

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 2.65	▼ \$ (0.04)	▲ \$ 0.05

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 47.62	▲ \$ -	▲ \$ 1.0

	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 50.74	▼ \$ (0.02)	▲ \$ 0.7

Page Menu

[Short-term Weather Model Outlooks](#)

[Lower 48 Component Models](#)

[Regional S/D Models Storage Projection](#)

[Weather Model Storage Projection](#)

[Supply – Demand Trends](#)

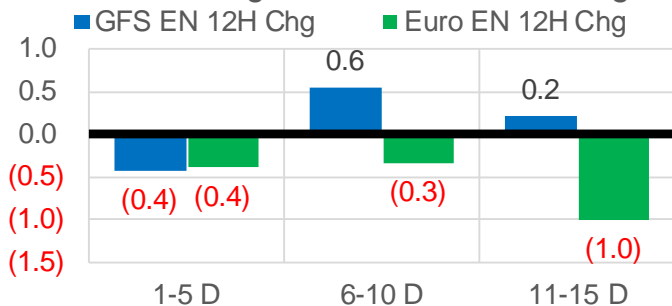
[Nat Gas Options Volume and Open Interest](#)

[Nat Gas Futures Open Interest](#)

[Price Summary](#)

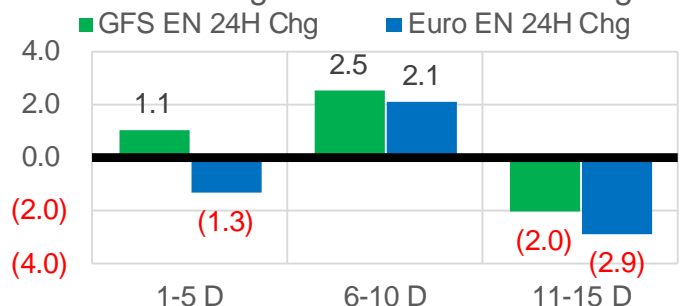
Vs. 12H Ago

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	90.5	▼ -0.33	▼ -0.66

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	27.0	▼ -0.74	▲ 0.78

	Current	Δ from YD	Δ from 7D Avg
US ResComm	44.5	▼ -2.24	▲ 7.57

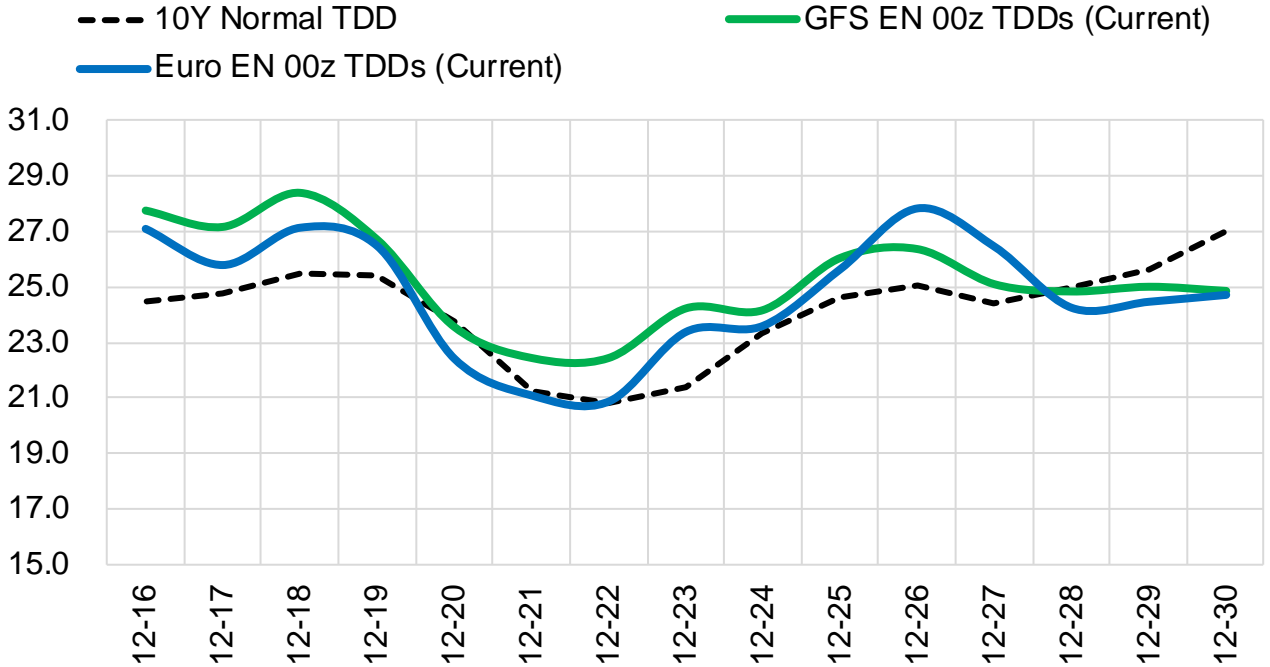
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	6.6	▼ -0.03	▲ 1.17

