

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 3.02 ▲	\$ 0.05 ▲	\$ 0.10

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 40.53 ▼	\$ (0.59) ▲	\$ 1.2

	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 43.07 ▼	\$ (0.46) ▲	\$ 1.4

Page Menu

[Short-term Weather Model Outlooks](#)

[Lower 48 Component Models](#)

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

[Weather Model Storage Projection](#)

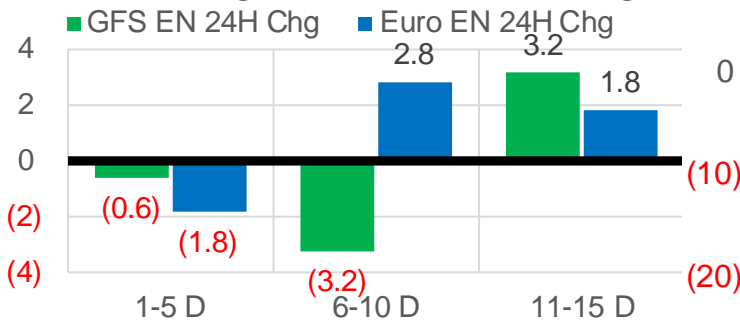
[Supply – Demand Trends](#)

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

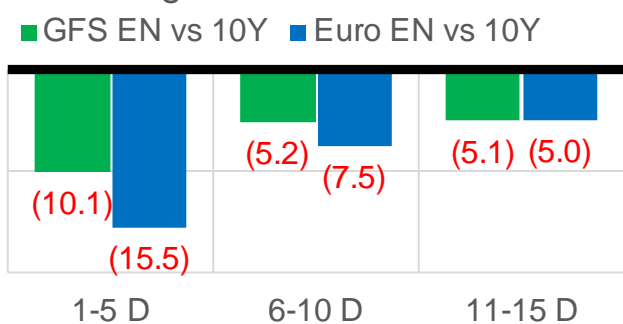
[Nat Gas Futures Open Interest](#)

[Price Summary](#)

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	90.4 ▲	0.13	▲ 1.36

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	25.7 ▼	-0.52	▲ 1.41

	Current	Δ from YD	Δ from 7D Avg
US ResComm	26.9 ▲	1.75	▲ 9.60

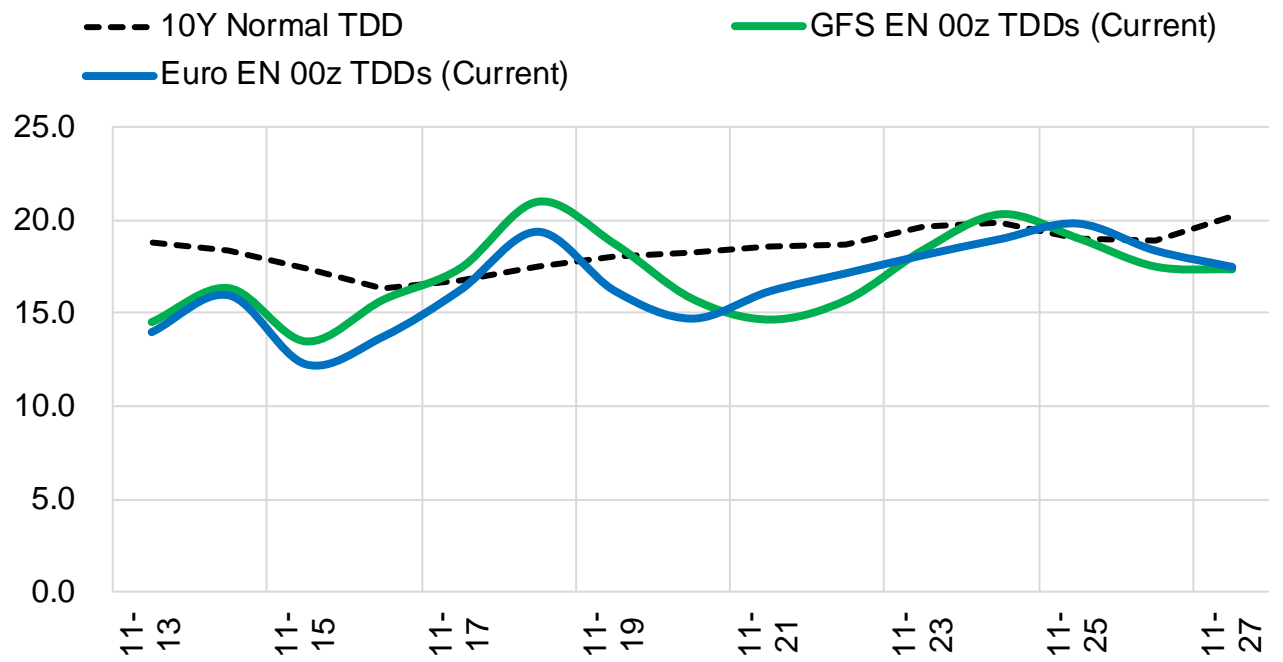
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	5.2 ▲	0.13	▲ 1.32

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	10.8 ▲	0.07	▲ 0.41

	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.7 ▼	-0.17	▲ 0.33

Short-term Weather Model Outlooks (00z)

L48 Region



Source: WSI , 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.

