

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 2.95	▼ \$ (0.00)	▲ \$ 0.02

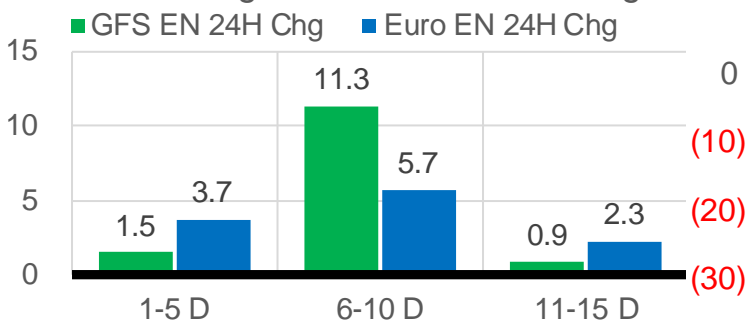
	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 42.43	▲ \$ 1.07	▲ \$ 3.7

	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 44.73	▲ \$ 1.12	▲ \$ 3.8

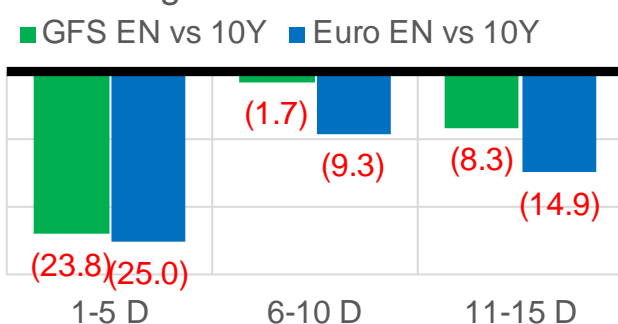
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L48 Region - 00z TDD vs 24H Ago



L48 Region - 00z TDD vs 10Y N



	Current	Δ from YD	Δ from 7D Avg
US Dry Production	87.8	▼ -0.05	▼ -1.60

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	26.3	▲ 1.62	▲ 2.56

	Current	Δ from YD	Δ from 7D Avg
US ResComm	19.6	▲ 2.29	▲ 4.51

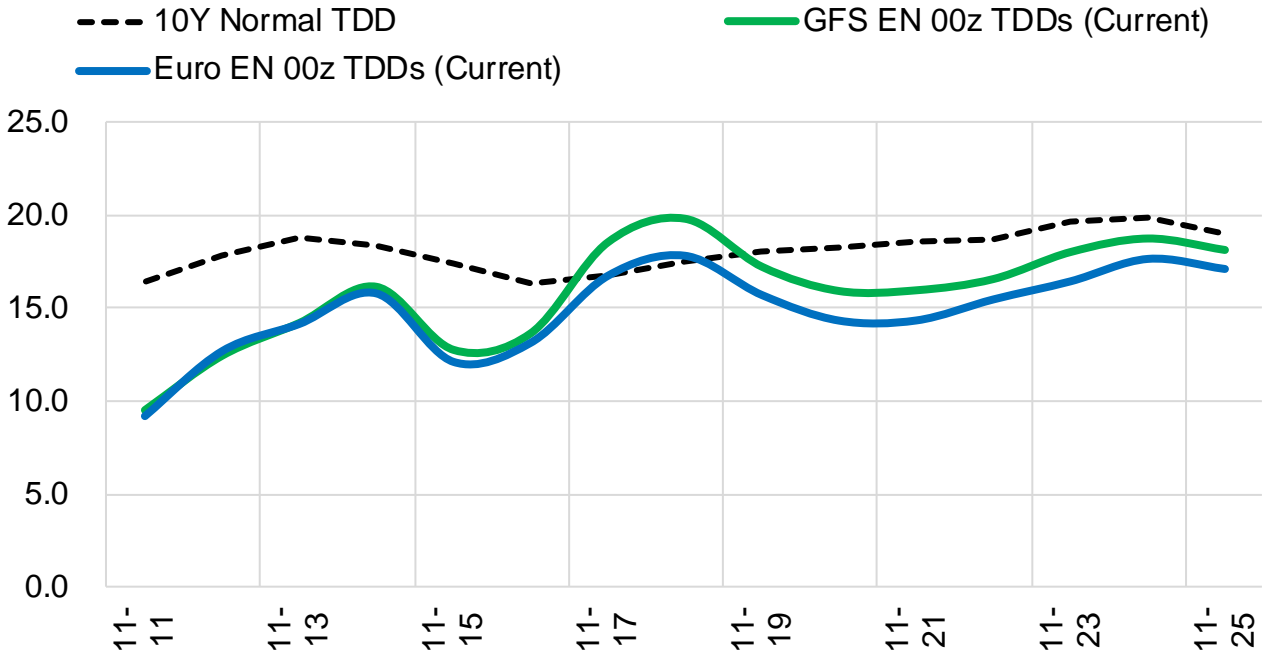
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	4.7	▲ 0.08	▲ 1.15

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	10.4	▲ 0.00	▲ 0.14

	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.6	▲ 0.02	▲ 0.38

Short-term Weather Model Outlooks (00z)

