

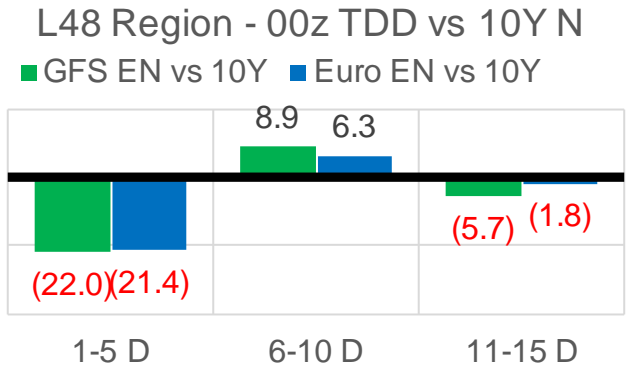
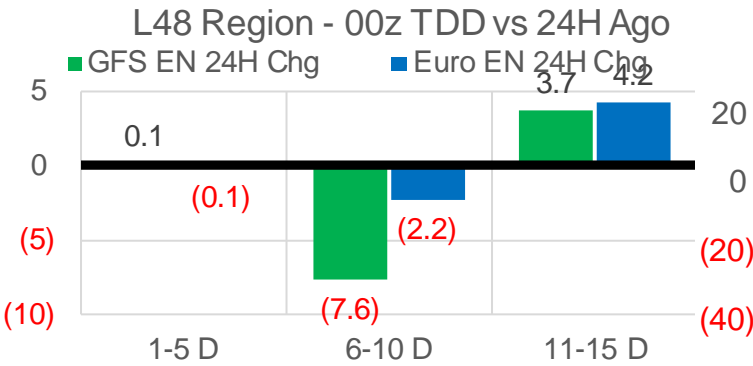
	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 2.75	▼ \$ (0.02)	▲ \$ 0.07

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 45.21	▲ \$ 0.30	▲ \$ 2.6

	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 48.20	▲ \$ 0.34	▲ \$ 2.9

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	Current	Δ from YD	Δ from 7D Avg
US Dry Production	92.0	▼ -1.03	▼ -0.56

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	25.2	▲ 0.19	▼ -0.06

	Current	Δ from YD	Δ from 7D Avg
US ResComm	27.4	▼ -4.35	▼ -0.24

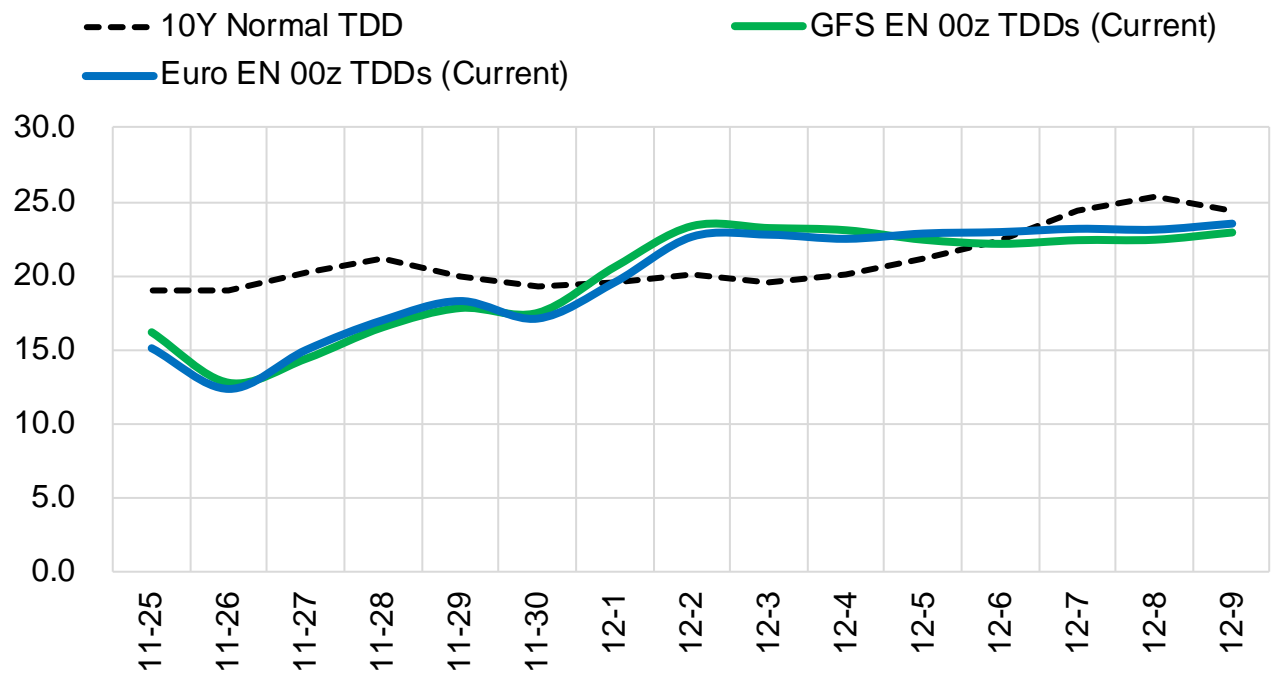
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	4.4	▼ -0.53	▼ -0.20