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	10.9	▲ 1.48	▼ -0.23

	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.3	▼ -0.22	▲ 0.08

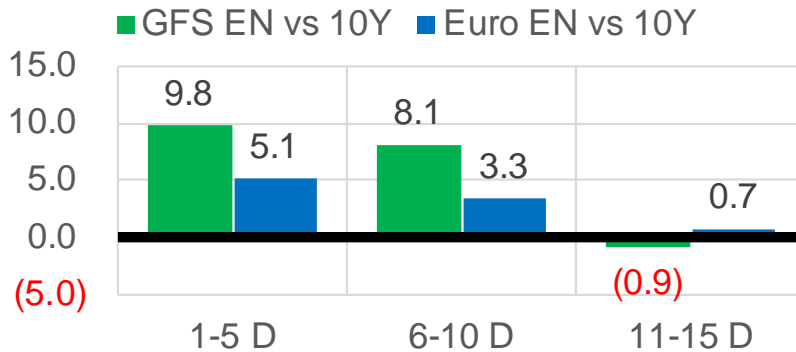
Short-term Weather Model Outlooks (00z)

L48 Region



Vs. 10Y Normal

L48 Region - 00z TDD vs 10Y N



Source: WSI , Bloomberg

Lower 48 Component Models

Daily Balances

	10-Dec	11-Dec	12-Dec	13-Dec	14-Dec	15-Dec	16-Dec	DoD	vs. 7D
Lower 48 Dry Production	91.2	91.7	91.2	91.2	90.9	90.8	90.5	▼ -0.3	▼ -0.7
Canadian Imports	5.5	4.6	4.9	5.0	5.7	6.6	6.6	▼ 0.0	▲ 1.2
L48 Power	26.1	24.7	24.0	24.3	27.8	27.8	27.0	▼ -0.7	▲ 1.2
L48 Residential & Commercial	33.4	32.3	33.2	35.2	42.8	46.8	44.5	▼ -2.2	▲ 7.3
L48 Industrial	23.6	24.4	25.4	26.3	27.2	27.2	26.5	▼ -0.7	▲ 0.8
L48 Lease and Plant Fuel	5.1	5.1	5.1	5.1	5.0	5.0	5.0	▼ 0.0	▼ 0.0
L48 Pipeline Distribution	2.7	2.6	2.6	2.7	3.2	3.4	3.3	▼ -0.1	▲ 0.4
L48 Regional Gas Consumption	90.9	89.2	90.2	93.6	106.0	110.2	106.3	▼ -3.9	▲ 9.6
Net LNG Delivered	11.39	11.49	11.59	11.62	10.79	9.37	10.85	▲ 1.5	▼ -0.2
Total Mexican Exports	6.3	6.3	6.0	5.7	6.3	6.5	6.3	▼ -0.2	▲ 0.1
Implied Daily Storage Activity	-11.9	-10.7	-11.6	-14.8	-26.4	-28.6	-26.4		
EIA Reported Daily Storage Activity									
Daily Model Error									

EIA Storage Week Balances

	6-Nov	13-Nov	20-Nov	27-Nov	4-Dec	11-Dec	WoW	vs. 4W
Lower 48 Dry Production	89.6	88.2	90.9	91.6	91.6	90.9	▼ -0.7	▲ 0.3
Canadian Imports	4.9	3.9	5.1	4.5	5.3	5.9	▲ 0.6	▲ 1.2
L48 Power	24.6	24.4	24.8	24.8	26.5	28.1	▲ 1.6	▲ 3.0
L48 Residential & Commercial	23.1	16.8	27.2	26.7	34.4	37.4	▲ 2.9	▲ 11.1
L48 Industrial	23.0	24.0	23.2	22.1	24.4	22.5	▼ -1.9	▼ -0.9
L48 Lease and Plant Fuel	4.9	4.9	5.0	5.1	5.1	5.0	▼ 0.0	▲ 0.0
L48 Pipeline Distribution	2.3	1.9	2.4	2.4	2.8	3.0	▲ 0.2	▲ 0.6
L48 Regional Gas Consumption	78.0	72.1	82.7	81.1	93.2	96.0	▲ 2.8	▲ 13.7
Net LNG Exports	10.2	10.4	10.2	9.7	10.4	11.3	▲ 0.9	▲ 1.1
Total Mexican Exports	6.0	6.3	6.1	6.3	6.4	6.3	▼ -0.1	▲ 0.0
Implied Daily Storage Activity	0.3	3.4	-2.9	-1.0	-13.1	-16.7	-3.6	
EIA Reported Daily Storage Activity	1.1	4.4	-2.6	-0.1	-13.0			
Daily Model Error	-0.8	-1.1	-0.3	-0.9	-0.1			

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	91.1	▲ 0.6	▼ -4.1
Canadian Imports	4.8	4.5	4.9	3.8	4.3	4.6	5.8	▲ 1.2	▲ 1.3
L48 Power	24.4	28.9	41.0	34.1	29.4	24.7	27.4	▲ 2.8	▼ -1.4
L48 Residential & Commercial	39.3	39.1	7.7	8.8	16.2	24.2	38.4	▲ 14.1	▼ -0.7
L48 Industrial	22.4	24.4	20.3	19.2	22.3	23.2	24.6	▲ 1.4	▲ 0.1
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	3.0	▲ 0.7	▼ -0.1
L48 Regional Gas Consumption	93.9	100.7	76.3	69.1	74.9	79.3	98.4	▲ 19.1	▼ -2.3
Net LNG Exports	4.5	7.8	4.0	5.9	8.0	10.1	11.0	▲ 0.9	▲ 3.3
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	2.7	-0.7	-18.9		
EIA Reported Daily Storage Activity									
Daily Model Error									

