

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 3.09 ▲	\$ 0.05 ▼	\$ (0.15) ▼

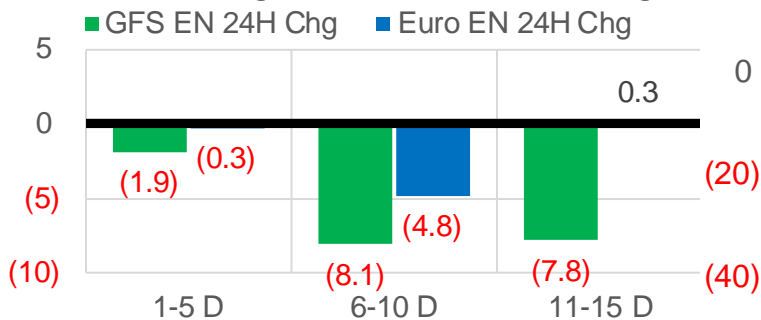
	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 38.81 ▼	\$ (0.34) ▼	\$ 2.1 ▲

	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 40.99 ▼	\$ (0.24) ▼	\$ 2.4 ▲

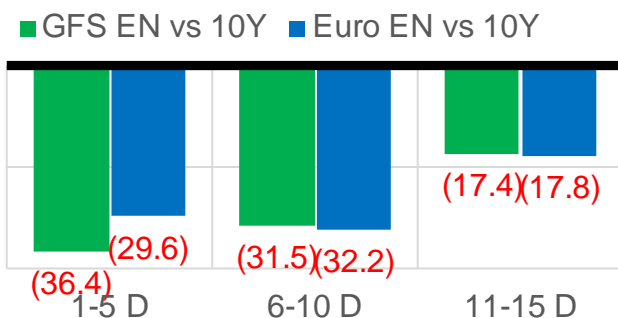
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L48 Region - 00z TDD vs 24H Ago



L48 Region - 00z TDD vs 10Y N



	Current	Δ from YD	Δ from 7D Avg
US Dry Production	90.3 ▼	-0.61 ▼	0.38 ▲

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	25.0 ▲	1.23 ▲	-0.20 ▼

	Current	Δ from YD	Δ from 7D Avg
US ResComm	14.8 ▼	-2.26 ▼	-10.13 ▼

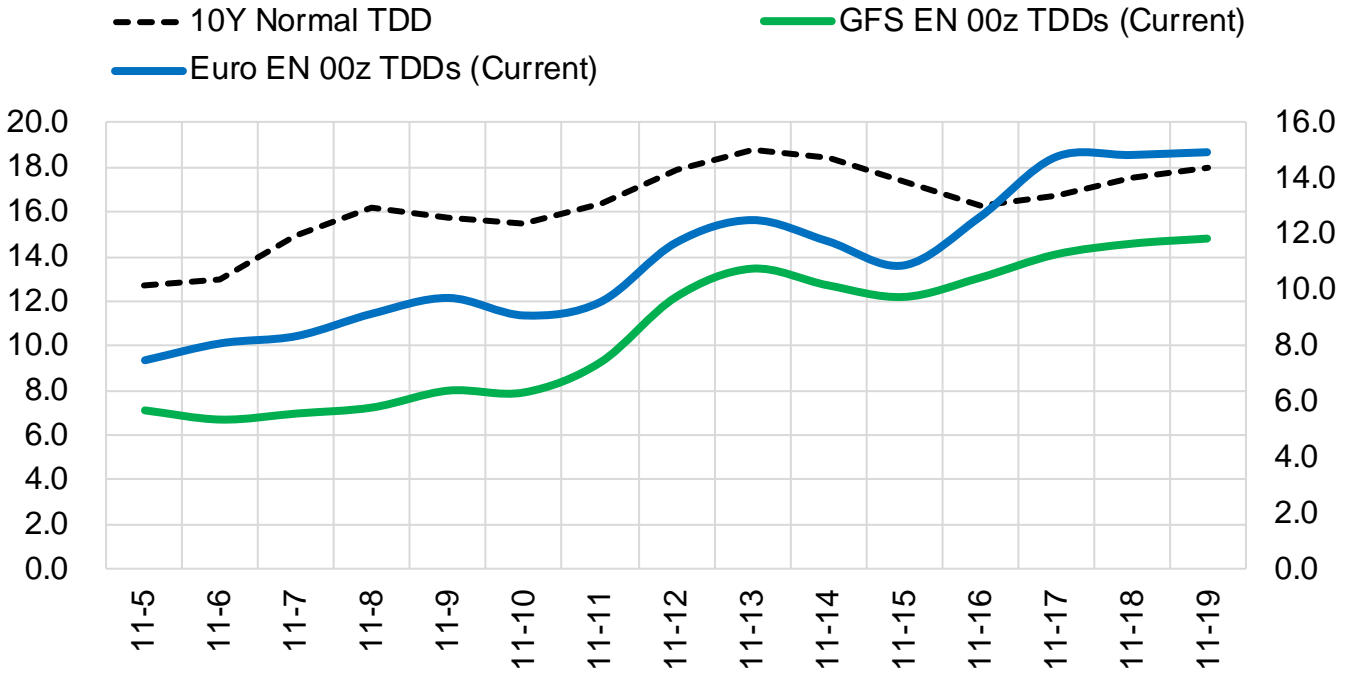
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	3.6 ▼	-0.38 ▼	-1.50 ▼