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	10.7	▲ 0.90	▲ 0.97

	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.4	▲ 0.09	▲ 0.18

Short-term Weather Model Outlooks (00z)

L48 Region



Source: WSI , Bloomberg

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Lower 48 Component Models

Daily Balances

	19-Nov	20-Nov	21-Nov	22-Nov	23-Nov	24-Nov	25-Nov	DoD	vs. 7D
Lower 48 Dry Production	92.7	91.8	92.4	92.5	92.7	93.0	92.0	▼ -1.0	▼ -0.5
Canadian Imports	4.3	4.3	4.4	4.4	4.7	5.0	4.4	▼ -0.5	▼ -0.1
L48 Power	25.2	26.0	24.4	24.5	25.7	25.0	25.2	▲ 0.2	▲ 0.0
L48 Residential & Commercial	24.5	21.7	25.0	28.0	30.9	31.7	27.4	▼ -4.4	▲ 0.4
L48 Industrial	22.5	21.9	21.7	21.5	21.5	21.4	21.0	▼ -0.4	▼ -0.7
L48 Lease and Plant Fuel	5.1	5.1	5.1	5.1	5.1	5.1	5.1	▼ -0.1	▼ 0.0
L48 Pipeline Distribution	2.3	2.2	2.3	2.4	2.6	2.6	2.5	▼ -0.2	▲ 0.0
L48 Regional Gas Consumption	79.6	76.9	78.5	81.5	86.0	85.9	81.1	▼ -4.8	▼ -0.3
Net LNG Delivered	9.95	9.74	9.65	9.39	9.39	9.84	10.74	▲ 0.9	▲ 1.1
Total Mexican Exports	6.2	6.4	6.2	6.0	6.3	6.3	6.4	▲ 0.1	▲ 0.2
Implied Daily Storage Activity	1.3	3.1	2.5	0.0	-4.2	-4.1	-1.8		
EIA Reported Daily Storage Activity									
Daily Model Error									

EIA Storage Week Balances

	16-Oct	23-Oct	30-Oct	6-Nov	13-Nov	20-Nov	WoW	vs. 4W
Lower 48 Dry Production	86.7	90.0	88.1	90.4	89.0	91.7	▲ 2.7	▲ 2.3
Canadian Imports	4.0	3.6	4.8	4.9	3.9	5.1	▲ 1.2	▲ 0.8
L48 Power	30.5	28.5	28.1	24.8	24.5	24.6	▲ 0.1	▼ -1.8
L48 Residential & Commercial	11.4	16.8	23.3	23.6	17.2	27.6	▲ 10.4	▲ 7.3
L48 Industrial	21.9	22.5	24.2	23.2	24.3	23.9	▼ -0.3	▲ 0.4
L48 Lease and Plant Fuel	4.8	4.9	4.8	5.0	4.9	5.1	▲ 0.1	▲ 0.1
L48 Pipeline Distribution	2.1	2.2	2.5	2.3	1.9	2.4	▲ 0.5	▲ 0.2
L48 Regional Gas Consumption	70.5	75.0	82.9	78.8	72.8	83.6	▲ 10.8	▲ 6.3
Net LNG Exports	6.9	8.0	9.2	10.2	10.4	10.2	▼ -0.2	▲ 0.7
Total Mexican Exports	6.2	6.3	6.2	6.0	6.3	6.1	▼ -0.3	▼ -0.1
Implied Daily Storage Activity	7.0	4.2	-5.3	0.3	3.4	-3.0	-6.4	
EIA Reported Daily Storage Activity	7.0	4.1	-5.1	1.1	4.4			
Daily Model Error	0.0	0.1	-0.2	-0.8	-1.0			