L48 Region



Source: WSI, Bloomberg

Lower 48 Component Models

Daily Balances

	5-Nov	6-Nov	7-Nov	8-Nov	9-Nov	10-Nov	11-Nov	DoD	vs. 7D
Lower 48 Dry Production	90.5	90.0	88.5	88.8	89.1	87.8	87.8	▼ 0.0	▼ -1.3
Canadian Imports	3.7	2.9	3.2	3.2	3.3	4.6	4.7	▲ 0.1	▲ 1.2
L48 Power	25.4	24.4	21.5	21.6	24.2	24.6	26.3	▲ 1.6	▲ 2.6
L48 Residential & Commercial	14.5	13.8	13.8	14.1	15.4	17.4	19.6	▲ 2.3	▲ 4.8
L48 Industrial	24.2	24.7	25.1	25.6	25.7	25.4	25.0	▼ -0.3	▼ -0.1
L48 Lease and Plant Fuel	5.0	5.0	4.9	4.9	4.9	4.8	4.8	▼ 0.0	▼ -0.1
L48 Pipeline Distribution	1.9	1.8	1.6	1.7	1.9	2.0	2.1	▲ 0.2	▲ 0.3
L48 Regional Gas Consumption	71.0	69.6	66.9	67.9	72.1	74.2	77.9	▲ 3.8	▲ 7.6
Net LNG Delivered	10.32	10.08	10.25	10.53	10.00	10.42	10.42	▲ 0.0	▲ 0.2
Total Mexican Exports	6.4	6.4	6.0	5.9	6.2	6.6	6.6	▲ 0.0	▲ 0.4
Implied Daily Storage Activity	6.6	6.8	8.5	7.6	4.1	1.3	-2.4		
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	3.9	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	24.3	▲ 0.1	▲ 1.8
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	75.0	83.0	79.9	▼ -3.1	▲ 4.5
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	4.2	-5.4	-0.8	4.6	
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	-0.2			

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	89.8	▲ 1.5	▼ -5.5
Canadian Imports	4.1	4.5	4.4	4.9	3.8	4.3	4.1	▼ -0.1	▼ -0.4
L48 Power	25.4	27.5	43.7	40.7	33.3	29.3	24.2	▼ -5.0	▼ -3.3
L48 Residential & Commercial	32.9	32.8	7.9	7.7	8.5	16.8	18.6	▲ 1.7	▼ -14.2
L48 Industrial	24.4	24.1	19.3	20.8	21.2	22.6	24.8	▲ 2.2	▲ 0.7
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	2.0	▼ -0.3	▼ -0.8
L48 Regional Gas Consumption	90.3	92.5	78.3	76.4	69.9	75.8	74.5	▼ -1.3	▼ -17.9
Net LNG Exports	4.3	7.2	3.3	4.0	5.9	8.0	10.3	▲ 2.3	▲ 3.1
Total Mexican Exports	4.8	5.3	6.1	6.3	6.4	6.2	6.2	▼ 0.0	▲ 0.9
Implied Daily Storage Activity	-7.2	-5.1	4.9	6.8	10.3	2.6	2.9		
EIA Reported Daily Storage Activity									
Daily Model Error									

Source: Bloomberg, analytix.ai

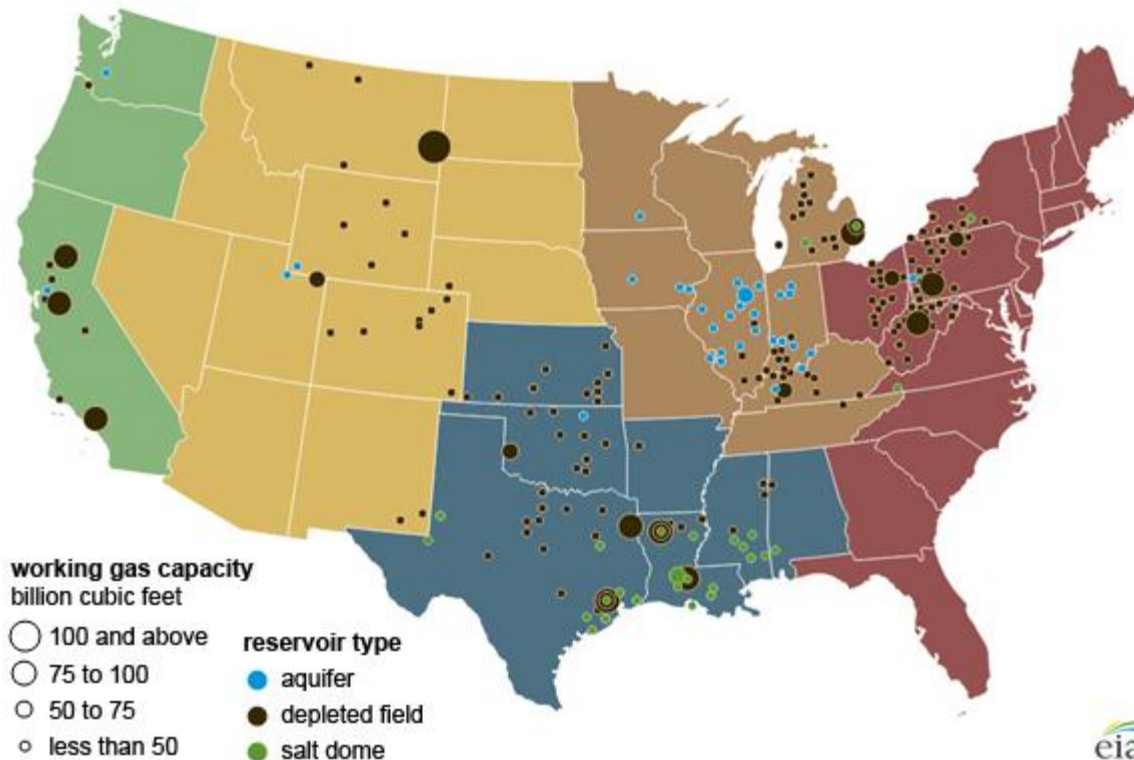
Regional S/D Models Storage Projection

Week Ending 6-Nov

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	-1.0	0.4	-0.6	-4
East	-3.2	2.1	-1.1	-8
Midwest	-0.3	1.4	1.1	8
Mountain	4.1	-3.1	1.0	7
South Central	-2.0	-0.1	-2.1	-15
Pacific	0.4	0.2	0.5	4