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	10.2 ▼	-0.09 ▼	0.13 ▲

	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.2 ▲	0.26 ▲	0.23 ▲

Short-term Weather Model Outlooks (00z)

L48 Region



Source: WSI, Bloomberg

Lower 48 Component Models

Daily Balances

	30-Oct	31-Oct	1-Nov	2-Nov	3-Nov	4-Nov	5-Nov	DoD	vs. 7D
Lower 48 Dry Production	88.3	89.4	90.8	91.5	91.7	90.9	90.3	▼ -0.6	▼ -0.1
Canadian Imports	5.4	5.0	5.2	5.8	4.9	4.0	3.6	▼ -0.4	▼ -1.4
L48 Power	26.3	23.2	23.9	25.9	24.5	23.7	25.0	▲ 1.2	▲ 0.4
L48 Residential & Commercial	28.5	26.2	26.0	29.7	22.9	17.1	14.8	▼ -2.3	▼ -10.3
L48 Industrial	26.0	26.0	26.1	26.4	25.1	23.9	23.0	▼ -0.8	▼ -2.6
L48 Lease and Plant Fuel	4.9	4.9	5.0	5.0	5.1	5.0	5.0	▼ 0.0	▼ 0.0
L48 Pipeline Distribution	2.7	2.4	2.3	2.6	2.2	1.9	1.9	▼ 0.0	▼ -0.5
L48 Regional Gas Consumption	88.3	82.8	83.4	89.7	79.8	71.6	69.6	▼ -1.9	▼ -13.0
Net LNG Delivered	9.88	10.41	10.05	10.20	10.41	10.33	10.25	▼ -0.1	▲ 0.0
Total Mexican Exports	6.1	5.8	5.8	5.7	6.2	6.0	6.2	▲ 0.3	▲ 0.3
Implied Daily Storage Activity	-10.6	-4.5	-3.2	-8.4	0.1	7.0	7.8		
EIA Reported Daily Storage Activity									
Daily Model Error									

EIA Storage Week Balances

	25-Sep	2-Oct	9-Oct	16-Oct	23-Oct	30-Oct	WoW	vs. 4W
Lower 48 Dry Production	87.8	88.2	88.1	86.7	90.0	88.2	▼ -1.8	▼ -0.1
Canadian Imports	3.6	3.9	4.5	4.0	3.6	4.8	▲ 1.2	▲ 0.8
L48 Power	30.8	30.7	31.0	30.5	28.6	28.1	▼ -0.5	▼ -2.1
L48 Residential & Commercial	9.7	9.3	13.4	11.4	16.8	23.3	▲ 6.4	▲ 10.5
L48 Industrial	22.3	23.2	22.5	22.9	23.6	25.0	▲ 1.4	▲ 1.9
L48 Lease and Plant Fuel	4.8	4.8	4.8	4.8	4.9	4.8	▼ -0.1	▼ 0.0
L48 Pipeline Distribution	2.0	2.0	2.2	2.1	2.2	2.5	▲ 0.3	▲ 0.4
L48 Regional Gas Consumption	69.5	70.1	73.9	71.6	76.2	83.7	▲ 7.5	▲ 10.8
Net LNG Exports	5.8	6.8	7.5	6.9	8.0	9.2	▲ 1.2	▲ 1.9
Total Mexican Exports	6.4	6.3	6.2	6.2	6.3	6.2	▼ -0.1	▼ -0.1
Implied Daily Storage Activity	9.6	9.0	5.1	6.0	3.0	-6.2	-9.2	
EIA Reported Daily Storage Activity	10.9	10.7	6.6	7.0	4.1			
Daily Model Error	-1.3	-1.8	-1.5	-1.0	-1.1			

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	91.0	▲ 2.7	▼ -4.3
Canadian Imports	4.1	4.5	4.4	4.9	3.8	4.3	4.7	▲ 0.4	▲ 0.2
L48 Power	25.4	27.5	43.7	40.7	33.3	29.3	24.6	▼ -4.7	▼ -2.9
L48 Residential & Commercial	32.9	32.8	7.9	7.7	8.5	16.8	22.1	▲ 5.3	▼ -10.7
L48 Industrial	25.1	25.1	19.8	21.3	22.1	23.6	24.9	▲ 1.3	▼ -0.2
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	2.2	▼ -0.1	▼ -0.6
L48 Regional Gas Consumption	91.0	93.5	78.8	77.0	70.7	76.8	78.8	▲ 2.0	▼ -14.7
Net LNG Exports	4.3	7.2	3.3	4.0	5.9	8.0	10.2	▲ 2.2	▲ 3.0
Total Mexican Exports	4.8	5.3	6.1	6.3	6.4	6.2	6.0	▼ -0.2	▲ 0.7
Implied Daily Storage Activity	-7.8	-6.2	4.4	6.2	9.4	1.5	0.7		
EIA Reported Daily Storage Activity									
Daily Model Error									