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	4.6	▲ 0.3	▲ 0.0
L48 Power	25.5	27.6	43.8	40.6	33.3	29.2	24.7	▼ -4.5	▼ -2.8
L48 Residential & Commercial	32.9	32.8	7.9	7.7	8.5	16.8	23.5	▲ 6.7	▼ -9.3
L48 Industrial	24.4	24.0	19.3	20.8	21.1	22.5	23.3	▲ 0.7	▼ -0.8
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	2.3	▼ 0.0	▼ -0.6
L48 Regional Gas Consumption	90.3	92.5	78.3	76.4	69.8	75.7	78.8	▲ 3.1	▼ -13.7
Net LNG Exports	4.3	7.2	3.3	4.0	5.9	8.0	10.1	▲ 2.1	▲ 2.9
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	10.2	2.6	0.4		
EIA Reported Daily Storage Activity									
Daily Model Error									

Source: Bloomberg, analytix.ai

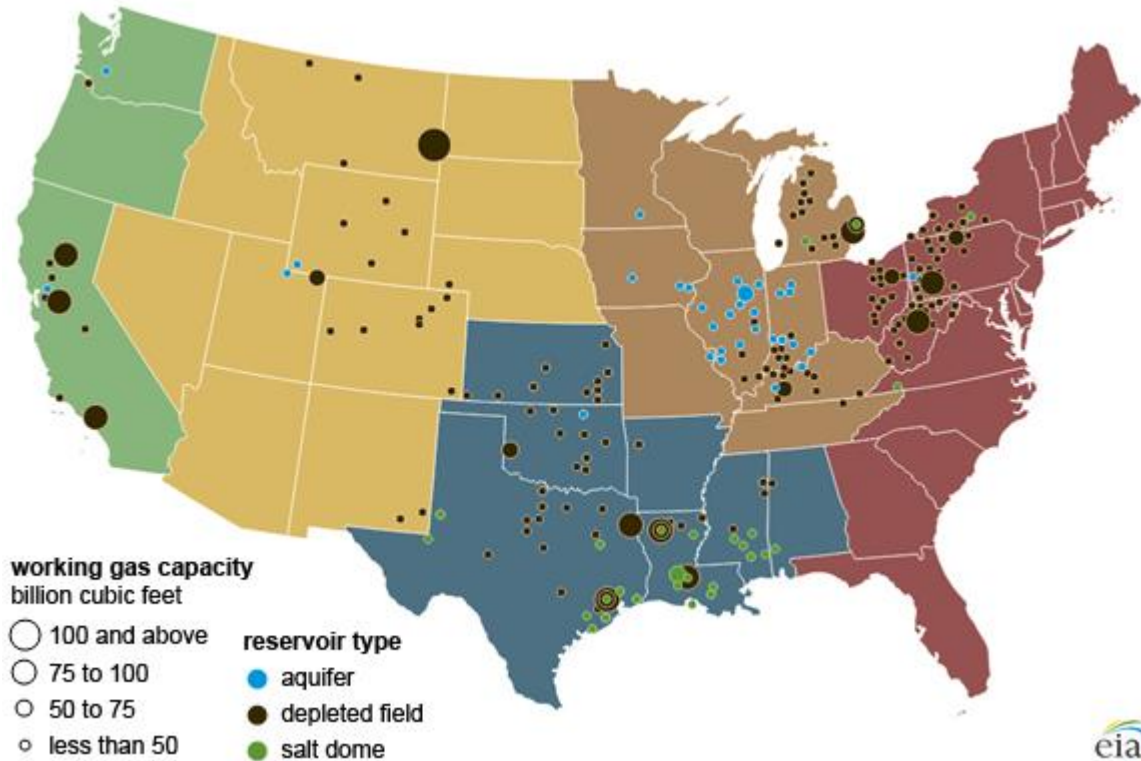
Regional S/D Models Storage Projection

Week Ending 20-Nov

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	-3.3	1.1	-2.2	-22
East	-4.6	1.7	-2.8	-16
Midwest	-1.3	0.7	-0.6	-10
Mountain	3.4	-3.5	-0.1	-3
South Central	-1.2	2.0	0.9	4
Pacific	0.3	0.2	0.5	3