Source: Bloomberg, analytix.ai

Regional S/D Models Storage Projection

Week Ending 11-Dec

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	-17.5	0.6	-16.1	-113
East	-6.5	1.8	-4.6	-32
Midwest	-5.9	0.4	-5.3	-37
Mountain	2.8	-3.7	-0.8	-6
South Central	-7.4	2.4	-4.7	-33
Pacific	-0.6	-0.3	-0.8	-6

*Adjustment Factor is calculated based on historical regional deltas

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

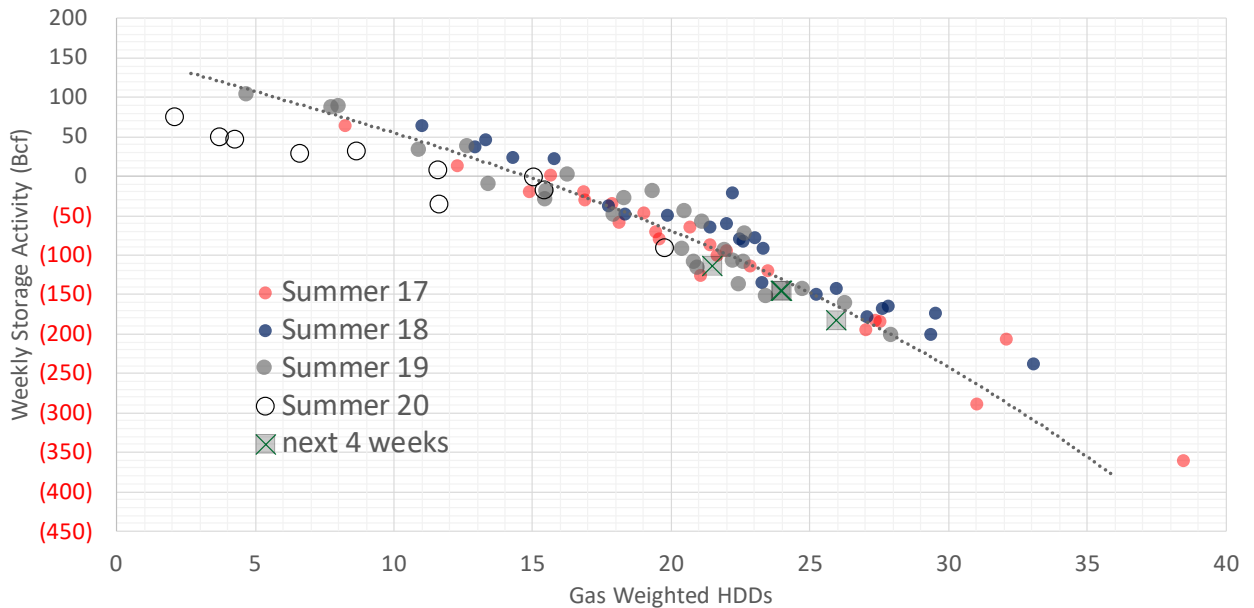


Weather Model Storage Projection

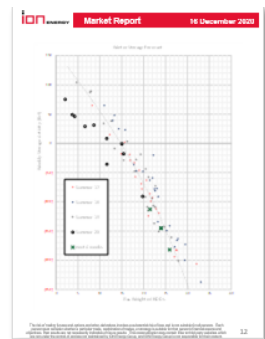
Next report
and beyond

Week Ending	Temp	Week Storage Projection
11-Dec	21.5	-113
18-Dec	24.0	-146
25-Dec	23.9	-145
01-Jan	26.0	-182