Source: Bloomberg, analytix.ai

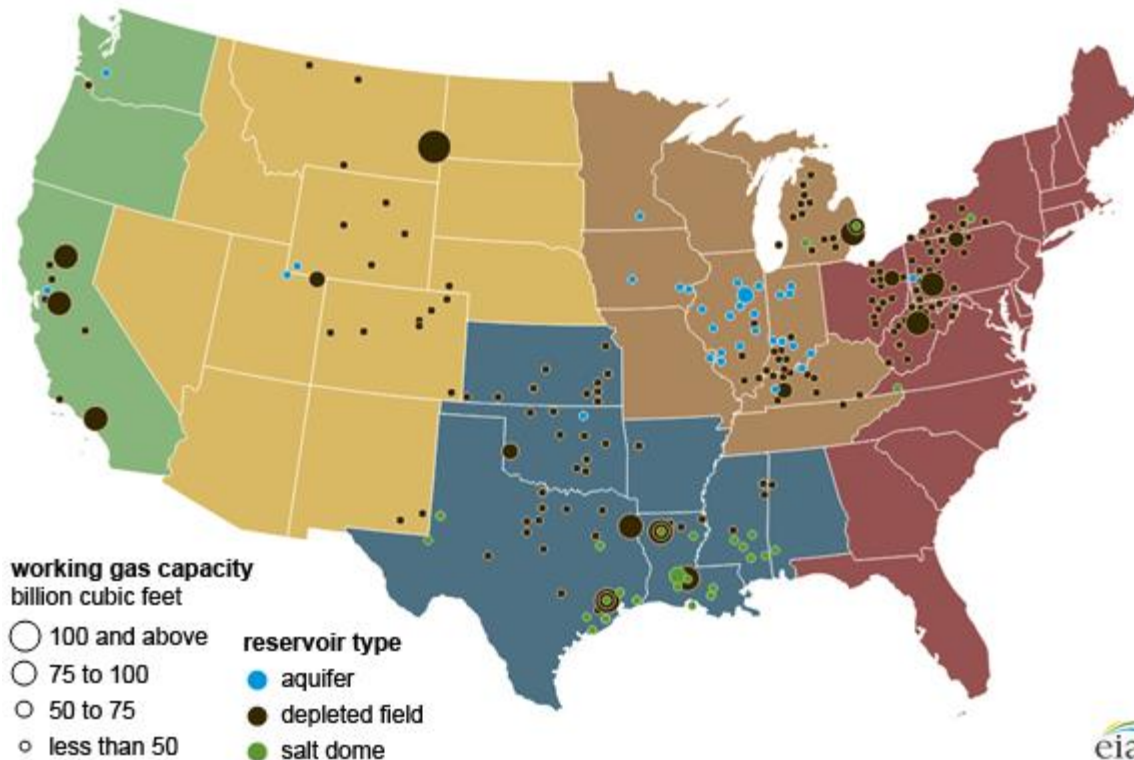
Regional S/D Models Storage Projection

Week Ending 30-Oct

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	-6.5	1.6	-4.9	-34
East	-1.4	2.2	0.8	6
Midwest	-1.4	1.4	-0.1	0
Mountain	2.1	-3.2	-1.1	-8
South Central	-4.8	1.2	-3.6	-25
Pacific	-0.9	0.0	-0.9	-6

*Adjustment Factor is calculated based on historical regional deltas

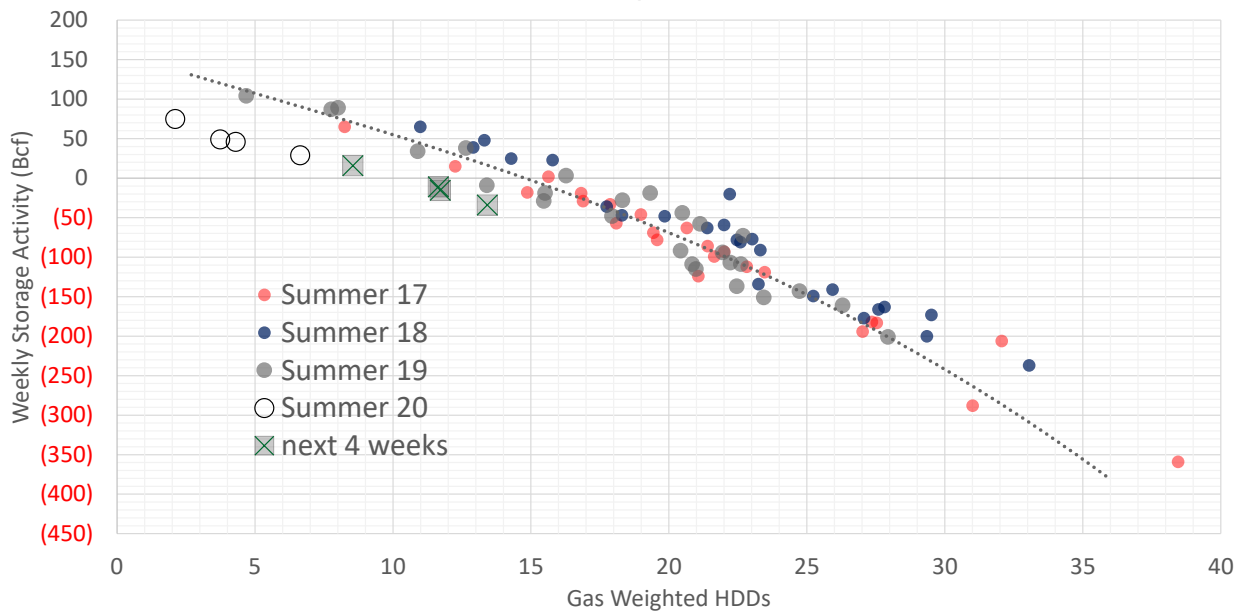
U.S. underground natural gas storage facilities by type (July 2015)