Lower 48 Component Models

Daily Balances

	7-Nov	8-Nov	9-Nov	10-Nov	11-Nov	12-Nov	13-Nov	DoD	vs. 7D
Lower 48 Dry Production	88.5	88.9	89.1	88.0	88.6	90.3	90.4	▲ 0.1	▲ 1.5
Canadian Imports	3.2	3.2	3.3	4.7	5.0	5.1	5.2	▲ 0.1	▲ 1.2
L48 Power	21.5	21.6	24.2	25.0	27.1	26.2	25.7	▼ -0.5	▲ 1.4
L48 Residential & Commercial	13.8	14.1	15.4	17.2	21.8	25.2	26.9	▲ 1.7	▲ 9.0
L48 Industrial	26.4	27.1	27.3	26.8	26.6	25.5	24.1	▼ -1.4	▼ -2.5
L48 Lease and Plant Fuel	4.9	4.9	4.9	4.9	4.9	5.0	5.0	▲ 0.0	▲ 0.1
L48 Pipeline Distribution	1.6	1.7	1.8	2.0	2.3	2.4	2.5	▲ 0.1	▲ 0.5
L48 Regional Gas Consumption	68.2	69.4	73.7	75.8	82.7	84.3	84.2	▼ -0.1	▲ 8.5
Net LNG Delivered	10.25	10.53	10.00	10.42	10.62	10.71	10.78	▲ 0.1	▲ 0.4
Total Mexican Exports	5.9	5.9	6.2	6.6	6.6	6.8	6.7	▼ -0.2	▲ 0.3
Implied Daily Storage Activity	7.2	6.2	2.6	-0.1	-6.4	-6.5	-6.0		
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	3.8	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	23.6	▲ 0.3	▲ 7.3
L48 Industrial	22.3	21.4	21.8	22.5	24.2	24.4	▲ 0.2	▲ 1.9
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	69.1	72.8	70.6	75.1	83.0	80.0	▼ -3.0	▲ 4.7
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	6.0	▼ -0.2	▼ -0.3
Implied Daily Storage Activity	9.9	6.2	7.0	4.1	-5.4	-0.9	4.5	
EIA Reported Daily Storage Activity	10.7	6.6	7.0	4.1	-5.1			
Daily Model Error	-0.8	-0.4	0.0	0.0	-0.3			

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	89.9	▲ 1.6	▼ -5.3
Canadian Imports	4.1	4.5	4.4	4.9	3.8	4.3	4.3	▲ 0.0	▼ -0.2
L48 Power	25.4	27.5	43.7	40.7	33.3	29.3	24.6	▼ -4.7	▼ -3.0
L48 Residential & Commercial	32.9	32.8	7.9	7.7	8.5	16.8	19.9	▲ 3.0	▼ -12.9
L48 Industrial	24.4	24.1	19.3	20.8	21.2	22.6	25.5	▲ 2.9	▲ 1.5
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	2.1	▼ -0.2	▼ -0.7
L48 Regional Gas Consumption	90.3	92.5	78.3	76.4	69.9	75.8	77.0	▲ 1.2	▼ -15.5
Net LNG Exports	4.3	7.2	3.3	4.0	5.9	8.0	10.4	▲ 2.3	▲ 3.1
Total Mexican Exports	4.8	5.3	6.1	6.3	6.4	6.2	6.3	▲ 0.1	▲ 1.0
Implied Daily Storage Activity	-7.2	-5.1	4.9	6.8	10.2	2.6	0.6		
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	-1.2	0.5	-0.7	-4
East	-3.2	2.1	-1.1	-8
Midwest	-0.3	1.4	1.1	7
Mountain	4.1	-3.1	1.0	7
South Central	-2.1	-0.1	-2.2	-15
Pacific	0.4	0.2	0.5	4

