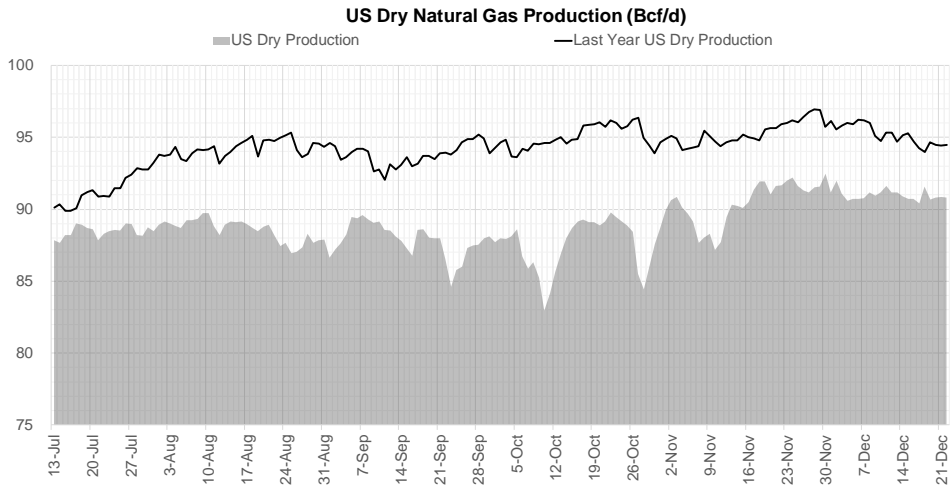
Winter Storage Forecast



Go to larger image



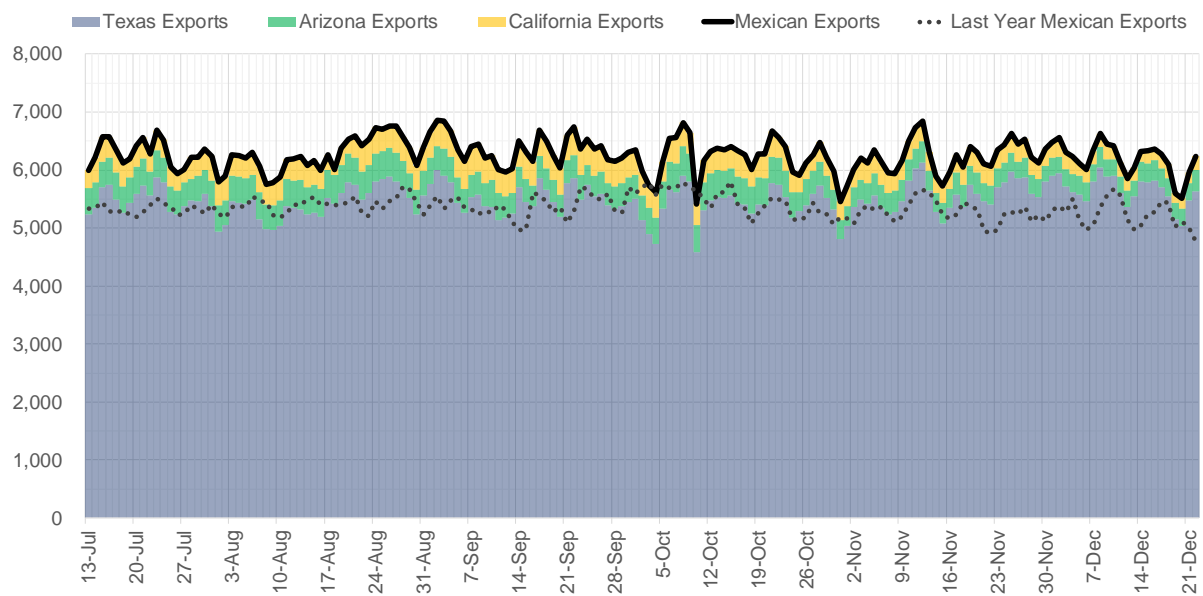
Supply – Demand Trends



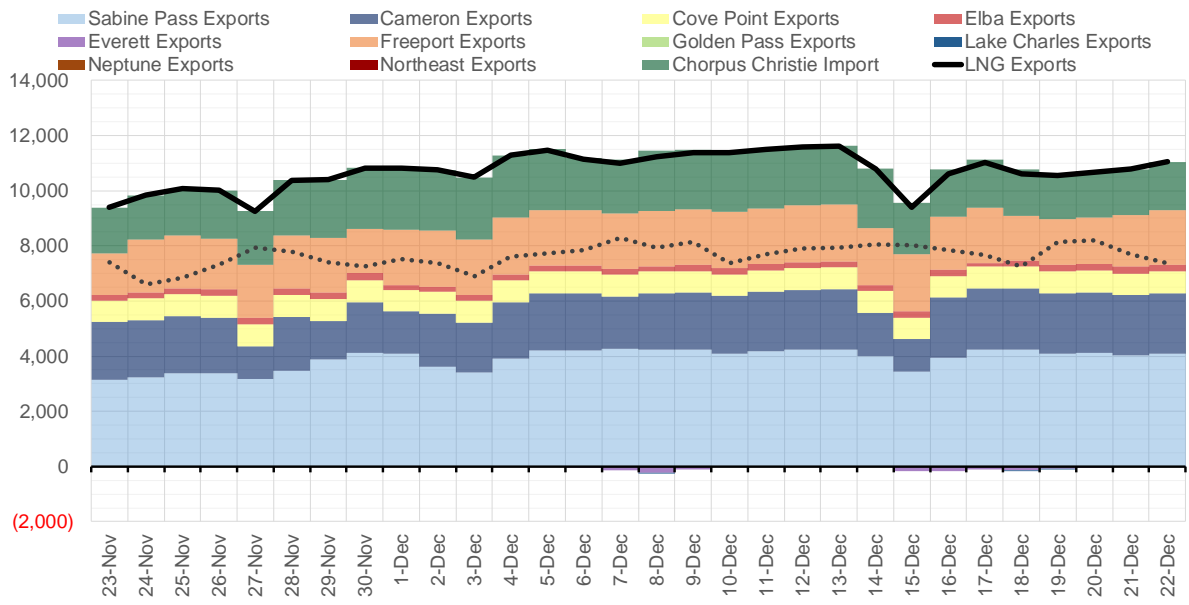