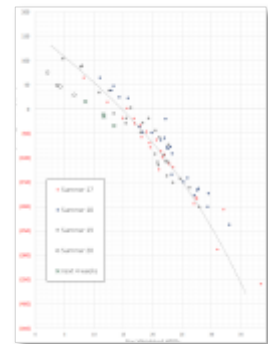
Weather Model Storage Projection

Next report and beyond		
Week Ending	Temp	Week Storage Projection
06-Nov	11.7	-15
13-Nov	8.5	16
20-Nov	13.4	-34

Winter Storage Forecast

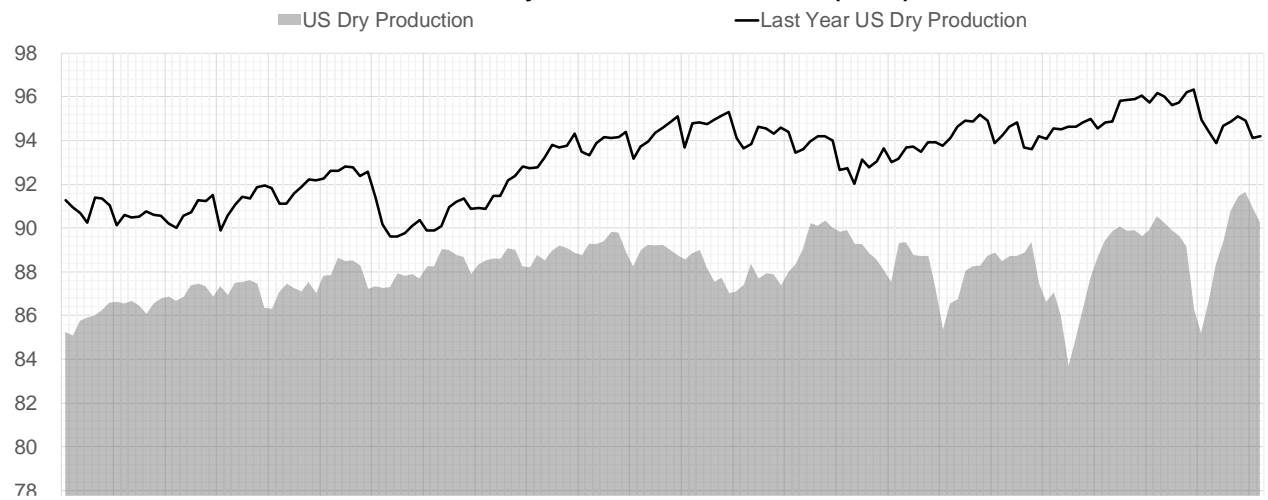


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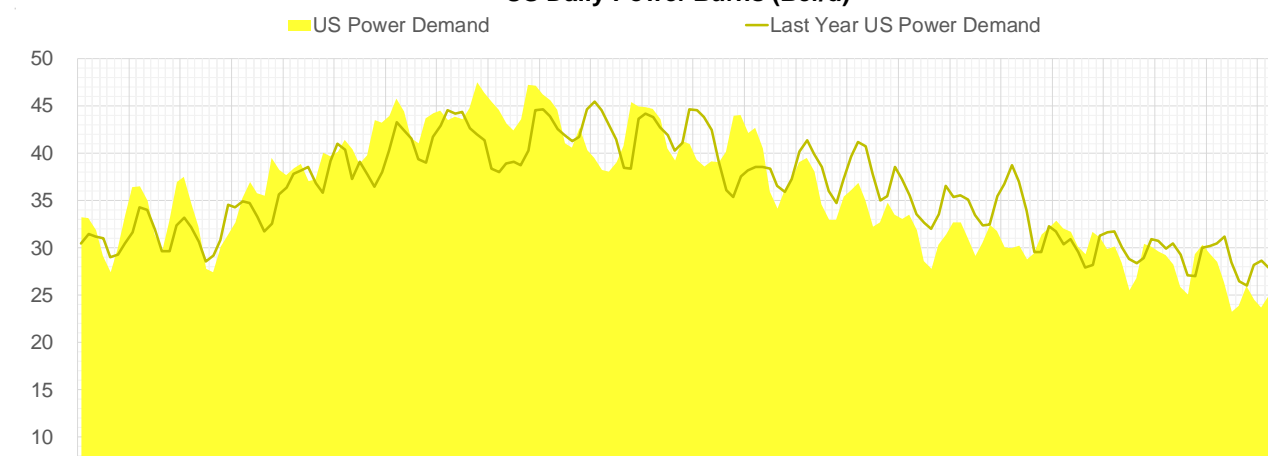