*Adjustment Factor is calculated based on historical regional deltas

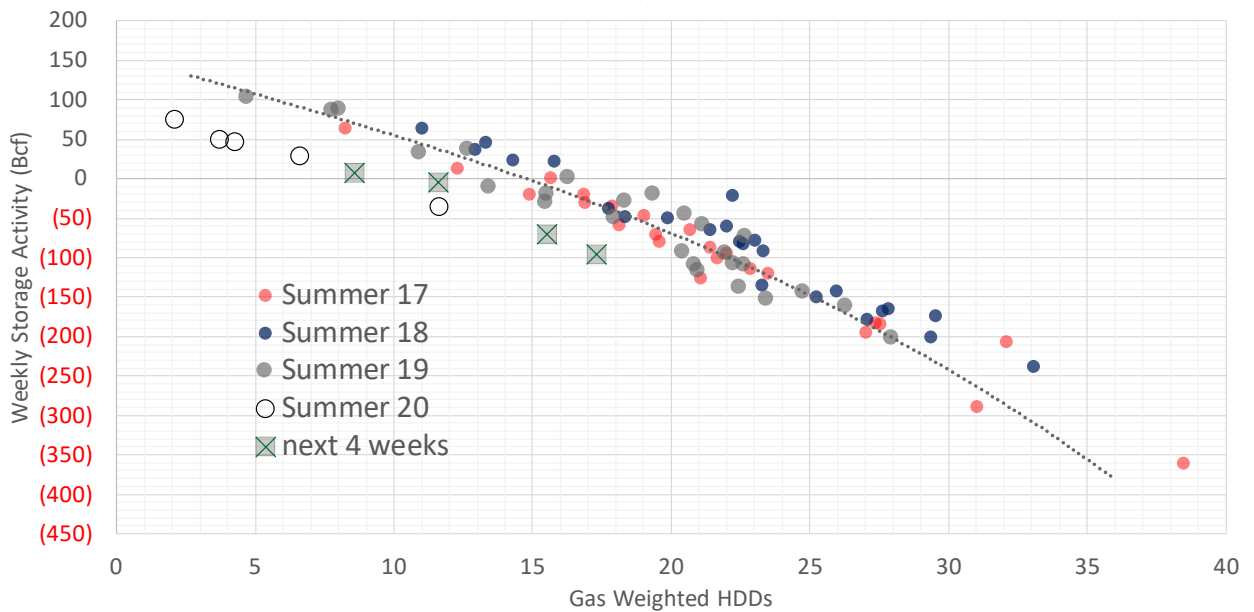
U.S. underground natural gas storage facilities by type (July 2015)



Weather Model Storage Projection

Next report and beyond		
Week Ending	Temp	Week Storage Projection
06-Nov	11.6	-4
13-Nov	8.6	7
20-Nov	15.5	-69
27-Nov	17.3	-95

Winter Storage Forecast

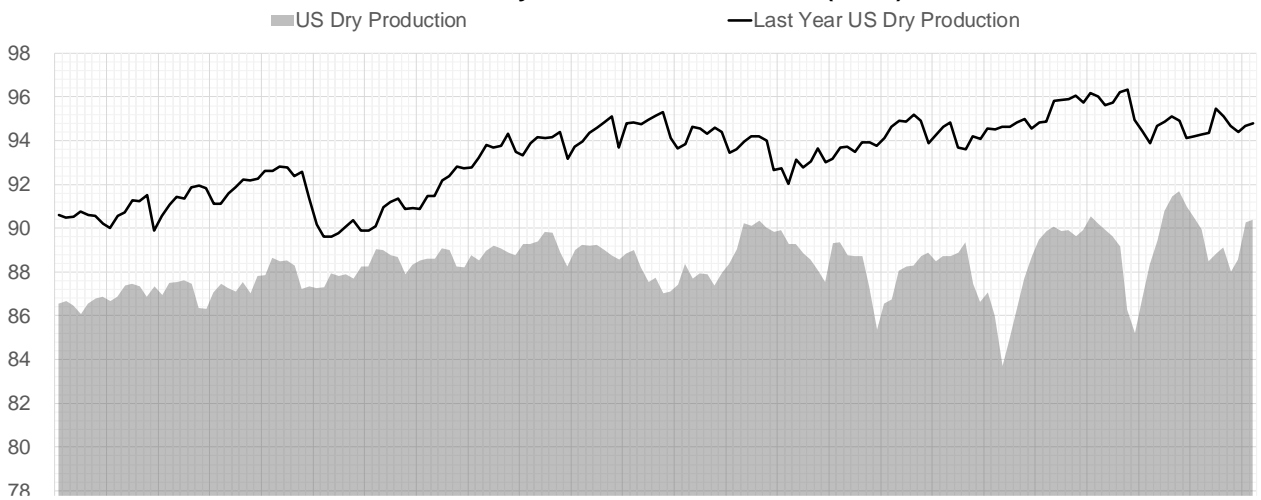


[Go to larger image](#)