Source: Bloomberg

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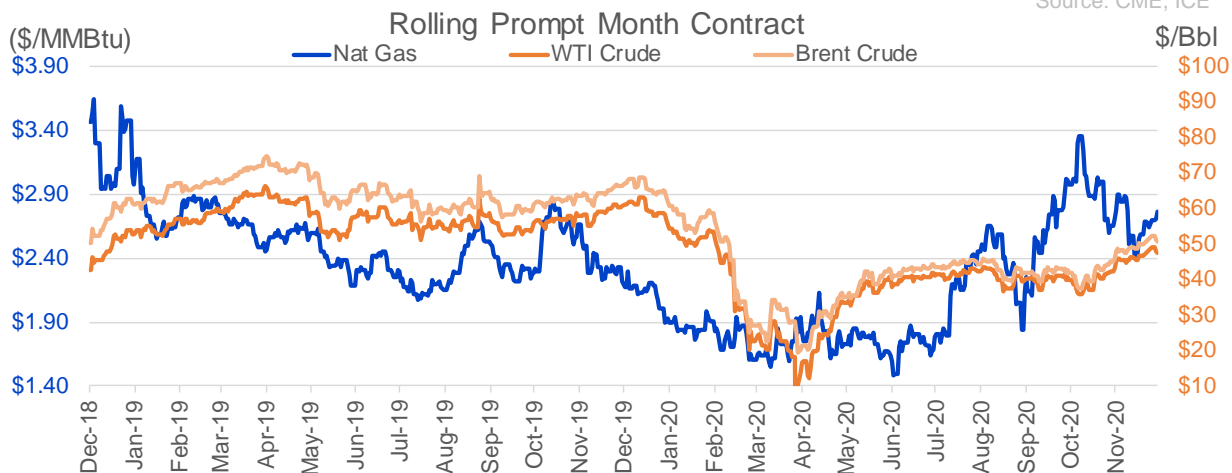
Nat Gas Options Volume and Open Interest CME, ICE and Nasdaq Combined