Supply – Demand Trends

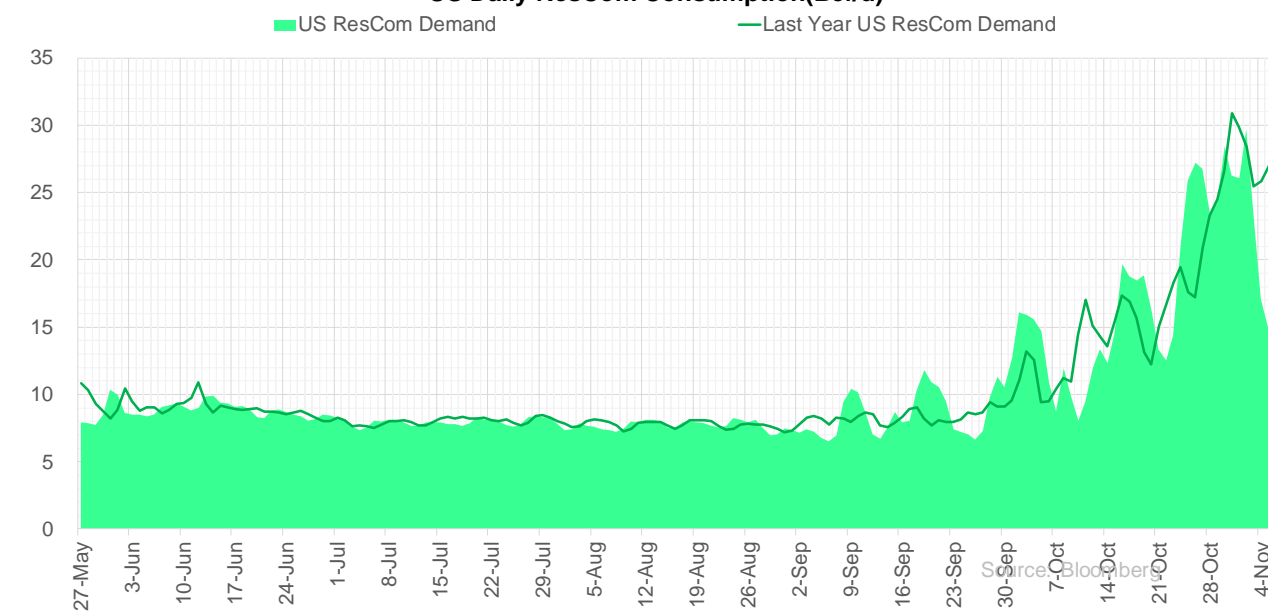
US Dry Natural Gas Production (Bcf/d)



US Daily Power Burns (Bcf/d)

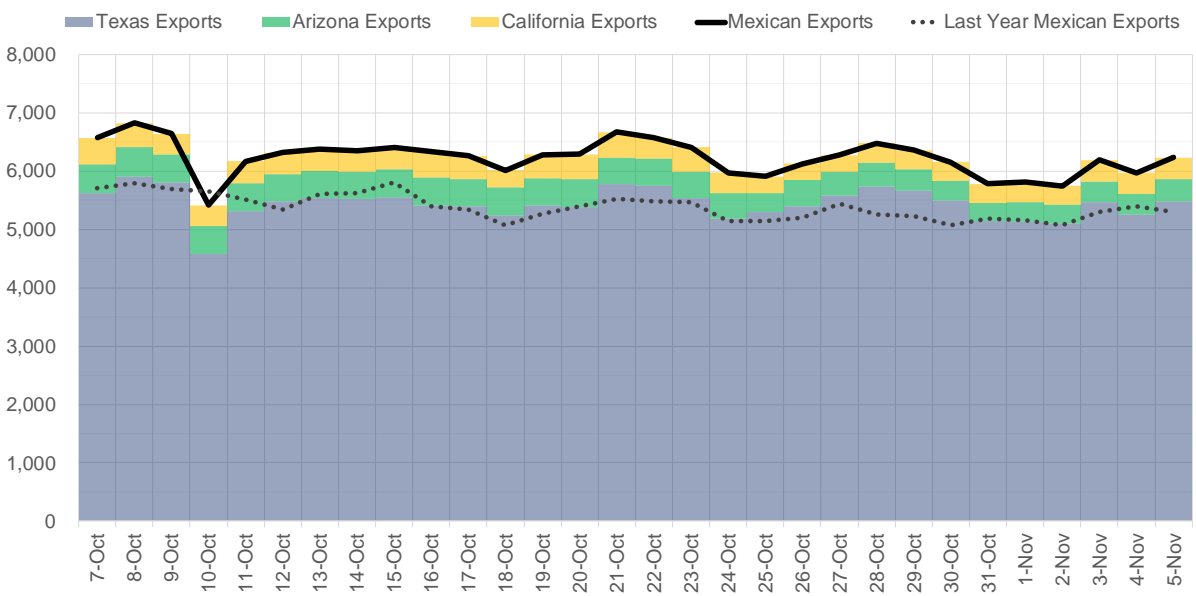


US Daily ResCom Consumption (Bcf/d)