*Adjustment Factor is calculated based on historical regional deltas

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

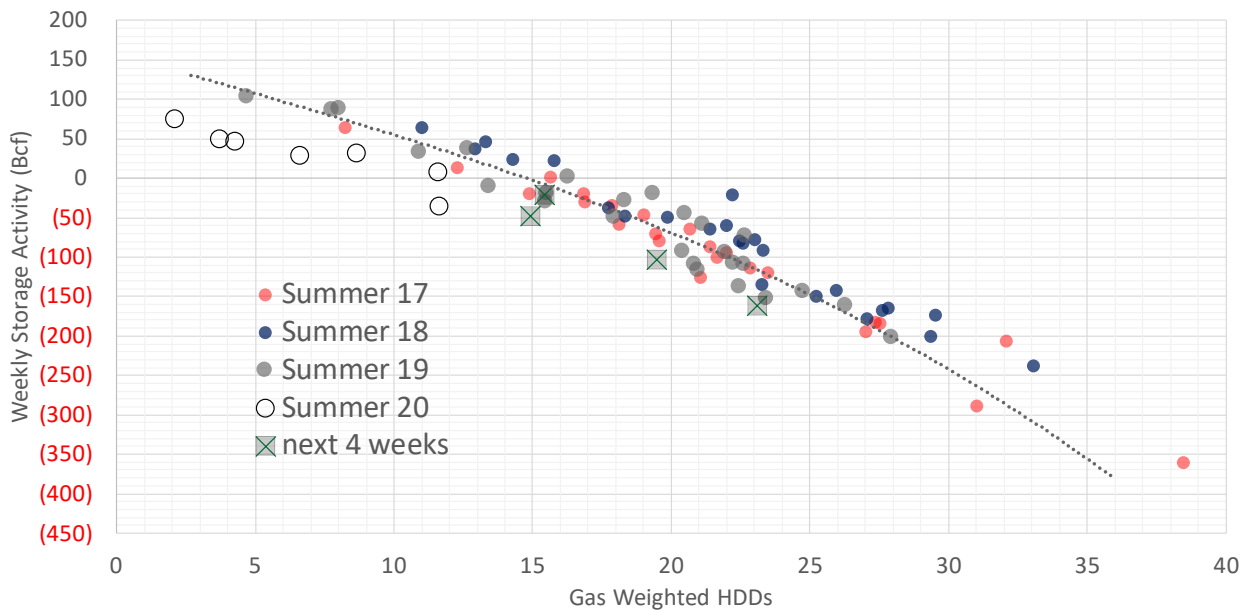


Weather Model Storage Projection

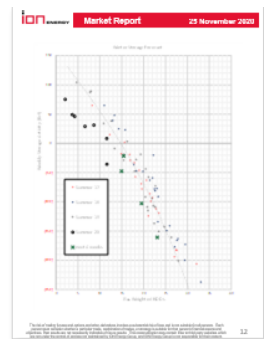
Next report
and beyond

Week Ending	Temp	Week Storage Projection
20-Nov	15.4	-22
27-Nov	15.0	-48
04-Dec	19.5	-103
11-Dec	23.1	-161