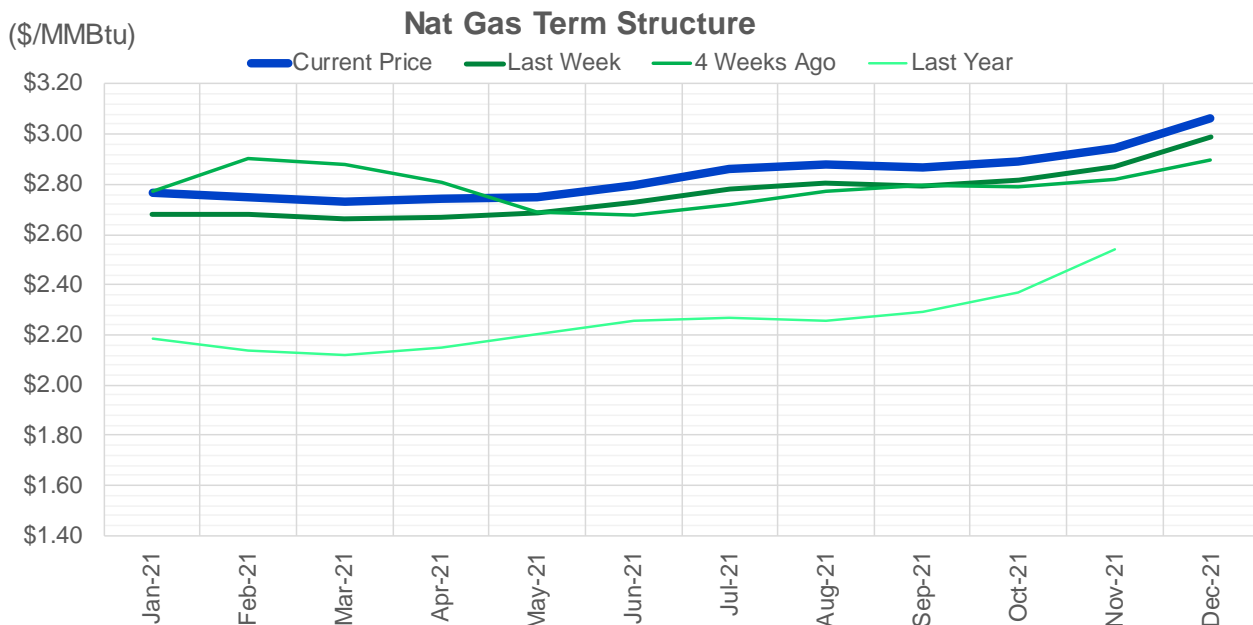
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
3	2021	C	5.00	10304	1	2021	C	3.50	43559
3	2021	C	4.00	8687	3	2021	P	2.00	42700
4	2021	C	3.25	6050	1	2021	C	3.00	39547
4	2021	C	3.00	5912	3	2021	C	5.00	37254
2	2021	C	3.25	4522	3	2021	C	6.00	36839
1	2021	P	2.00	3771	1	2021	P	2.50	35409
1	2021	C	2.90	3058	3	2021	C	4.00	34397
1	2021	P	2.50	2905	3	2021	C	3.50	33917
1	2021	C	3.00	2581	4	2021	C	3.00	33506
1	2021	C	2.75	2308	1	2021	P	2.25	31055
1	2021	P	2.60	2183	2	2021	P	2.25	28510
1	2021	C	2.80	1838	3	2021	C	3.25	28306
3	2021	C	3.25	1801	3	2021	C	3.00	28068
8	2021	P	2.00	1500	1	2021	C	4.50	27881
2	2021	C	3.75	1167	10	2021	C	4.00	27516
4	2021	C	2.75	1075	4	2021	C	4.00	26896
2	2021	C	2.75	944	3	2021	C	4.50	26621
2	2021	C	3.00	872	1	2021	C	5.00	25397
3	2021	P	2.50	860	1	2021	P	2.00	24788
3	2021	P	2.00	855	1	2021	C	4.00	24218
3	2021	P	2.05	800	10	2021	C	3.25	24184
10	2021	P	2.50	800	3	2021	P	2.50	23022
2	2021	P	2.25	746	1	2021	C	3.75	22499
5	2021	C	3.00	700	2	2021	C	4.00	21721
4	2021	P	2.50	650	3	2021	C	7.00	21706
5	2021	C	3.50	625	4	2021	C	3.25	21438
2	2021	P	2.65	556	1	2021	C	6.00	21138
2	2021	C	2.70	539	8	2021	C	4.00	20978
5	2021	C	4.00	525	2	2021	P	2.50	20855
1	2021	P	2.80	523	1	2021	C	3.25	20518
3	2021	C	3.00	513	10	2021	C	5.00	19595
1	2021	P	2.40	505	2	2021	C	3.50	19571
3	2021	C	7.00	501	4	2021	C	2.75	19536
4	2022	C	3.00	500	1	2021	C	2.75	19306
2	2021	P	2.30	499	4	2021	C	5.00	18653
2	2021	P	2.00	497	8	2021	P	2.25	18417
2	2021	C	4.00	486	5	2021	C	3.00	18212
2	2021	P	2.55	462	4	2021	P	2.00	17165
1	2021	C	2.85	460	2	2021	C	3.00	17055
2	2021	C	3.10	429	2	2021	P	2.00	16664
1	2021	P	2.35	406	6	2021	C	4.00	16551
4	2021	P	2.25	400	2	2021	C	5.00	16522
1	2021	C	2.70	374	2	2021	C	4.50	15810
1	2021	P	2.65	368	4	2021	P	2.25	15173
2	2021	C	3.50	346	5	2021	C	3.50	15075
2	2021	C	3.30	330	1	2021	P	2.75	14845
2	2021	C	5.00	328	10	2021	P	2.00	14692
3	2021	C	3.15	324	10	2021	C	3.00	14266
4	2021	C	2.90	300	1	2021	P	3.00	14154
					1	2021	P	2.6	14072