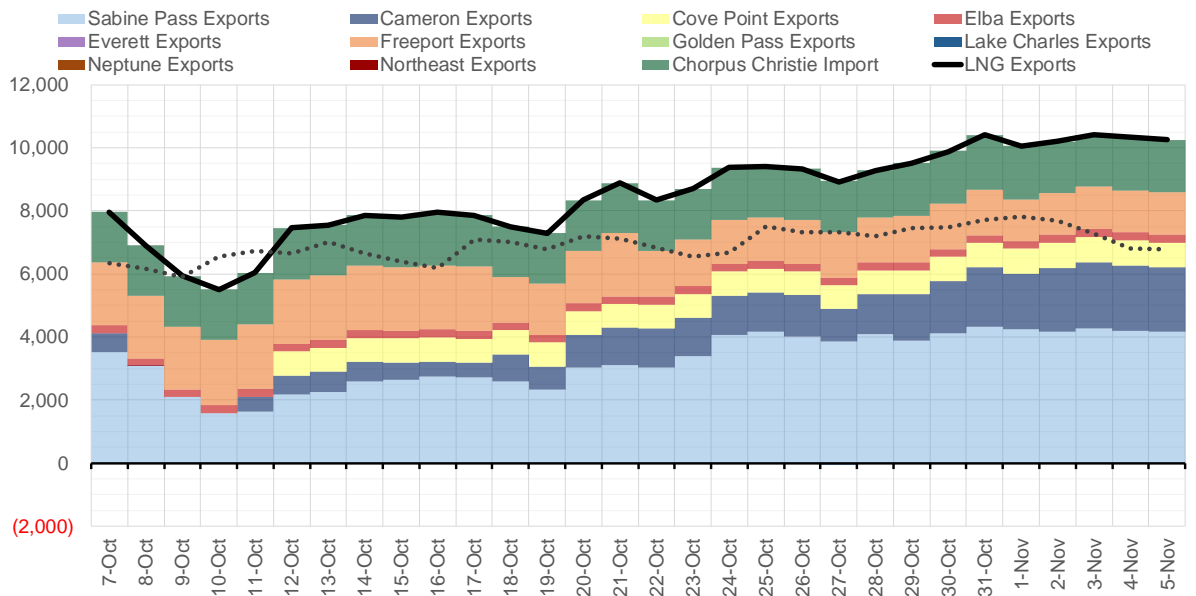


Source: Bloomberg

Mexican Exports - Last 30 days (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
12	2020	C	4.50	5612	3	2021	P	2.00	38288
1	2021	C	5.00	5317	12	2020	P	2.00	33053
12	2020	C	4.25	5202	3	2021	C	6.00	31666
12	2020	C	4.00	3201	1	2021	C	4.50	30104
12	2020	P	2.75	3197	3	2021	C	3.25	29824
12	2020	C	3.75	3141	10	2021	C	4.00	28715
1	2021	C	4.50	2402	12	2020	C	4.00	28301
12	2020	P	2.50	1963	12	2020	P	2.50	27845
1	2021	C	4.00	1917	3	2021	C	4.00	27726
12	2020	P	3.00	1890	1	2021	C	3.50	27639
1	2021	P	2.50	1601	10	2021	C	3.25	27220
12	2020	C	3.25	1222	12	2020	C	4.50	27001
12	2020	C	3.50	1167	4	2021	C	5.00	26672
12	2020	P	2.70	1145	3	2021	C	7.00	25343
1	2021	P	2.75	1014	4	2021	C	4.00	23870
2	2022	C	5.50	1000	3	2021	C	4.50	23342
2	2021	P	2.50	995	3	2021	C	5.00	22717
1	2021	P	2.90	823	12	2020	C	3.75	22534
1	2021	C	3.75	810	12	2020	C	3.50	21915
2	2021	C	4.00	806	3	2021	C	3.00	21692
2	2021	C	3.75	800	3	2021	C	3.50	21098
2	2021	C	4.50	764	1	2021	P	2.50	20920
12	2020	P	2.60	747	1	2021	C	5.00	20525
1	2021	C	6.00	684	1	2021	C	3.75	20120
3	2021	C	4.50	642	2	2021	P	2.25	20016
1	2021	C	7.00	621	12	2020	P	2.75	19758
5	2021	C	4.00	601	8	2021	C	4.00	19699
1	2021	C	3.50	597	2	2021	C	5.00	19100
3	2021	C	3.50	525	1	2021	C	6.00	18897
2	2021	P	3.00	523	1	2021	P	2.25	18522
3	2021	C	4.00	515	12	2020	P	3.00	18324
2	2021	P	2.25	503	3	2021	P	2.50	17910
2	2021	P	2.75	500	8	2021	P	2.25	17742
3	2021	C	6.00	500	2	2021	C	3.50	17366
2	2022	C	3.50	500	1	2021	C	3.00	17219
1	2021	P	2.25	491	10	2021	C	5.00	16853
4	2021	C	4.00	450	2	2021	C	4.00	16815
1	2021	C	5.50	416	2	2021	P	2.50	16373
2	2021	C	5.50	412	1	2021	C	4.00	16139
1	2021	C	4.25	405	12	2020	C	5.00	15791
7	2021	P	2.75	400	4	2021	C	3.00	14685
8	2021	P	2.75	400	12	2020	C	4.25	14631
9	2021	P	2.75	400	10	2021	C	3.00	14510
1	2021	C	3.20	389	12	2020	P	1.50	14450
1	2021	C	3.25	365	1	2021	C	7.00	14196
2	2021	C	3.50	360	4	2021	P	2.00	13802
12	2020	P	2.80	351	12	2020	C	3.25	13765
2	2021	C	6.00	342	5	2021	C	3.00	13661
1	2021	P	2.80	335	1	2021	P	2.00	13452
					1	2021	C	3.25	13178