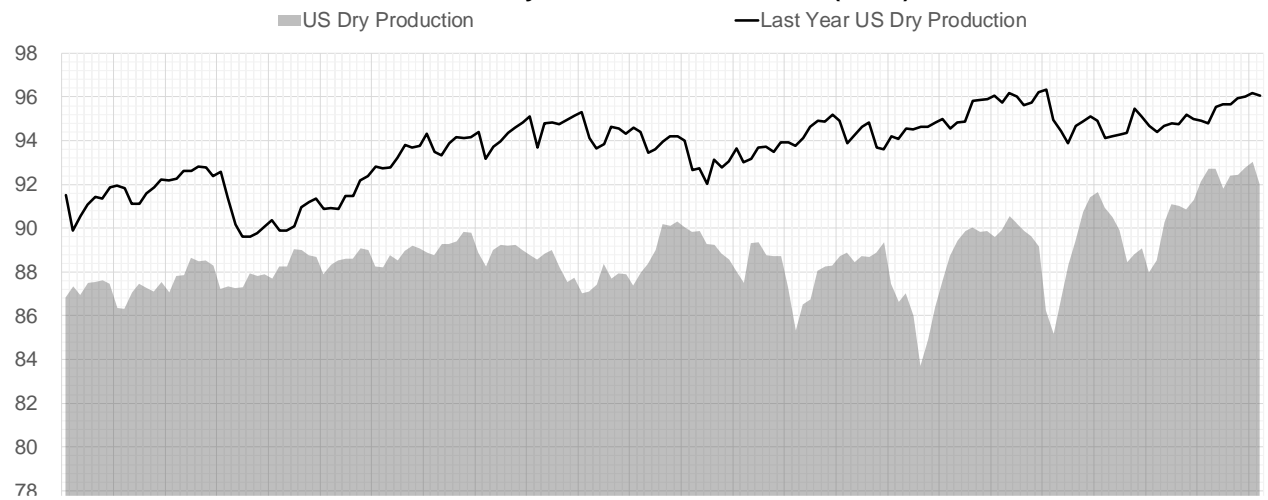
Winter Storage Forecast



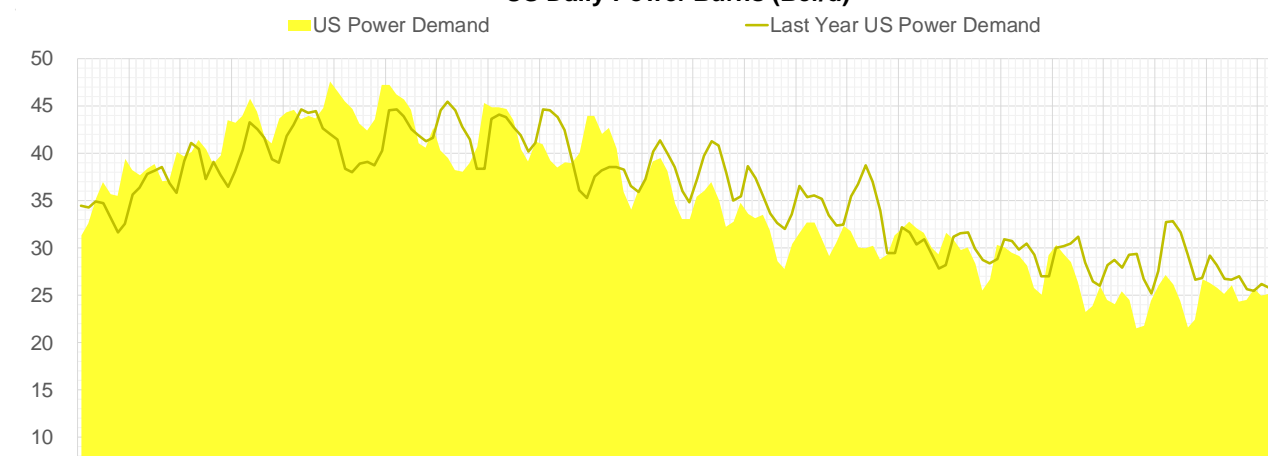
Go to larger image



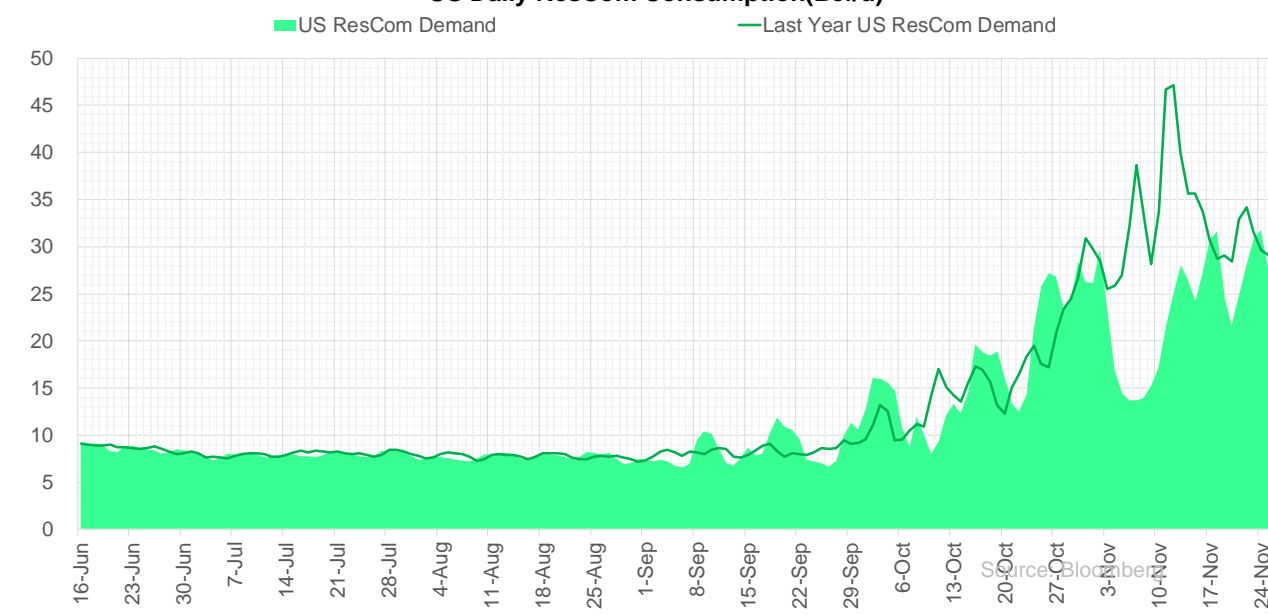