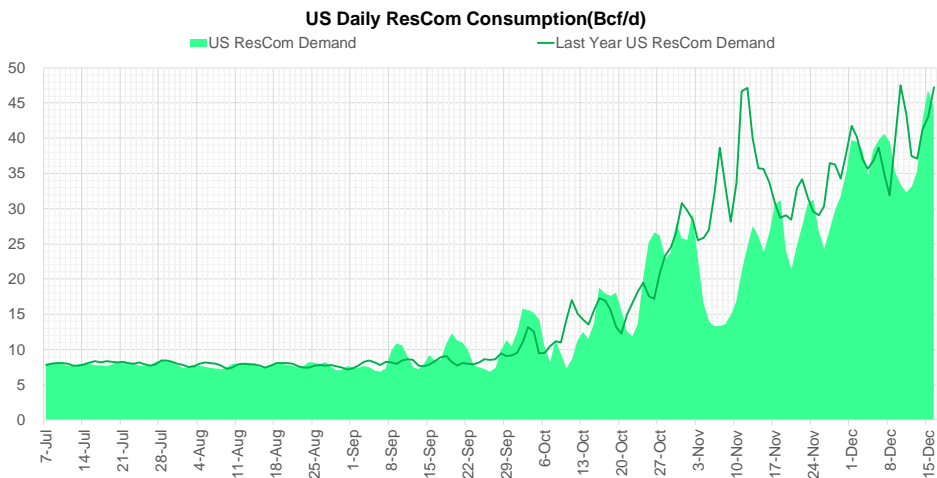
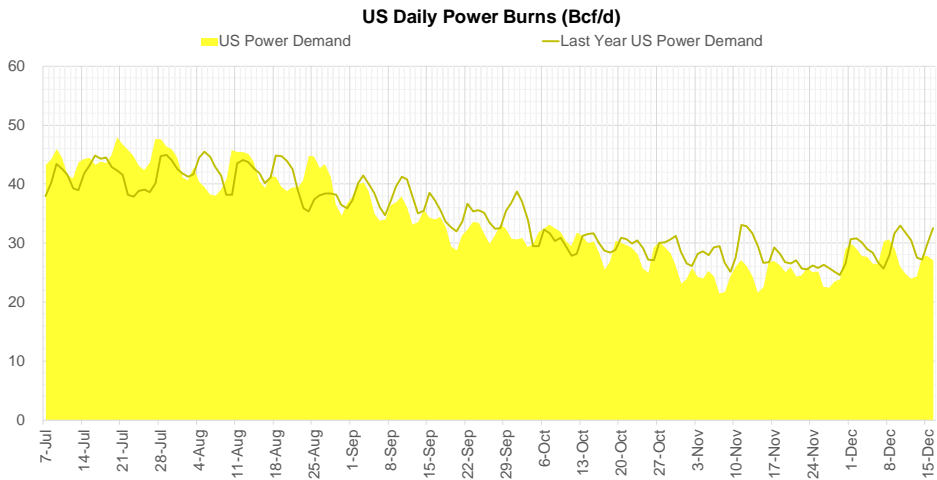
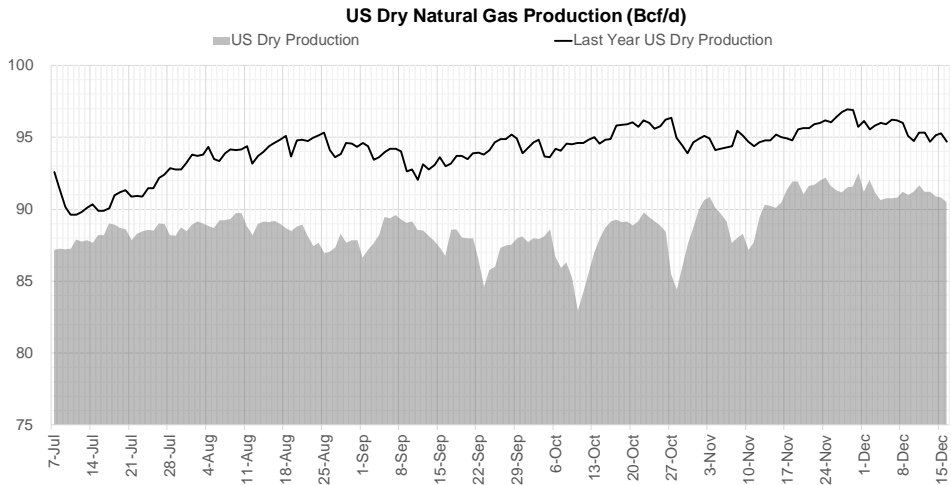
Winter Storage Forecast