*Adjustment Factor is calculated based on historical regional deltas

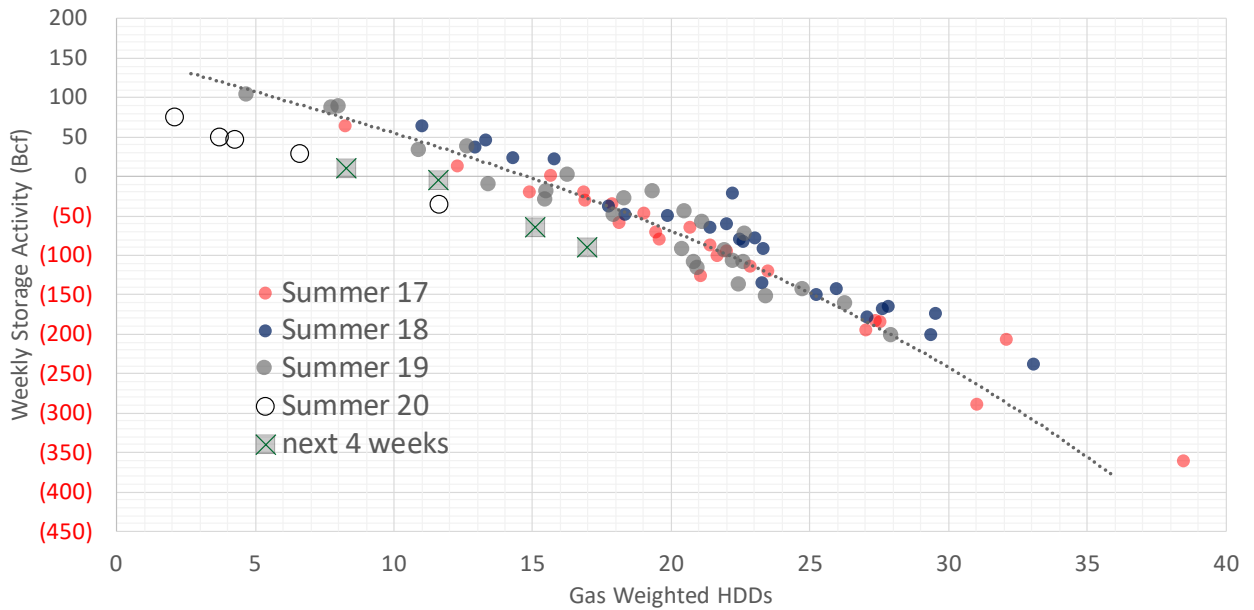
U.S. underground natural gas storage facilities by type (July 2015)



Weather Model Storage Projection

Next report and beyond		
Week Ending	Temp	Week Storage Projection
06-Nov	11.6	-4
13-Nov	8.3	10
20-Nov	15.1	-64
27-Nov	17.0	-90