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	48339	63301	-14962	JAN 21	82927	92981	-10054.5
FEB 21	201289	198613	2676	FEB 21	80139	79017	1121.25
MAR 21	248294	246700	1594	MAR 21	99470	99562	-91.75
APR 21	103921	101722	2199	APR 21	86636	85465	1171.75
MAY 21	61357	60829	528	MAY 21	77165	77060	104.75
JUN 21	39878	39560	318	JUN 21	63678	63558	120
JUL 21	32501	31738	763	JUL 21	65657	65466	190.5
AUG 21	28265	28499	-234	AUG 21	67749	67691	58.25
SEP 21	46429	46811	-382	SEP 21	62832	62701	131
OCT 21	99158	97008	2150	OCT 21	78112	78169	-56.75
NOV 21	41617	42543	-926	NOV 21	51507	51461	45.25
DEC 21	42890	42976	-86	DEC 21	52348	52279	68.75
JAN 22	39862	39848	14	JAN 22	50975	50878	96.25
FEB 22	24226	24157	69	FEB 22	39033	38979	54.5
MAR 22	26749	27131	-382	MAR 22	40818	40757	61.5
APR 22	24606	24715	-109	APR 22	38784	38652	132
MAY 22	13231	13304	-73	MAY 22	33545	33446	99
JUN 22	6863	6776	87	JUN 22	31841	31709	132
JUL 22	5819	5868	-49	JUL 22	33411	33494	-83.5
AUG 22	5191	5190	1	AUG 22	32435	32186	249.5
SEP 22	4548	4537	11	SEP 22	31727	31595	132
OCT 22	9385	9345	40	OCT 22	37408	37269	139
NOV 22	6420	6422	-2	NOV 22	31696	31652	44.25
DEC 22	6967	6962	5	DEC 22	34346	34293	53.25
JAN 23	4430	4444	-14	JAN 23	16394	16269	125.5
FEB 23	1373	1380	-7	FEB 23	15131	15010	121
MAR 23	1746	1763	-17	MAR 23	14431	14369	62
APR 23	3393	3383	10	APR 23	13858	13794	63.75
MAY 23	1781	1773	8	MAY 23	12943	12880	62.25
JUN 23	563	557	6	JUN 23	12999	12924	75