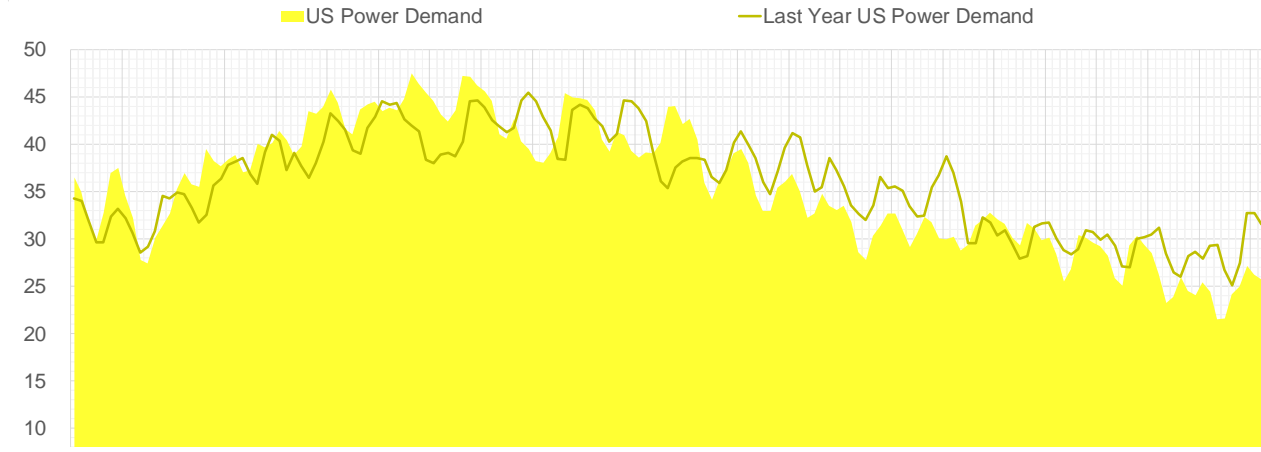


Supply – Demand Trends

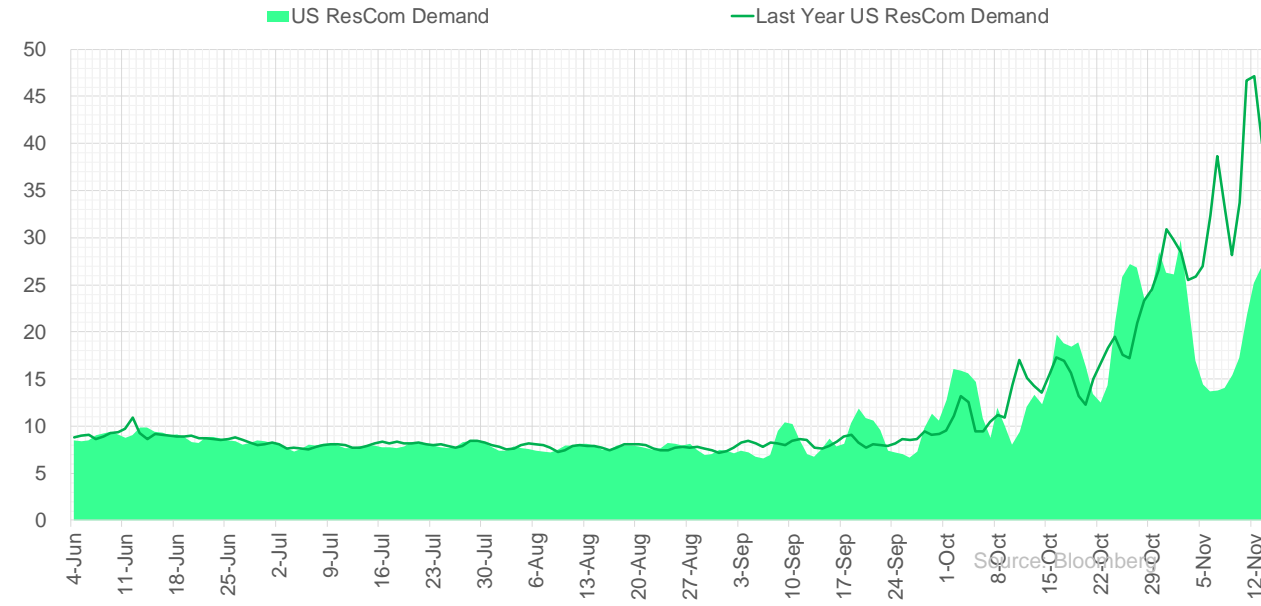
US Dry Natural Gas Production (Bcf/d)



US Daily Power Burns (Bcf/d)