Winter Storage Forecast

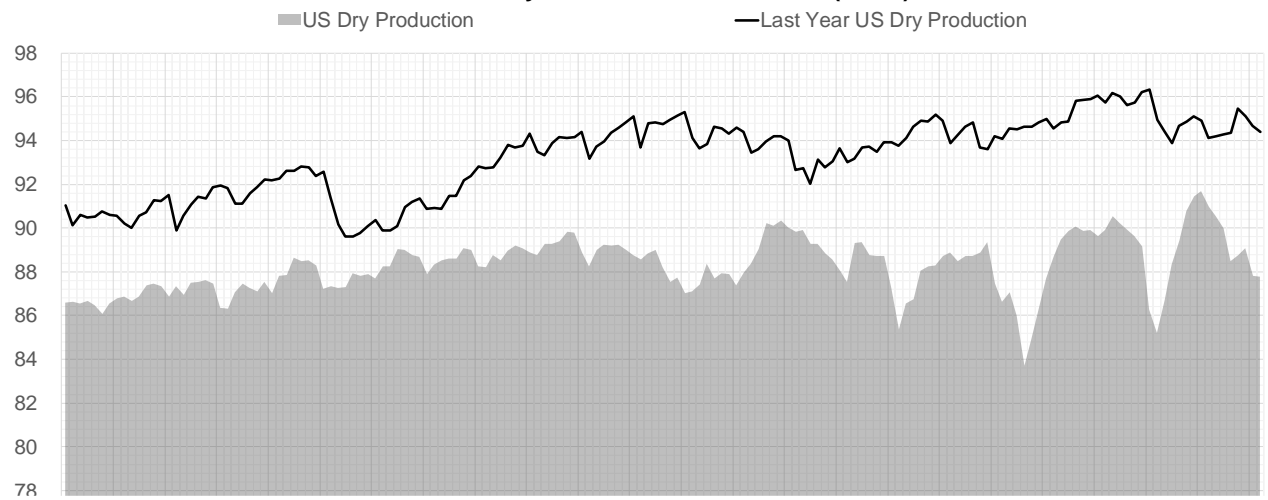


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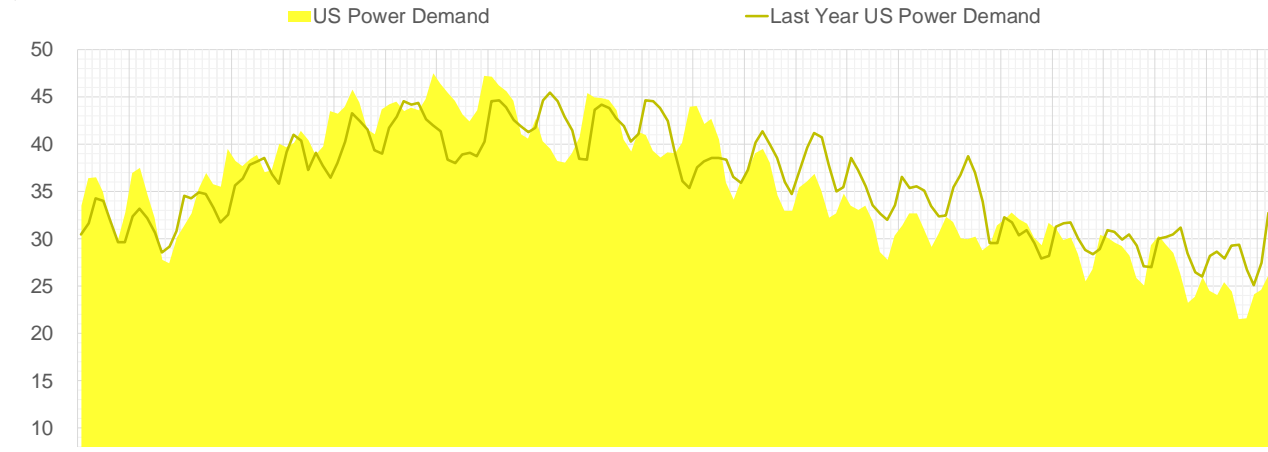


Supply – Demand Trends

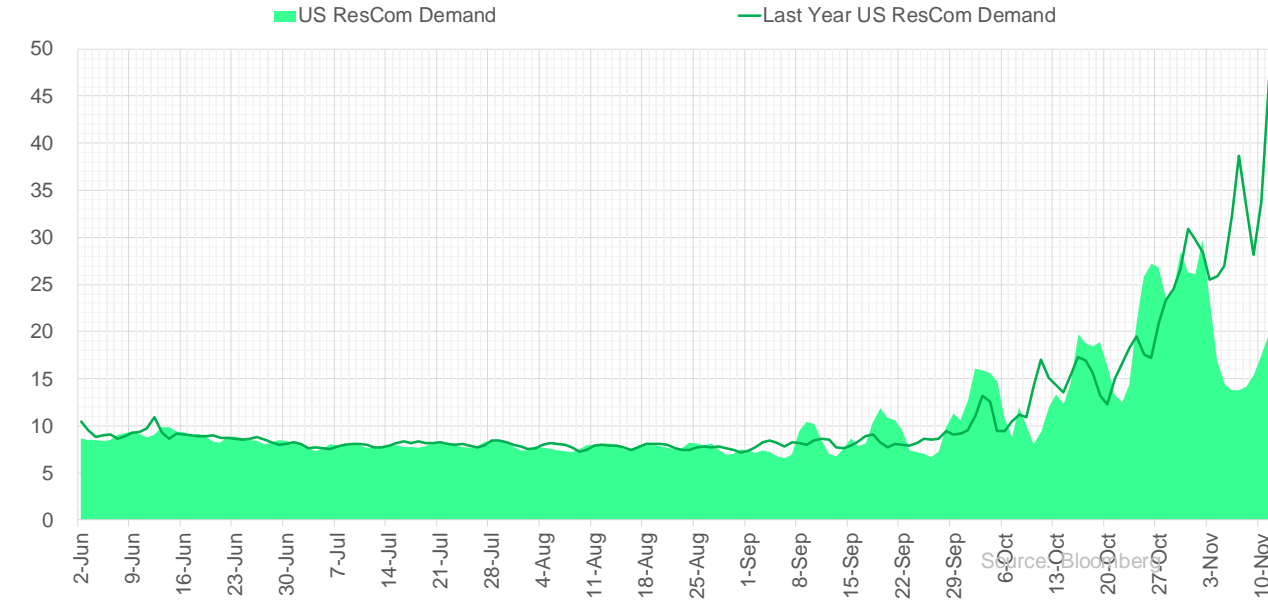
US Dry Natural Gas Production (Bcf/d)



US Daily Power Burns (Bcf/d)