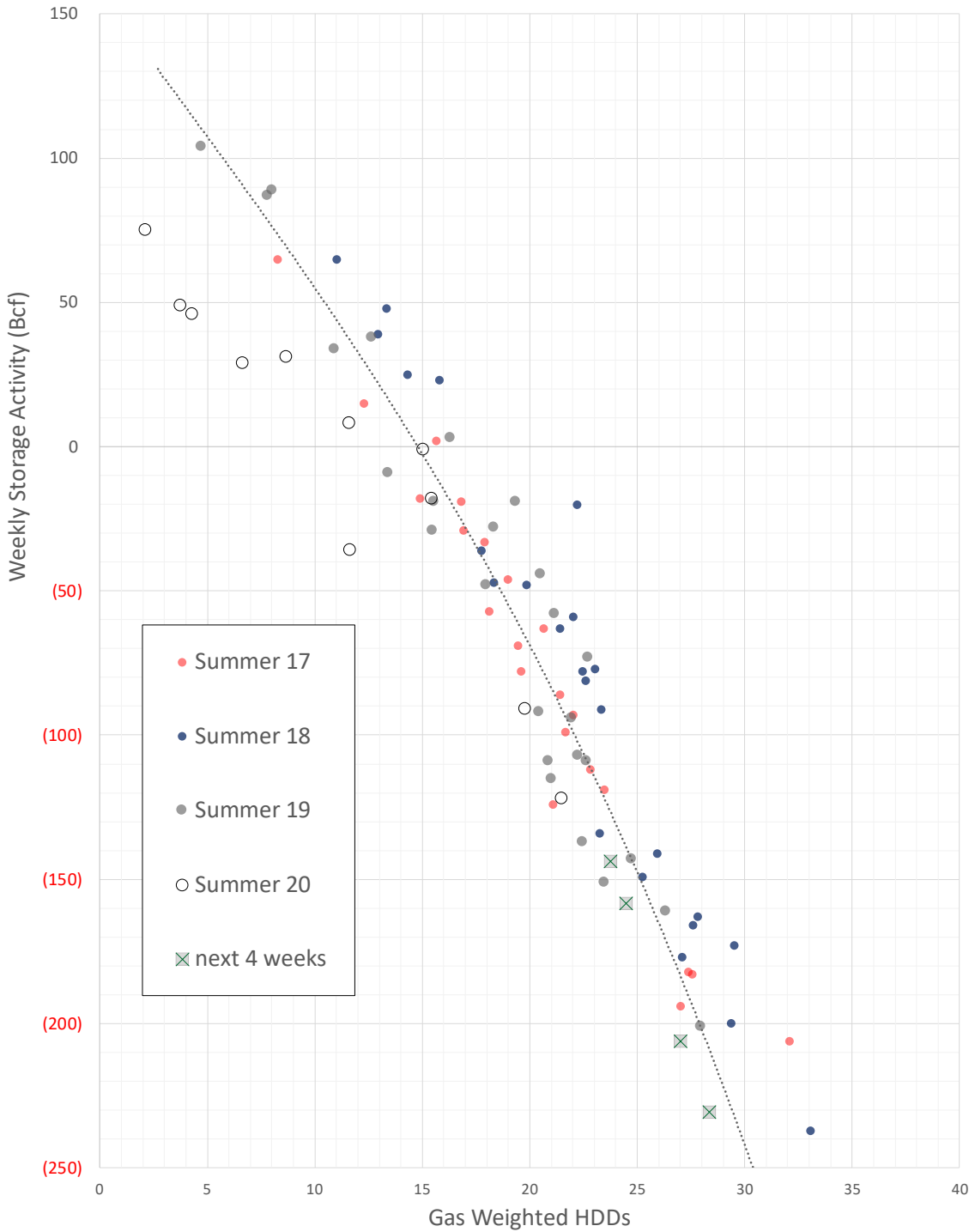
	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21
Current Price	\$2.769	\$2.751	\$2.731	\$2.740	\$2.749	\$2.798	\$2.861	\$2.879	\$2.865	\$2.889	\$2.943	\$3.064
Last Week	\$2.682	\$2.680	\$2.662	\$2.670	\$2.684	\$2.728	\$2.783	\$2.802	\$2.792	\$2.815	\$2.870	\$2.990
vs. Last Week	\$0.087	\$0.071	\$0.069	\$0.070	\$0.065	\$0.070	\$0.078	\$0.077	\$0.073	\$0.074	\$0.073	\$0.074
4 Weeks Ago	\$2.775	\$2.900	\$2.877	\$2.809	\$2.691	\$2.678	\$2.717	\$2.772	\$2.794	\$2.789	\$2.820	\$2.894
vs. 4 Weeks Ago	-\$0.006	-\$0.149	-\$0.146	-\$0.069	\$0.058	\$0.120	\$0.144	\$0.107	\$0.071	\$0.100	\$0.123	\$0.170
Last Year	\$2.172	\$2.187	\$2.138	\$2.123	\$2.151	\$2.205	\$2.258	\$2.269	\$2.259	\$2.291	\$2.369	\$2.542
vs. Last Year	\$0.597	\$0.564	\$0.593	\$0.617	\$0.598	\$0.593	\$0.603	\$0.610	\$0.606	\$0.598	\$0.574	\$0.522