Go to larger image



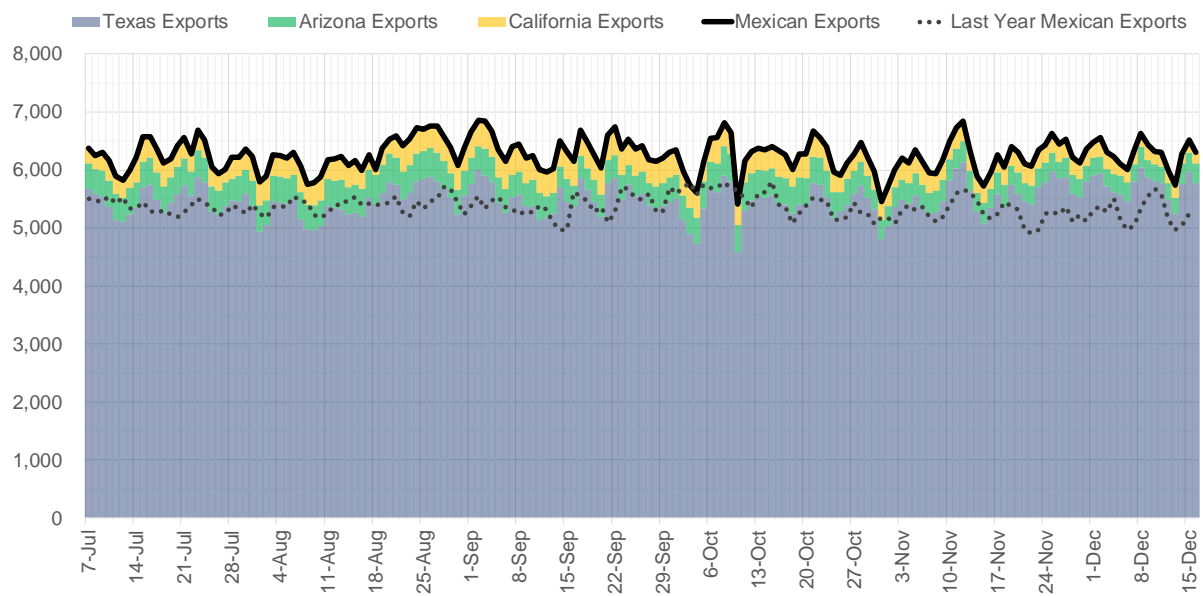
Supply – Demand Trends



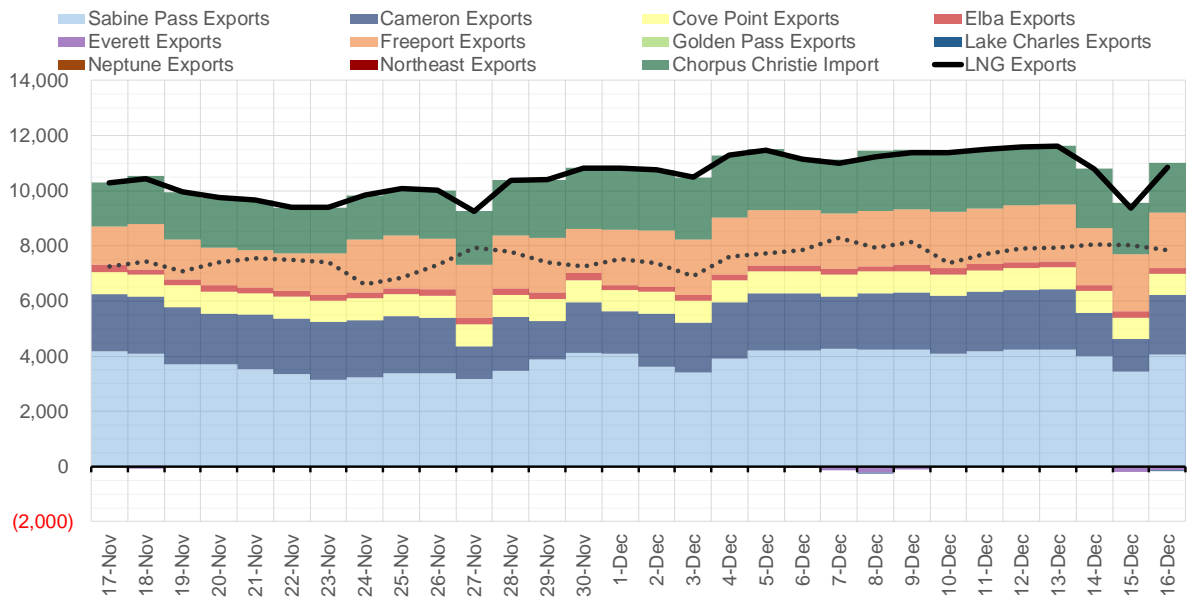
Source: Bloomberg

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

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.

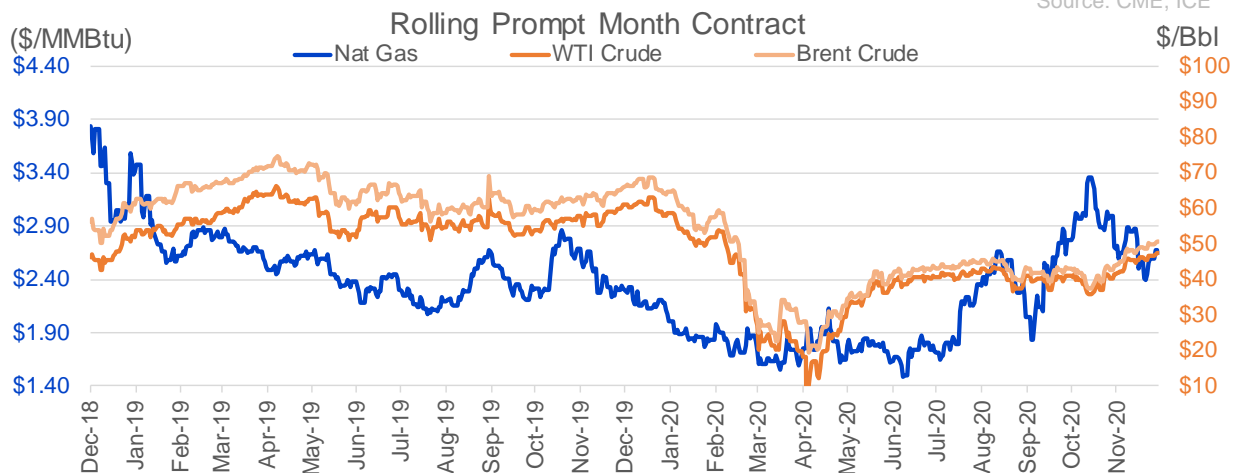
Nat Gas Options Volume and Open Interest CME, ICE and Nasdaq Combined

CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
1	2021	C	3.30	9220	3	2021	P	2.00	42227
1	2021	C	3.00	8297	1	2021	C	3.50	39633
1	2021	C	2.90	4929	3	2021	C	5.00	37548
1	2021	C	3.20	4492	3	2021	C	6.00	35160
1	2021	C	3.50	4320	3	2021	C	4.00	33650
2	2021	C	4.00	3449	1	2021	P	2.50	33634
1	2021	C	3.25	2985	4	2021	C	3.25	30162
2	2021	C	3.50	2565	1	2021	C	3.00	29809
1	2021	C	3.10	2460	3	2021	C	3.00	29809
1	2021	P	2.50	2415	3	2021	C	3.25	28296
1	2021	C	2.85	2287	1	2021	C	4.50	27881
1	2021	C	3.15	2270	10	2021	C	4.00	27686
1	2021	C	2.95	2142	4	2021	C	4.00	26221
1	2021	C	2.75	2091	2	2021	P	2.25	25903
1	2021	P	2.40	1647	3	2021	C	4.50	25636
1	2021	C	2.80	1605	1	2021	C	5.00	25397
1	2021	P	2.45	1473	3	2021	C	3.50	25232
4	2021	P	2.25	1448	1	2021	P	2.25	24889
3	2021	C	3.50	1356	1	2021	C	4.00	24270
4	2022	C	3.00	1250	10	2021	C	3.25	23937
5	2022	C	3.00	1250	3	2021	P	2.50	23231
6	2022	C	3.00	1250	1	2021	C	3.75	22491
7	2022	C	3.00	1250	4	2021	C	3.00	21855
8	2022	C	3.00	1250	3	2021	C	7.00	21756
9	2022	C	3.00	1250	1	2021	C	6.00	21138
10	2022	C	3.00	1250	8	2021	C	4.00	21003
2	2021	C	3.25	1240	1	2021	C	2.75	19937
3	2021	P	2.40	1034	2	2021	P	2.50	19914
2	2022	C	5.50	1000	2	2021	C	4.00	19757
3	2022	C	5.50	1000	1	2021	P	2.00	19699
1	2021	C	2.70	988	10	2021	C	5.00	19595
1	2021	P	2.25	957	2	2021	C	3.50	19561
10	2021	C	3.25	950	4	2021	C	2.75	19411
8	2021	C	2.75	800	1	2021	C	3.25	18809
2	2022	C	3.50	750	4	2021	C	5.00	18653
3	2022	C	3.50	750	8	2021	P	2.25	18517
1	2021	P	2.60	715	5	2021	C	3.00	18162
8	2021	C	3.25	700	4	2021	P	2.00	16939
10	2021	C	2.75	700	2	2021	P	2.00	16909
1	2021	P	2.30	617	2	2021	C	3.00	16720
3	2021	C	4.50	602	6	2021	C	4.00	16601
2	2021	C	2.90	599	2	2021	C	5.00	16424
1	2021	P	2.65	567	4	2021	C	3.50	15228
4	2022	C	2.75	525	1	2021	P	2.75	14798
4	2022	C	3.25	525	5	2021	C	3.50	14778
5	2022	C	2.75	525	10	2021	C	3.00	14566
5	2022	C	3.25	525	2	2021	C	4.50	14478
6	2022	C	2.75	525	4	2021	P	2.25	14263
6	2022	C	2.75	525	1	2021	P	3.00	14156
6	2022	C	3.25	525	3	2021	P	2.25	13935.5

Source: CME, ICE

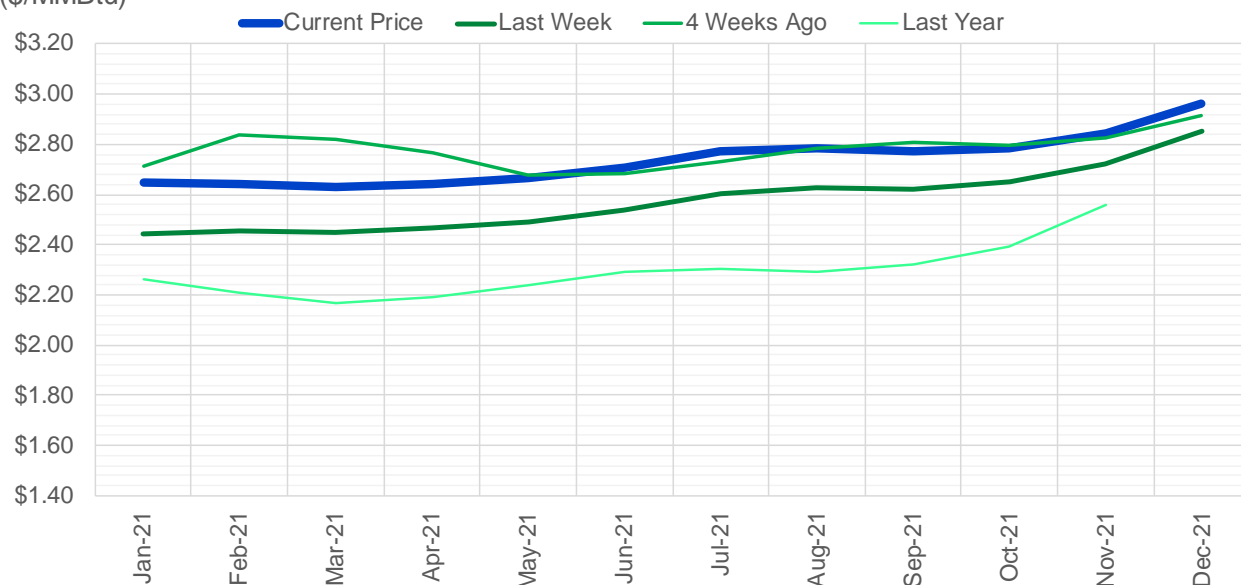
Nat Gas Futures Open Interest CME, and ICE Combined