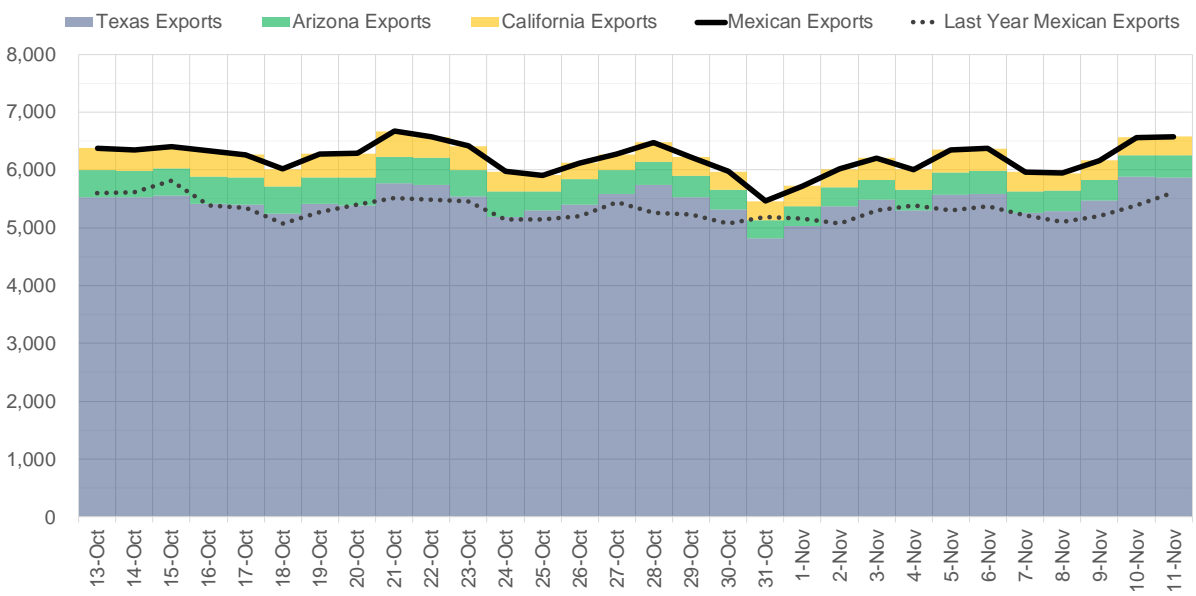


US Daily ResCom Consumption (Bcf/d)

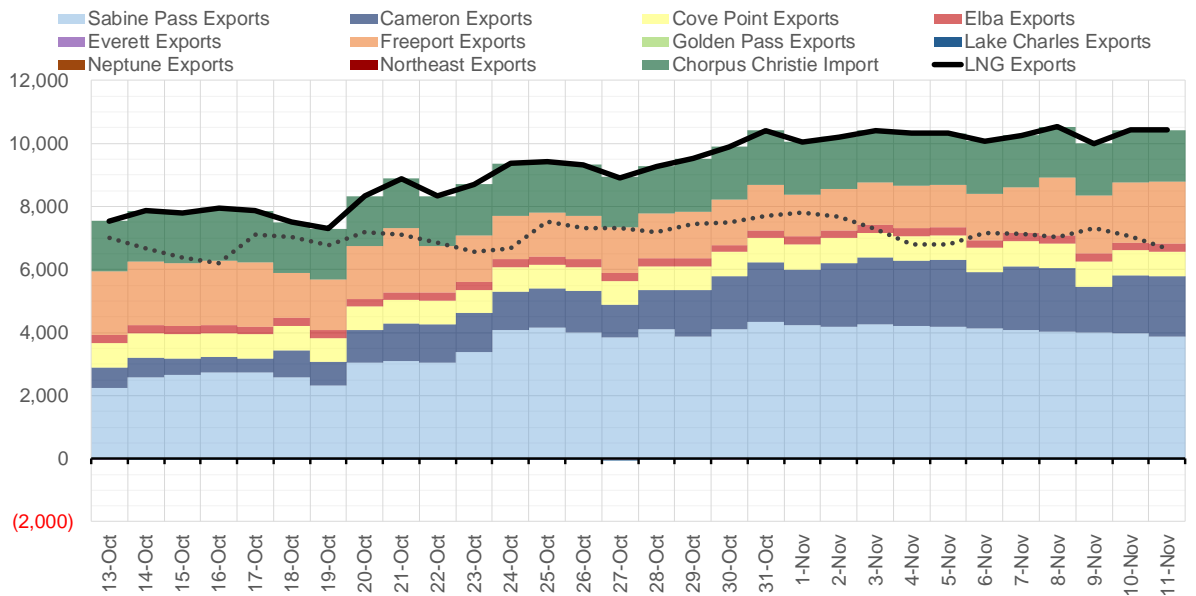


Source: Bloomberg

Mexican Exports - Last 30 days (MMcf/d)



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



Source: Bloomberg

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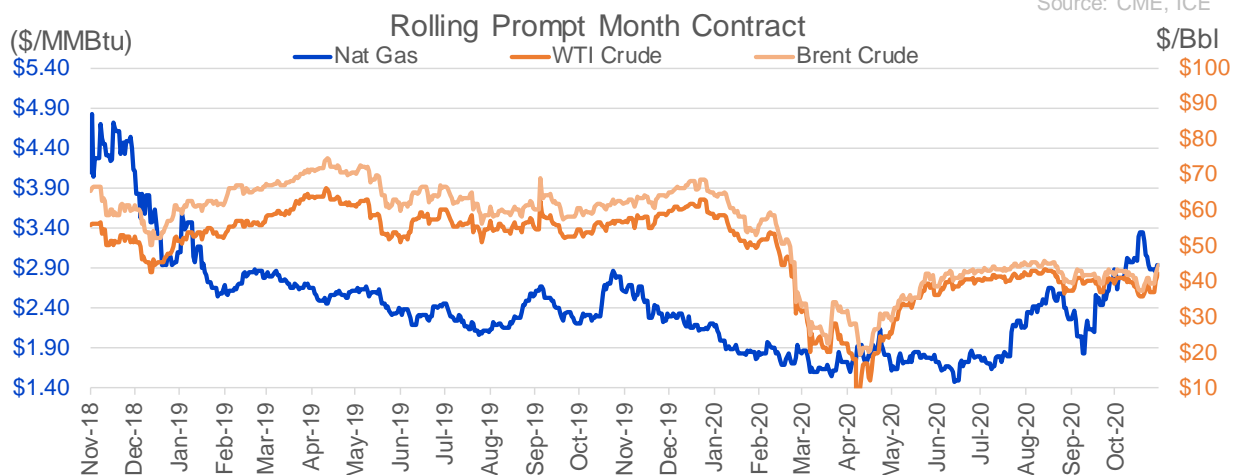
Nat Gas Options Volume and Open Interest CME, ICE and Nasdaq Combined