Source: CME, ICE

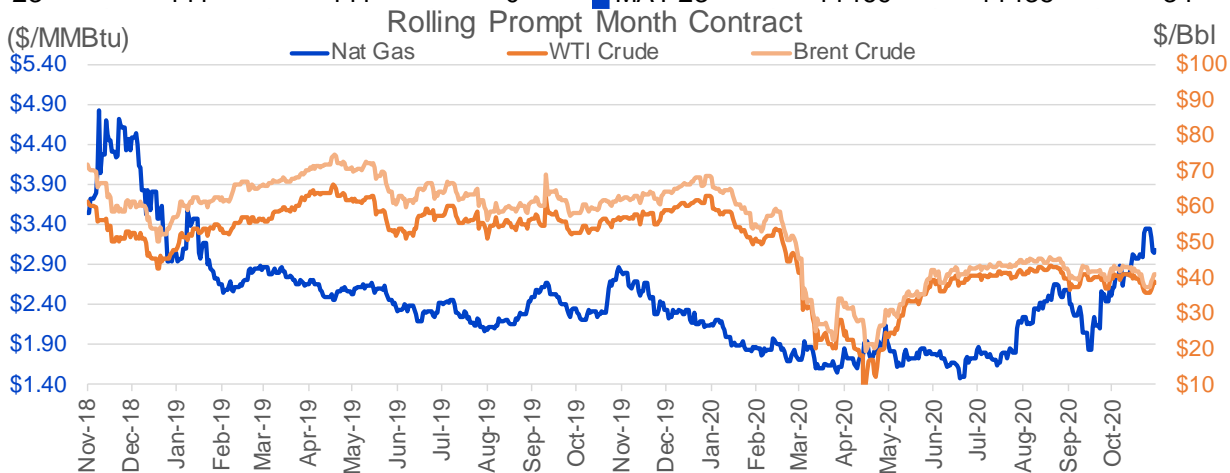
Nat Gas Futures Open Interest

CME and ICE Combined

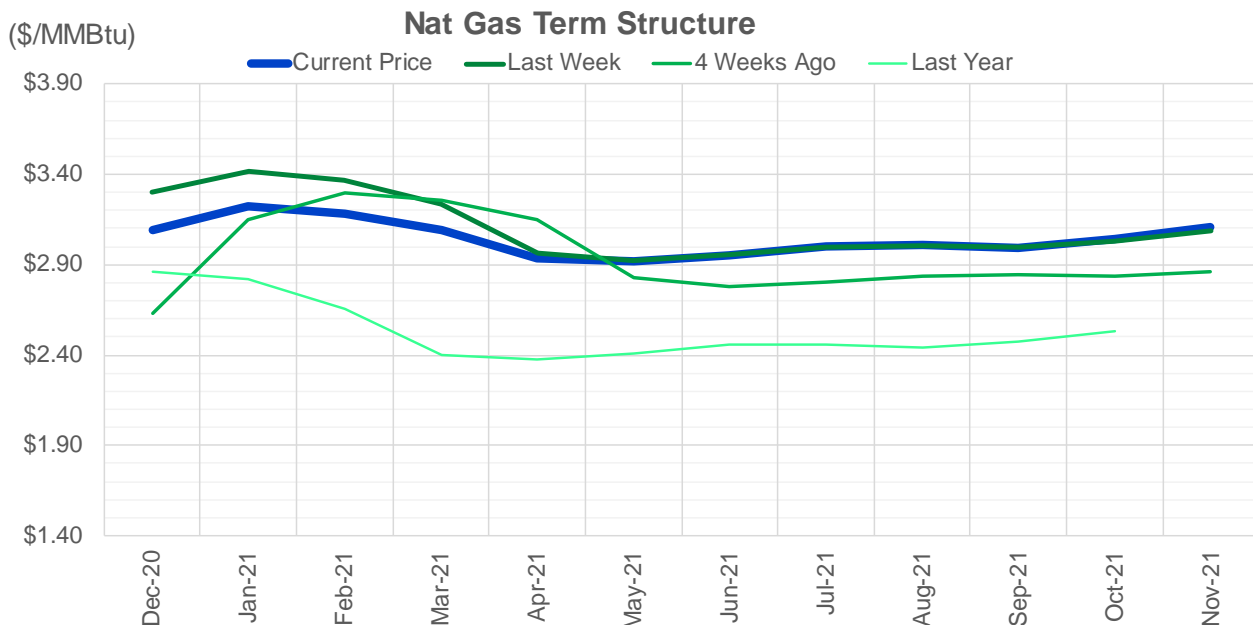
CME Henry Hub Futures (10,000 MMBtu)