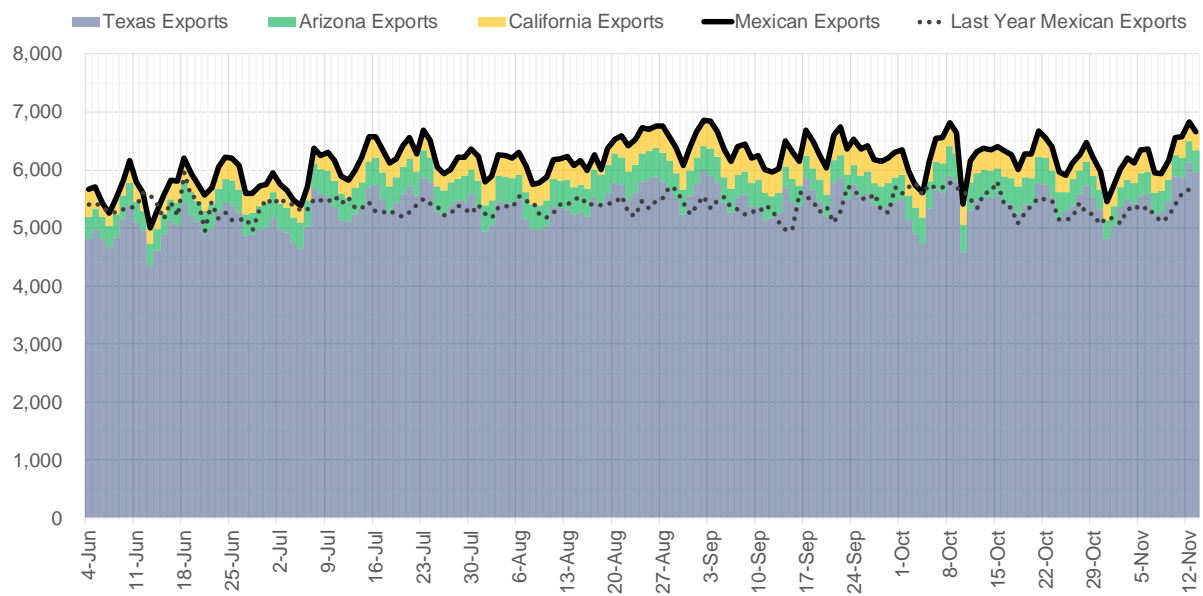


US Daily ResCom Consumption (Bcf/d)

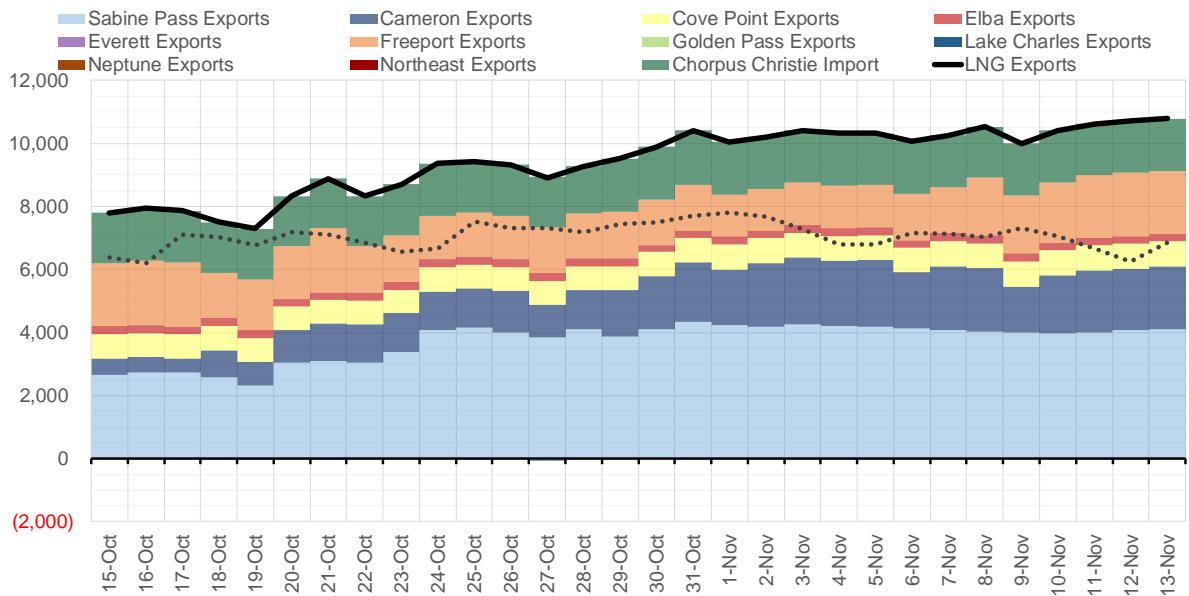


Source: Bloomberg

Mexican Exports (MMcf/d)



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



Source: Bloomberg

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.