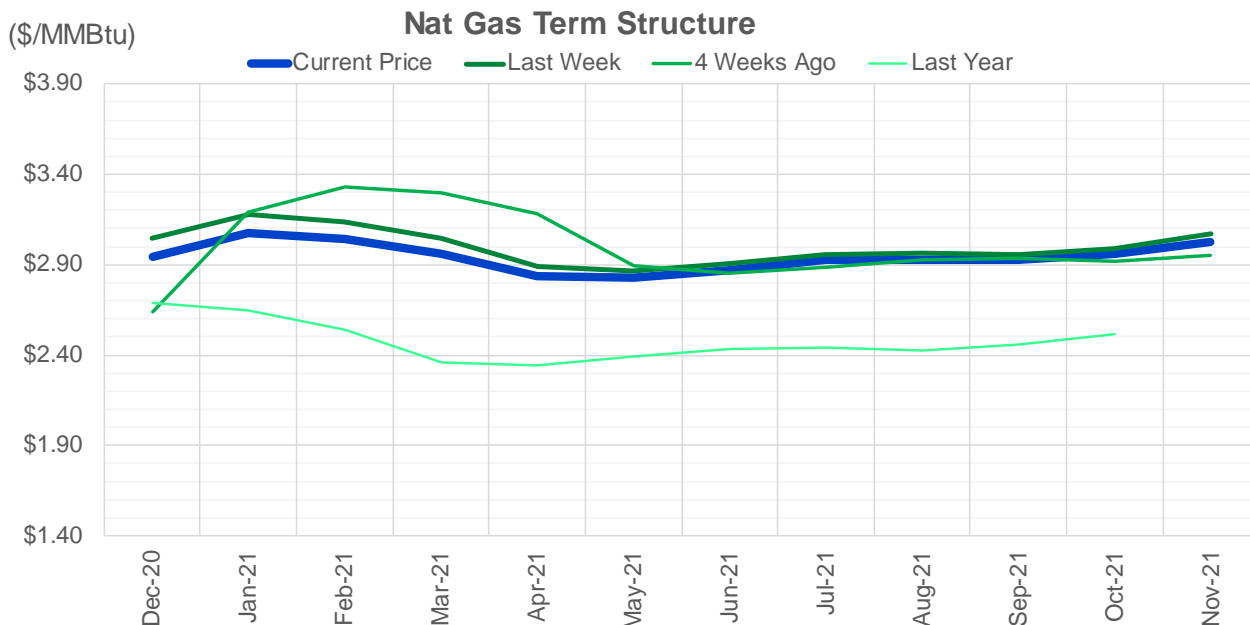
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
12	2020	C	4.00	12249	3	2021	P	2.00	38188
12	2020	P	2.50	7768	12	2020	P	2.00	33020
12	2020	C	3.50	7704	3	2021	C	4.00	32048
2	2021	P	2.50	7259	12	2020	C	4.00	31766
12	2020	C	3.00	5083	1	2021	C	4.50	29898
12	2020	P	2.40	4270	1	2021	C	3.50	29722
12	2020	C	3.60	4246	3	2021	C	3.25	29674
12	2020	C	3.80	4160	4	2021	C	4.00	28850
12	2020	C	3.75	3678	10	2021	C	4.00	28615
12	2020	C	3.25	3546	10	2021	C	3.25	27235
2	2021	P	3.00	3516	3	2021	C	6.00	27186
12	2020	P	2.75	3222	12	2020	P	2.50	26876
12	2020	C	3.10	2449	4	2021	C	5.00	26847
12	2020	P	2.70	2449	1	2021	P	2.50	26148
1	2021	C	4.75	2403	3	2021	C	7.00	24489
1	2021	C	4.50	2389	12	2020	C	3.75	24363
12	2020	P	3.00	2127	3	2021	C	5.00	23570
9	2021	C	3.25	2100	3	2021	C	4.50	23191
1	2021	C	4.00	2096	12	2020	C	3.50	22063
12	2020	P	2.60	2084	3	2021	C	3.50	21907
3	2021	C	5.00	2082	1	2021	C	3.75	21862
1	2022	C	5.00	2050	12	2020	P	2.75	21690
2	2022	C	5.00	2050	3	2021	C	3.00	20814
3	2022	C	5.00	2050	1	2021	C	6.00	20571
1	2021	C	5.00	2049	12	2020	C	4.50	20512
1	2021	C	4.25	2045	2	2021	P	2.25	20047
3	2021	C	6.00	1880	1	2021	C	5.00	19781
12	2020	P	2.90	1838	1	2021	C	3.00	19711
12	2020	C	3.05	1639	8	2021	C	4.00	19605
12	2020	C	3.15	1589	1	2021	C	4.00	19513
1	2021	P	2.75	1556	2	2021	C	5.00	18972
8	2021	C	3.00	1500	3	2021	P	2.50	18285
12	2020	C	3.20	1465	12	2020	P	3.00	18128
1	2021	P	2.50	1284	2	2021	C	3.50	18042
3	2021	C	4.00	1151	1	2021	P	2.25	17820
12	2020	C	3.40	1132	8	2021	P	2.25	17792
1	2021	C	3.10	1008	1	2021	P	2.00	17597
3	2021	C	3.50	1003	2	2021	P	2.50	16936
12	2020	P	2.80	982	12	2020	C	3.00	16798
10	2021	C	3.00	950	10	2021	C	5.00	16778
1	2021	C	6.00	886	2	2021	C	4.00	16603
7	2021	C	3.25	850	2	2021	C	4.50	16079
1	2021	P	2.25	846	12	2020	C	5.00	15830
1	2021	C	3.15	822	4	2021	C	3.00	15653
1	2021	P	3.10	708	12	2020	C	3.25	15014
7	2021	C	4.00	700	1	2021	C	3.25	14811
12	2020	C	3.65	638	10	2021	C	3.00	14761
3	2021	C	4.50	610	12	2020	P	1.50	14450
2	2021	C	3.25	601	5	2021	C	3.50	14157
					4	2021	P	2	13952