ICE Henry Hub Futures Contract Equivalent (10,000 MM

	Current	Prior	Daily Change	FOR JUNE 26	Current	Prior	Daily Change
DEC 20	158228	165177	-6949	DEC 20	79168	81079	-1911.75
JAN 21	212556	209813	2743	JAN 21	93706	93850	-143.5
FEB 21	88560	87895	665	FEB 21	66375	64971	1404
MAR 21	138783	137548	1235	MAR 21	93480	93128	352
APR 21	75906	76215	-309	APR 21	68802	68006	796.5
MAY 21	55015	54808	207	MAY 21	70951	70829	121.75
JUN 21	33273	32958	315	JUN 21	58248	57960	287.75
JUL 21	28999	28696	303	JUL 21	60457	60196	261
AUG 21	28934	28705	229	AUG 21	64116	64135	-18.5
SEP 21	38898	39177	-279	SEP 21	58367	58167	200
OCT 21	93457	94137	-680	OCT 21	67874	67797	77.25
NOV 21	34669	34620	49	NOV 21	54080	53784	296
DEC 21	30857	30434	423	DEC 21	47988	47916	72.25
JAN 22	32068	32394	-326	JAN 22	46034	45752	281.5
FEB 22	22947	22592	355	FEB 22	37196	36977	218.75
MAR 22	23051	22694	357	MAR 22	40174	39972	201.75
APR 22	24614	23992	622	APR 22	40932	40672	260
MAY 22	10373	10282	91	MAY 22	29871	29709	161.5
JUN 22	5582	5358	224	JUN 22	29170	28930	240.5
JUL 22	4637	4636	1	JUL 22	30608	30552	56
AUG 22	3552	3551	1	AUG 22	28946	28804	141.5
SEP 22	3394	3399	-5	SEP 22	28952	28719	233
OCT 22	4746	4686	60	OCT 22	33186	32947	239
NOV 22	4139	4101	38	NOV 22	28943	28784	158.75
DEC 22	4593	4541	52	DEC 22	31206	31057	148.75
JAN 23	4300	4300	0	JAN 23	14973	14948	24.25
FEB 23	1036	1036	0	FEB 23	13861	13840	21.5
MAR 23	2311	2311	0	MAR 23	13921	13897	24
APR 23	1552	1542	10	APR 23	12966	12938	28.25
MAY 23	441	441	0	MAY 23	11469	11435	34



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	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	\$3.091	\$3.223	\$3.181	\$3.090	\$2.936	\$2.916	\$2.953	\$3.000	\$3.012	\$2.997	\$3.042	\$3.111
Last Week	\$3.301	\$3.417	\$3.364	\$3.233	\$2.968	\$2.927	\$2.958	\$2.998	\$3.008	\$2.993	\$3.027	\$3.087
vs. Last Week	-\$0.210	-\$0.194	-\$0.183	-\$0.143	-\$0.032	-\$0.011	-\$0.005	\$0.002	\$0.004	\$0.004	\$0.015	\$0.024
4 Weeks Ago	\$2.627	\$3.149	\$3.299	\$3.258	\$3.146	\$2.830	\$2.777	\$2.804	\$2.840	\$2.847	\$2.833	\$2.861
vs. 4 Weeks Ago	\$0.464	\$0.074	-\$0.118	-\$0.168	-\$0.210	\$0.086	\$0.176	\$0.196	\$0.172	\$0.150	\$0.209	\$0.250
Last Year	\$2.772	\$2.859	\$2.817	\$2.654	\$2.402	\$2.374	\$2.412	\$2.454	\$2.461	\$2.445	\$2.472	\$2.531
vs. Last Year	\$0.319	\$0.364	\$0.364	\$0.436	\$0.534	\$0.542	\$0.541	\$0.546	\$0.551	\$0.552	\$0.570	\$0.580

	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	0.93	5.60	4.67
TETCO M3	\$/MMBtu	0.57	3.68	3.11
FGT Zone 3	\$/MMBtu	0.65	3.34	2.69
Zone 6 NY	\$/MMBtu	0.65	4.34	3.69
Chicago Citygate	\$/MMBtu	2.40	3.34	0.94
Michcon	\$/MMBtu	2.40	3.08	0.68
Columbia TCO Pool	\$/MMBtu	1.46	2.97	1.51
Ventura	\$/MMBtu	2.36	3.54	1.18
Rockies/Opal	\$/MMBtu	3.18	3.21	0.03
El Paso Permian Basin	\$/MMBtu	2.44	2.91	0.47
Socal Citygate	\$/MMBtu	5.77	4.28	-1.50
Malin	\$/MMBtu	3.24	3.91	0.67
Houston Ship Channel	\$/MMBtu	2.59	3.25	0.66
Henry Hub Cash	\$/MMBtu	2.59	3.16	0.57
AECO Cash	C\$/GJ	2.22	2.52	0.30
Station2 Cash	C\$/GJ	2.21	5.43	3.22
Dawn Cash	C\$/GJ	2.40	3.19	0.79

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks Ago	vs. Last Year
NatGas Jan21/Apr21	\$/MMBtu	-0.287	▲ 0.162	▲ 0.182	▲ 0.194
NatGas Mar21/Apr21	\$/MMBtu	-0.154	▲ 0.111	▼ -0.470	▼ -0.448
NatGas Oct21/Nov21	\$/MMBtu	0.069	▲ 0.009	▲ 0.013	▲ 0.004
NatGas Apr21/Oct21	\$/MMBtu	0.106	▼ -0.284	▼ -0.332	▼ -0.311
WTI Crude	\$/Bbl	38.81	▲ 2.640	▼ -2.380	▼ -18.340
Brent Crude	\$/Bbl	40.99	▲ 3.340	▼ -2.350	▼ -21.300
Fuel Oil, NY Harbour 1%	\$/Bbl	98.03	▲ 0.000	▲ 0.000	▲ 0.000
Heating Oil	cents/Gallon	116.14	▲ 7.300	▼ -3.090	▼ -75.890
Propane, Mt. Bel	cents/Gallon	0.56	▲ 0.041	▲ 0.041	▲ 0.050
Ethane, Mt. Bel	cents/Gallon	0.23	▲ 0.010	▲ 0.030	▲ 0.022
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			