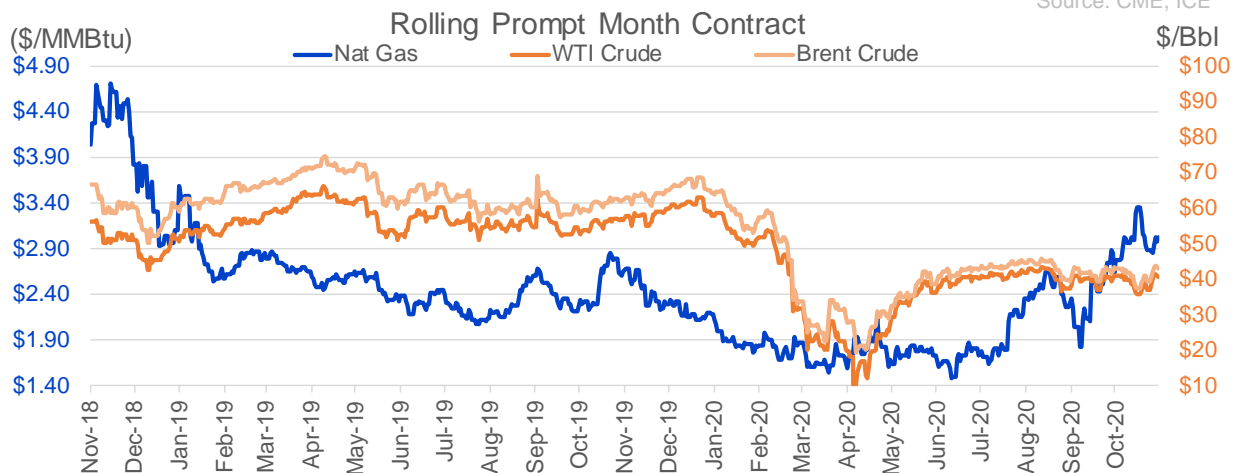
Nat Gas Options Volume and Open Interest CME, ICE and Nasdaq Combined

CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
1	2021	P	2.50	7571	3	2021	P	2.00	38188
12	2020	P	2.75	5342	4	2021	C	4.00	37070
12	2020	C	3.75	5205	3	2021	C	4.00	34274
12	2020	C	4.00	4429	12	2020	P	2.00	32760
4	2021	C	4.00	4250	1	2021	C	3.50	31210
3	2021	C	4.00	4249	3	2021	C	3.25	30090
3	2021	C	4.50	3952	1	2021	C	4.50	30054
12	2020	P	2.50	3882	12	2020	P	2.50	29538
12	2020	P	2.70	3818	10	2021	C	4.00	28665
12	2020	C	3.25	3675	3	2021	C	6.00	27622
12	2020	P	2.85	2473	10	2021	C	3.25	27160
12	2020	C	3.50	2448	4	2021	C	5.00	26848
1	2021	P	2.75	2432	1	2021	P	2.50	26515
12	2020	P	2.90	2351	12	2020	C	4.00	25906
4	2021	C	3.25	2300	12	2020	C	3.50	25897
4	2021	P	2.25	2100	12	2020	C	3.75	25225
6	2021	P	2.25	2100	3	2021	C	7.00	24606
6	2021	C	3.75	2000	3	2021	C	5.00	24529
1	2021	C	3.50	1788	12	2020	P	2.75	23740
3	2021	C	7.00	1713	3	2021	C	4.50	22473
12	2020	C	3.00	1666	1	2021	C	3.75	22385
3	2021	C	6.00	1510	12	2020	C	4.50	22301
3	2021	P	2.40	1446	3	2021	C	3.50	22178
3	2021	C	3.25	1415	1	2021	C	6.00	21271
2	2021	P	3.00	1358	1	2021	C	4.00	21042
12	2020	P	3.00	1176	2	2021	P	2.25	20839
12	2020	C	3.30	1106	3	2021	C	3.00	20785
12	2020	P	2.65	1074	1	2021	C	5.00	20221
5	2021	P	2.50	1050	2	2021	P	2.50	19715
12	2020	P	2.80	974	12	2020	P	3.00	19581
3	2021	C	3.50	936	8	2021	C	4.00	19505
12	2020	C	3.15	826	1	2021	C	3.00	19284
12	2020	C	3.35	802	3	2021	P	2.50	18385
1	2021	C	4.00	792	2	2021	C	5.00	18376
2	2021	P	2.50	766	2	2021	C	3.50	18181
3	2021	C	3.15	708	12	2020	C	3.00	18129
1	2021	C	4.75	690	4	2021	C	3.25	18036
1	2021	C	3.15	684	1	2021	P	2.00	17915
12	2020	C	3.40	673	8	2021	P	2.25	17792
2	2021	C	5.00	665	1	2021	P	2.25	17387
12	2020	C	3.05	603	2	2021	C	4.00	16961
1	2021	C	5.00	538	2	2021	C	4.00	16961
4	2021	P	2.00	525	10	2021	C	5.00	16953
5	2021	P	2.00	525	12	2020	P	2.70	16568
6	2021	P	2.00	525	12	2020	C	3.25	16470
7	2021	P	2.00	525	2	2021	C	4.50	16081
8	2021	P	2.00	525	12	2020	C	5.00	15830
9	2021	P	2.00	525	4	2021	C	3.00	15729
10	2021	P	2.00	525	1	2021	C	3.25	15061
					10	2021	C	3.00	14985
					4	2021	P	2	14904