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	131178	144084	-12906	DEC 20	72522	74943	-2421.25
JAN 21	245628	240021	5607	JAN 21	92135	93138	-1002.5
FEB 21	98252	99761	-1509	FEB 21	66118	66135	-17
MAR 21	143565	143373	192	MAR 21	89159	89993	-834
APR 21	80354	79474	880	APR 21	71777	71926	-149.75
MAY 21	61303	58350	2953	MAY 21	71690	71619	70.75
JUN 21	34120	34309	-189	JUN 21	58007	58028	-20.75
JUL 21	31356	30840	516	JUL 21	61070	60708	361.25
AUG 21	29357	28794	563	AUG 21	64880	64830	50.25
SEP 21	37977	38174	-197	SEP 21	58381	58467	-85.75
OCT 21	98081	92992	5089	OCT 21	69058	68623	434.25
NOV 21	37531	36571	960	NOV 21	54048	54264	-216
DEC 21	30905	30496	409	DEC 21	48082	47981	100.75
JAN 22	29595	30086	-491	JAN 22	46433	46120	312.5
FEB 22	23433	23522	-89	FEB 22	37510	37487	23
MAR 22	25793	23913	1880	MAR 22	40946	40870	75.75
APR 22	25605	25443	162	APR 22	40985	41184	-198.75
MAY 22	10594	10586	8	MAY 22	30187	30005	182.25
JUN 22	5481	5666	-185	JUN 22	29715	29541	173.5
JUL 22	4312	4529	-217	JUL 22	30836	30782	53.75
AUG 22	3619	3635	-16	AUG 22	29443	29351	92.5
SEP 22	3577	3510	67	SEP 22	29381	29223	158.25
OCT 22	5631	4944	687	OCT 22	33771	33600	171
NOV 22	4440	4415	25	NOV 22	29245	29259	-14
DEC 22	4744	4721	23	DEC 22	31594	31593	0.75
JAN 23	4333	4333	0	JAN 23	14952	14940	12.25
FEB 23	1046	1047	-1	FEB 23	13879	13867	11.75
MAR 23	2305	2305	0	MAR 23	13932	13911	20.25
APR 23	1557	1557	0	APR 23	12849	12829	19.75
MAY 23	445	445	0	MAY 23	11491	11485	5.75