	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	4.04	5.59	1.55
TETCO M3	\$/MMBtu	2.82	3.66	0.84
FGT Zone 3	\$/MMBtu	3.03	2.66	-0.37
Zone 6 NY	\$/MMBtu	3.03	4.36	1.33
Chicago Citygate	\$/MMBtu	2.49	2.63	0.14
Michcon	\$/MMBtu	2.48	2.48	0.00
Columbia TCO Pool	\$/MMBtu	2.42	2.18	-0.24
Ventura	\$/MMBtu	2.50	2.85	0.35
Rockies/Opal	\$/MMBtu	3.29	2.48	-0.81
El Paso Permian Basin	\$/MMBtu	2.47	2.46	-0.01
Socal Citygate	\$/MMBtu	4.50	3.34	-1.17
Malin	\$/MMBtu	3.32	3.25	-0.07
Houston Ship Channel	\$/MMBtu	2.66	2.67	0.01
Henry Hub Cash	\$/MMBtu	2.65	2.51	-0.14
AECO Cash	C\$/GJ	2.10	2.10	0.00
Station2 Cash	C\$/GJ	2.03	3.42	1.39
Dawn Cash	C\$/GJ	2.52	2.51	-0.01

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks Ago	vs. Last Year
NatGas Jan21/Apr21	\$/MMBtu	-0.029	▼ -0.017	▲ 0.180	▲ 0.368
NatGas Mar21/Apr21	\$/MMBtu	0.009	▲ 0.001	▼ -0.109	▼ -0.237
NatGas Oct21/Nov21	\$/MMBtu	0.054	▼ -0.001	▼ -0.020	▼ -0.016
NatGas Apr21/Oct21	\$/MMBtu	0.149	▲ 0.282	▲ 0.069	▼ -0.172
WTI Crude	\$/Bbl	47.51	▼ -0.110	▲ 2.600	▼ -13.600
Brent Crude	\$/Bbl	50.53	▼ -0.230	▲ 2.670	▼ -16.670
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18	▲ 0.000	▲ 0.000	▲ 0.000
Heating Oil	cents/Gallon	147.37	▲ 0.930	▲ 11.420	▼ -56.260
Propane, Mt. Bel	cents/Gallon	0.64	▲ 0.039	▲ 0.094	▲ 0.135
Ethane, Mt. Bel	cents/Gallon	0.20	▼ -0.002	▼ -0.018	▲ 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			

Winter Storage Forecast



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