Source: CME, ICE

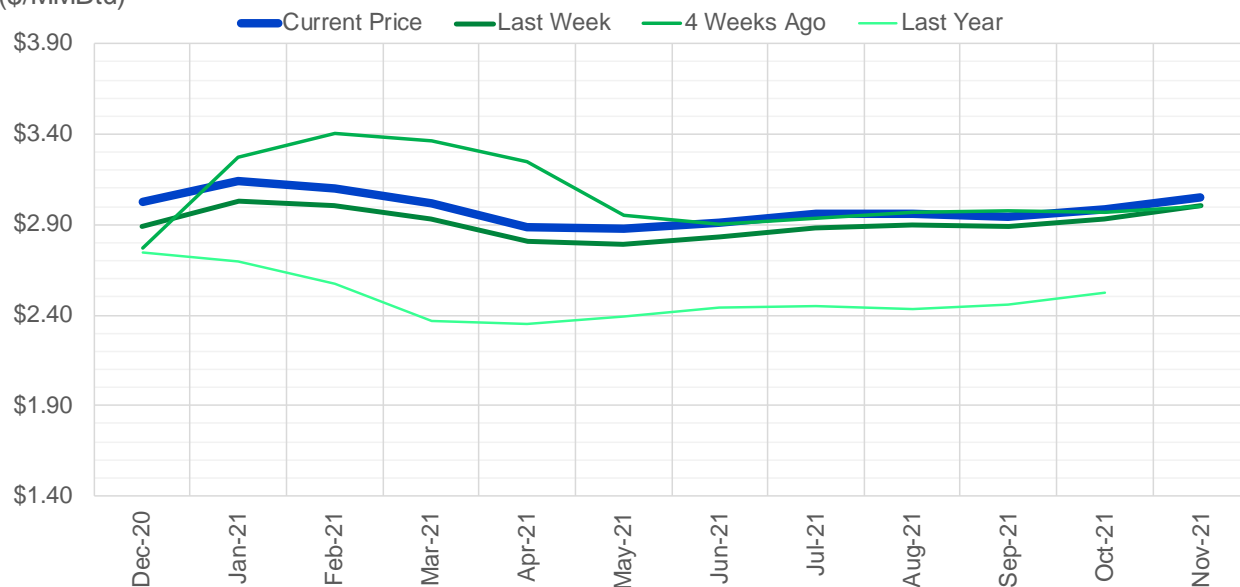
Nat Gas Futures Open Interest CME, and ICE Combined

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	105998	119105	-13107	DEC 20	72104	72808	-704
JAN 21	265374	255978	9396	JAN 21	91796	91229	566.75
FEB 21	95653	97512	-1859	FEB 21	66868	66762	106.5
MAR 21	149473	146939	2534	MAR 21	89883	89341	542.25
APR 21	81715	82041	-326	APR 21	71322	71262	59.75
MAY 21	64090	62591	1499	MAY 21	71890	71979	-89.5
JUN 21	35196	34394	802	JUN 21	58208	58074	133.75
JUL 21	32758	31803	955	JUL 21	60842	60843	-1
AUG 21	28347	29196	-849	AUG 21	64987	64724	263
SEP 21	36014	38212	-2198	SEP 21	58365	58391	-25.75
OCT 21	100330	99467	863	OCT 21	69318	69224	94.25
NOV 21	37594	37673	-79	NOV 21	53884	53955	-71
DEC 21	31639	30868	771	DEC 21	48429	48392	37
JAN 22	30332	30119	213	JAN 22	46289	46372	-83
FEB 22	22881	22956	-75	FEB 22	37727	37533	194
MAR 22	25191	25771	-580	MAR 22	40787	41115	-327.5
APR 22	25472	25891	-419	APR 22	41337	41314	22.25
MAY 22	11284	10712	572	MAY 22	30461	30386	75.25
JUN 22	6115	5536	579	JUN 22	29897	29939	-42
JUL 22	4525	4531	-6	JUL 22	31186	31187	-1
AUG 22	3633	3464	169	AUG 22	29866	29883	-16.75
SEP 22	4345	3738	607	SEP 22	29616	29606	10.25
OCT 22	6419	5674	745	OCT 22	34505	34353	152
NOV 22	4563	4502	61	NOV 22	29359	29305	53.5
DEC 22	4993	4892	101	DEC 22	31755	31708	47.25
JAN 23	4408	4416	-8	JAN 23	15029	14917	111.25
FEB 23	1065	1057	8	FEB 23	13996	13908	87.75
MAR 23	2381	2331	50	MAR 23	13733	13622	111.5
APR 23	1762	1762	0	APR 23	13086	13010	76.25
MAY 23	447	447	0	MAY 23	11725	11639	85.5