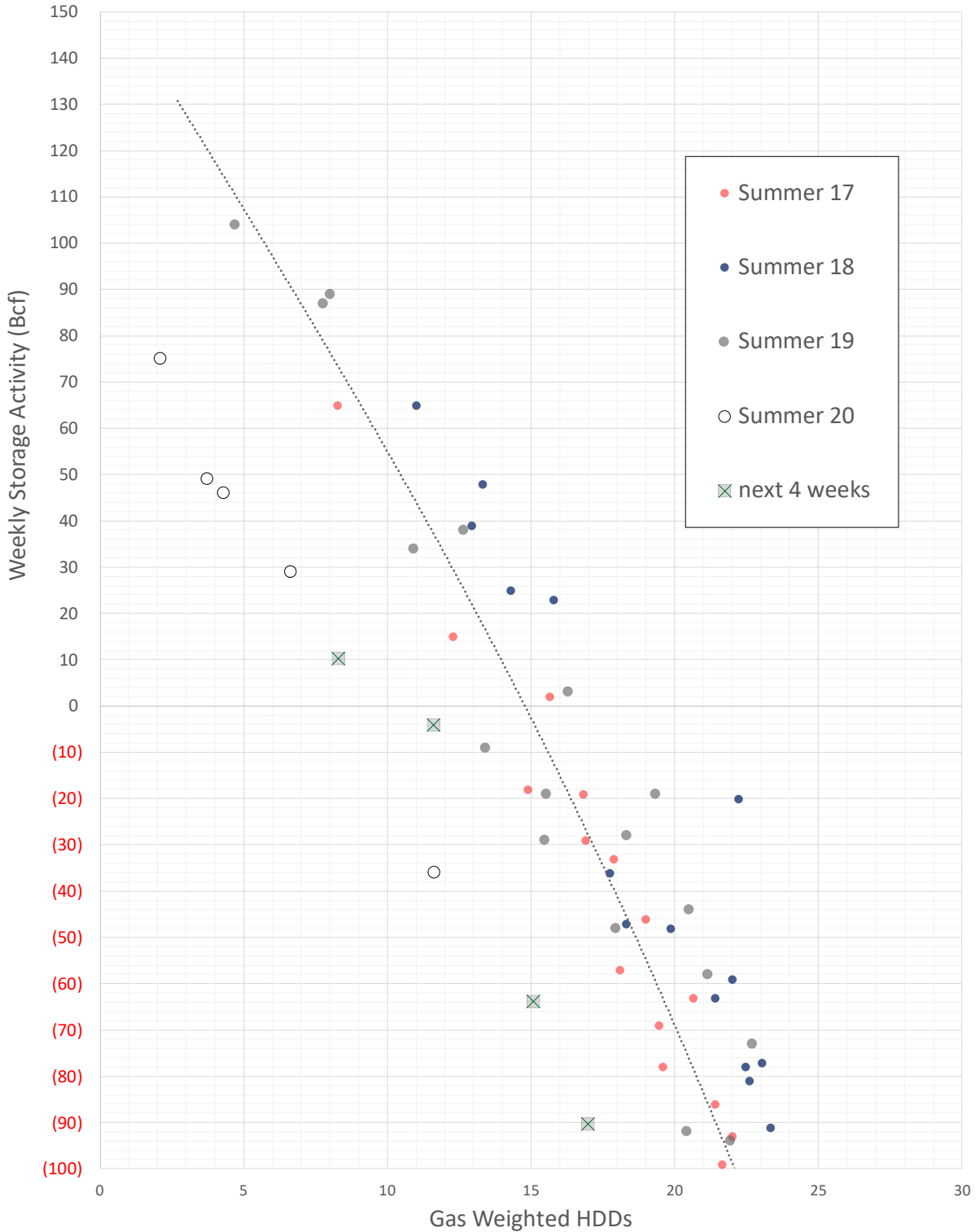
	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21
Current Price	\$2.946	\$3.077	\$3.046	\$2.959	\$2.834	\$2.827	\$2.868	\$2.923	\$2.929	\$2.924	\$2.961	\$3.024
Last Week	\$3.046	\$3.177	\$3.140	\$3.045	\$2.894	\$2.868	\$2.908	\$2.957	\$2.968	\$2.953	\$2.991	\$3.068
vs. Last Week	-\$0.100	-\$0.100	-\$0.094	-\$0.086	-\$0.060	-\$0.041	-\$0.040	-\$0.034	-\$0.039	-\$0.029	-\$0.030	-\$0.044
4 Weeks Ago	\$2.636	\$3.189	\$3.332	\$3.294	\$3.181	\$2.898	\$2.854	\$2.883	\$2.924	\$2.935	\$2.922	\$2.951
vs. 4 Weeks Ago	\$0.310	-\$0.112	-\$0.286	-\$0.335	-\$0.347	-\$0.071	\$0.014	\$0.040	\$0.005	-\$0.011	\$0.039	\$0.073
Last Year	\$2.600	\$2.692	\$2.650	\$2.536	\$2.360	\$2.345	\$2.389	\$2.436	\$2.443	\$2.426	\$2.454	\$2.517
vs. Last Year	\$0.346	\$0.385	\$0.396	\$0.423	\$0.474	\$0.482	\$0.479	\$0.487	\$0.486	\$0.498	\$0.507	\$0.507

	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	0.95	4.92	3.97
TETCO M3	\$/MMBtu	1.12	3.27	2.15
FGT Zone 3	\$/MMBtu	1.15	3.10	1.95
Zone 6 NY	\$/MMBtu	1.15	3.71	2.56
Chicago Citygate	\$/MMBtu	2.53	3.06	0.53
Michcon	\$/MMBtu	2.49	2.80	0.31
Columbia TCO Pool	\$/MMBtu	1.42	2.33	0.91
Ventura	\$/MMBtu	2.51	3.22	0.71
Rockies/Opal	\$/MMBtu	3.34	3.07	-0.27
El Paso Permian Basin	\$/MMBtu	2.46	2.79	0.33
Socal Citygate	\$/MMBtu	4.35	4.06	-0.29
Malin	\$/MMBtu	3.31	3.75	0.44
Houston Ship Channel	\$/MMBtu	2.87	3.01	0.14
Henry Hub Cash	\$/MMBtu	2.58	2.90	0.32
AECO Cash	C\$/GJ	2.29	2.40	0.11
Station2 Cash	C\$/GJ	1.85	5.05	3.20
Dawn Cash	C\$/GJ	2.47	2.89	0.42

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks Ago	vs. Last Year
NatGas Jan21/Apr21	\$/MMBtu	-0.243	▲ 0.040	▲ 0.191	▲ 0.232
NatGas Mar21/Apr21	\$/MMBtu	-0.125	▲ 0.026	▼ -0.408	▼ -0.405
NatGas Oct21/Nov21	\$/MMBtu	0.063	▼ -0.014	▲ 0.007	▼ -0.003
NatGas Apr21/Oct21	\$/MMBtu	0.127	▼ -0.059	▼ -0.254	▼ -0.289
WTI Crude	\$/Bbl	42.43	▲ 3.280	▲ 1.390	▼ -14.690
Brent Crude	\$/Bbl	44.73	▲ 3.500	▲ 1.410	▼ -17.640
Fuel Oil, NY Harbour 1%	\$/Bbl	98.03	▲ 0.000	▲ 0.000	▲ 0.000
Heating Oil	cents/Gallon	128.33	▲ 10.980	▲ 9.080	▼ -62.920
Propane, Mt. Bel	cents/Gallon	0.55	▼ -0.010	▲ 0.028	▲ 0.027
Ethane, Mt. Bel	cents/Gallon	0.22	▼ -0.006	▲ 0.010	▲ 0.025
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



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