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	97658	112845	-15187	JAN 21	89036	89680	-643.5
FEB 21	171590	162959	8631	FEB 21	73928	73282	645.75
MAR 21	242274	240322	1952	MAR 21	100344	99497	846.75
APR 21	97379	98834	-1455	APR 21	84082	83560	522
MAY 21	61020	61641	-621	MAY 21	76681	76665	15.75
JUN 21	39247	38681	566	JUN 21	63388	63316	71.5
JUL 21	29839	29676	163	JUL 21	64873	64612	260.75
AUG 21	28813	28493	320	AUG 21	67208	66885	323
SEP 21	46642	47549	-907	SEP 21	62419	62083	335.75
OCT 21	98104	95553	2551	OCT 21	77961	77892	69.25
NOV 21	43585	44250	-665	NOV 21	51019	51004	14.5
DEC 21	43178	42703	475	DEC 21	51785	51649	135.75
JAN 22	39558	39305	253	JAN 22	50196	50064	132.25
FEB 22	24194	24476	-282	FEB 22	38947	38856	91.5
MAR 22	26300	26919	-619	MAR 22	40452	40367	85
APR 22	25202	25038	164	APR 22	39417	39313	104
MAY 22	12961	13231	-270	MAY 22	33325	33231	94
JUN 22	6720	6670	50	JUN 22	31564	31415	149
JUL 22	5733	5787	-54	JUL 22	33079	33031	47.25
AUG 22	5083	5026	57	AUG 22	31891	31986	-95.25
SEP 22	4546	4529	17	SEP 22	31461	31507	-46
OCT 22	9166	9019	147	OCT 22	37295	37164	131.25
NOV 22	6384	6378	6	NOV 22	31541	31473	68
DEC 22	6903	6913	-10	DEC 22	34077	33999	78
JAN 23	4344	4505	-161	JAN 23	16125	16003	122.75
FEB 23	1330	1334	-4	FEB 23	14651	14597	54
MAR 23	2740	2734	6	MAR 23	14217	14204	12.75
APR 23	2618	2206	412	APR 23	13548	13506	42.5
MAY 23	1707	676	1031	MAY 23	12622	12570	51.5
JUN 23	486	486	0	JUN 23	12642	12589	52.5



(\$/MMBtu)