(\$/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	\$3.023	\$3.143	\$3.104	\$3.015	\$2.888	\$2.876	\$2.912	\$2.956	\$2.964	\$2.947	\$2.981	\$3.047
Last Week	\$2.888	\$3.031	\$3.005	\$2.933	\$2.807	\$2.793	\$2.834	\$2.885	\$2.900	\$2.889	\$2.928	\$3.008
vs. Last Week	\$0.135	\$0.112	\$0.099	\$0.082	\$0.081	\$0.083	\$0.078	\$0.071	\$0.064	\$0.058	\$0.053	\$0.039
4 Weeks Ago	\$2.773	\$3.271	\$3.405	\$3.364	\$3.249	\$2.948	\$2.906	\$2.933	\$2.970	\$2.979	\$2.966	\$3.001
vs. 4 Weeks Ago	\$0.250	-\$0.128	-\$0.301	-\$0.349	-\$0.361	-\$0.072	\$0.006	\$0.023	-\$0.006	-\$0.032	\$0.015	\$0.046
Last Year	\$2.688	\$2.750	\$2.695	\$2.569	\$2.368	\$2.351	\$2.393	\$2.440	\$2.449	\$2.434	\$2.461	\$2.523
vs. Last Year	\$0.335	\$0.393	\$0.409	\$0.446	\$0.520	\$0.525	\$0.519	\$0.516	\$0.515	\$0.513	\$0.520	\$0.524

	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	2.11	4.53	2.42
TETCO M3	\$/MMBtu	1.74	2.84	1.10
FGT Zone 3	\$/MMBtu	1.90	2.93	1.03
Zone 6 NY	\$/MMBtu	1.90	3.42	1.52
Chicago Citygate	\$/MMBtu	2.67	2.81	0.14
Michcon	\$/MMBtu	2.61	2.62	0.01
Columbia TCO Pool	\$/MMBtu	2.14	2.21	0.07
Ventura	\$/MMBtu	2.63	2.97	0.34
Rockies/Opal	\$/MMBtu	3.15	2.86	-0.29
El Paso Permian Basin	\$/MMBtu	2.54	2.57	0.03
Socal Citygate	\$/MMBtu	4.19	3.64	-0.55
Malin	\$/MMBtu	3.05	3.49	0.44
Houston Ship Channel	\$/MMBtu	2.98	2.84	-0.15
Henry Hub Cash	\$/MMBtu	2.83	2.69	-0.14
AECO Cash	C\$/GJ	2.32	2.24	-0.08
Station2 Cash	C\$/GJ	2.18	4.57	2.39
Dawn Cash	C\$/GJ	2.60	2.71	0.11

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks Ago	vs. Last Year
NatGas Jan21/Apr21	\$/MMBtu	-0.255	▼ -0.031	▲ 0.202	▲ 0.205
NatGas Mar21/Apr21	\$/MMBtu	-0.127	▼ -0.001	▼ -0.428	▼ -0.400
NatGas Oct21/Nov21	\$/MMBtu	0.066	▼ -0.014	▲ 0.007	▲ 0.003
NatGas Apr21/Oct21	\$/MMBtu	0.093	▼ -0.010	▼ -0.311	▼ -0.313
WTI Crude	\$/Bbl	40.53	▲ 3.390	▼ -0.350	▼ -17.190
Brent Crude	\$/Bbl	43.07	▲ 3.620	▲ 0.140	▼ -20.230
Fuel Oil, NY Harbour 1%	\$/Bbl	98.03	▲ 0.000	▲ 0.000	▲ 0.000
Heating Oil	cents/Gallon	121.80	▲ 7.540	▲ 3.890	▼ -73.000
Propane, Mt. Bel	cents/Gallon	0.56	▲ 0.006	▲ 0.037	▲ 0.030
Ethane, Mt. Bel	cents/Gallon	0.22	▲ 0.003	▲ 0.009	▲ 0.026
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