Nat Gas Term Structure



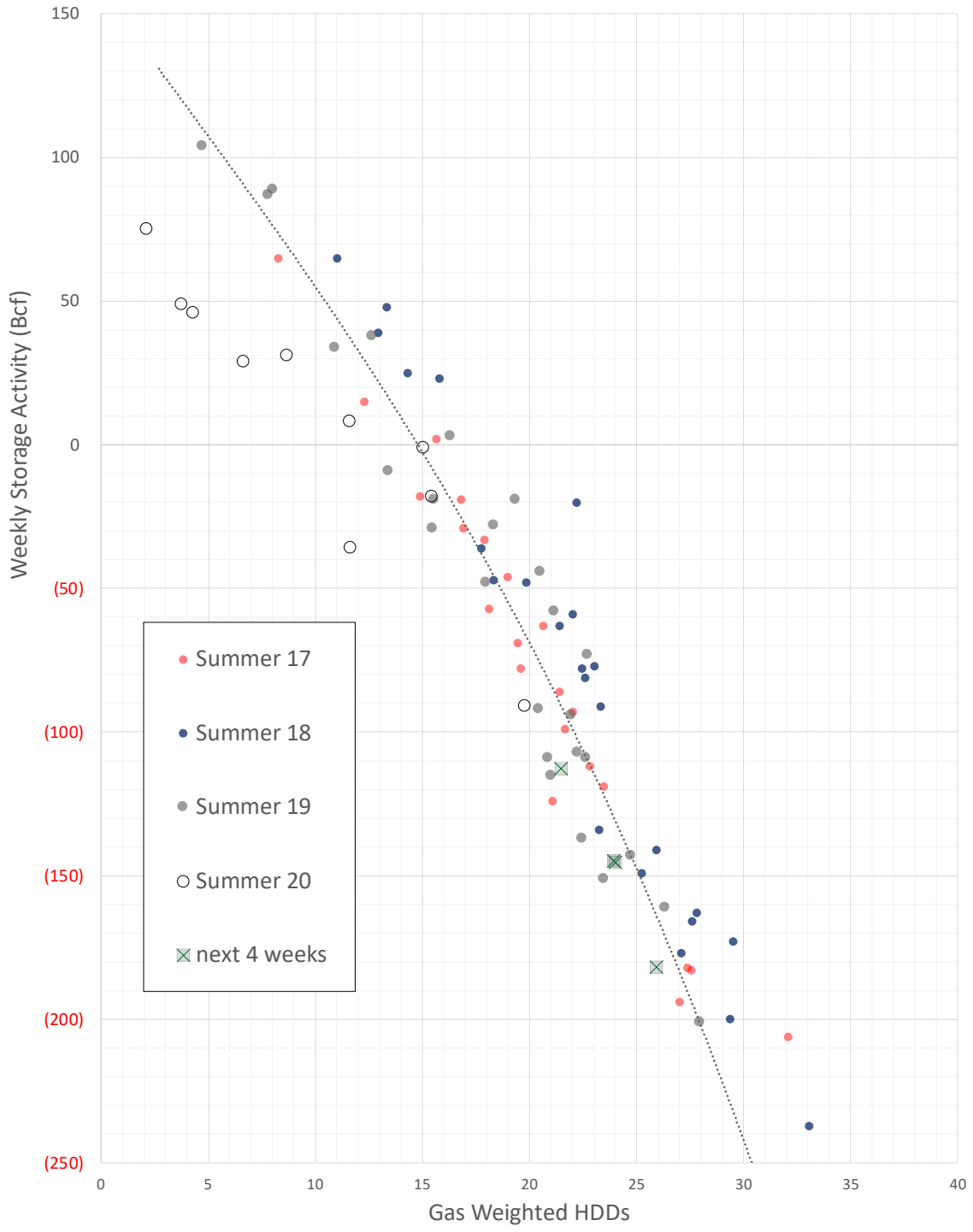
	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21
Current Price	\$2.645	\$2.644	\$2.628	\$2.644	\$2.664	\$2.706	\$2.770	\$2.784	\$2.772	\$2.783	\$2.841	\$2.963
Last Week	\$2.442	\$2.456	\$2.452	\$2.466	\$2.489	\$2.538	\$2.601	\$2.627	\$2.622	\$2.648	\$2.719	\$2.850
vs. Last Week	\$0.203	\$0.188	\$0.176	\$0.178	\$0.175	\$0.168	\$0.169	\$0.157	\$0.150	\$0.135	\$0.122	\$0.113
4 Weeks Ago	\$2.712	\$2.838	\$2.818	\$2.767	\$2.680	\$2.684	\$2.728	\$2.784	\$2.805	\$2.794	\$2.828	\$2.912
vs. 4 Weeks Ago	-\$0.067	-\$0.194	-\$0.190	-\$0.123	-\$0.016	\$0.022	\$0.042	\$0.000	-\$0.033	-\$0.011	\$0.013	\$0.051
Last Year	\$2.286	\$2.264	\$2.211	\$2.167	\$2.191	\$2.241	\$2.292	\$2.303	\$2.292	\$2.324	\$2.393	\$2.558
vs. Last Year	\$0.359	\$0.380	\$0.417	\$0.477	\$0.473	\$0.465	\$0.478	\$0.481	\$0.480	\$0.459	\$0.448	\$0.405

	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	7.19	4.35	-2.84
TETCO M3	\$/MMBtu	4.10	3.13	-0.98
FGT Zone 3	\$/MMBtu	4.09	2.43	-1.66
Zone 6 NY	\$/MMBtu	4.09	3.75	-0.35
Chicago Citygate	\$/MMBtu	2.54	2.34	-0.20
Michcon	\$/MMBtu	2.46	2.18	-0.28
Columbia TCO Pool	\$/MMBtu	2.31	1.92	-0.39
Ventura	\$/MMBtu	2.58	2.58	0.00
Rockies/Opal	\$/MMBtu	3.56	2.20	-1.36
El Paso Permian Basin	\$/MMBtu	2.55	2.19	-0.36
Socal Citygate	\$/MMBtu	4.35	3.05	-1.30
Malin	\$/MMBtu	3.57	2.83	-0.74
Houston Ship Channel	\$/MMBtu	2.67	2.40	-0.28
Henry Hub Cash	\$/MMBtu	2.63	2.24	-0.39
AECO Cash	C\$/GJ	2.13	1.89	-0.24
Station2 Cash	C\$/GJ	2.03	3.13	1.10
Dawn Cash	C\$/GJ	2.50	2.23	-0.27

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks Ago	vs. Last Year
NatGas Jan21/Apr21	\$/MMBtu	-0.001	▼ -0.025	▲ 0.157	▲ 0.400
NatGas Mar21/Apr21	\$/MMBtu	0.016	▲ 0.002	▼ -0.071	▼ -0.232
NatGas Oct21/Nov21	\$/MMBtu	0.058	▼ -0.013	▼ -0.026	▼ -0.010
NatGas Apr21/Oct21	\$/MMBtu	0.139	▲ 0.345	▲ 0.129	▼ -0.175
WTI Crude	\$/Bbl	47.62	▲ 2.100	▲ 5.800	▼ -13.310
Brent Crude	\$/Bbl	50.74	▲ 1.880	▲ 6.400	▼ -15.430
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18	▲ 0.000	▲ 0.000	▲ 0.000
Heating Oil	cents/Gallon	145.95	▲ 6.060	▲ 19.550	▼ -56.080
Propane, Mt. Bel	cents/Gallon	0.60	▲ 0.015	▲ 0.054	▲ 0.084
Ethane, Mt. Bel	cents/Gallon	0.20	▲ 0.009	▼ -0.019	▲ 0.027
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



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.