Supply – Demand Trends US Dry Natural Gas Production (Bcf/d)



US Daily Power Burns (Bcf/d)

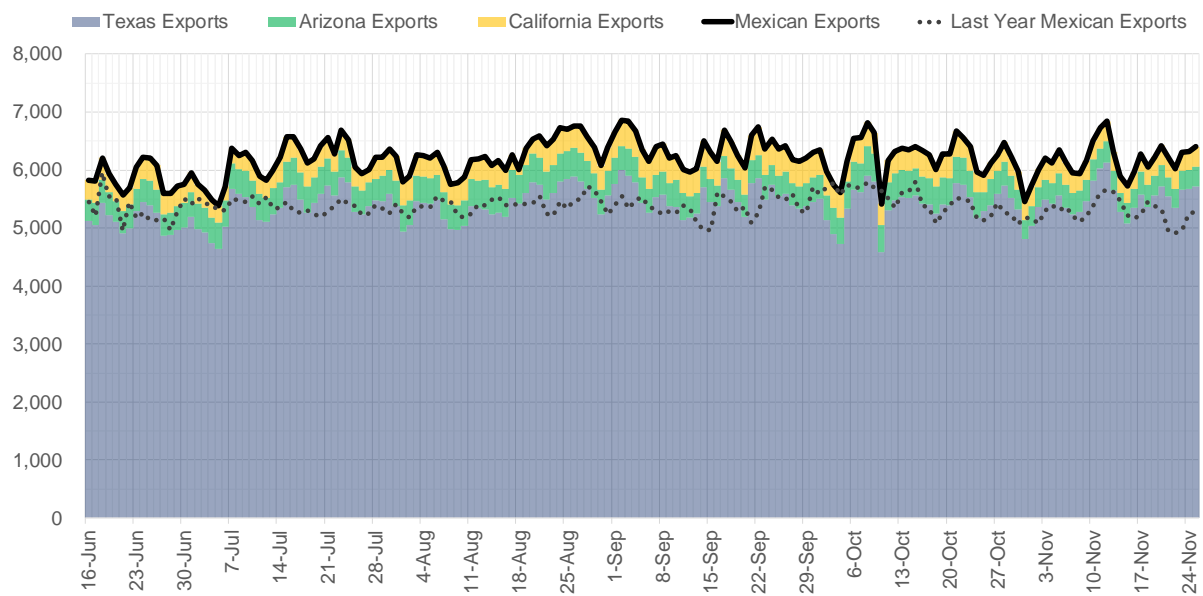


US Daily ResCom Consumption (Bcf/d)

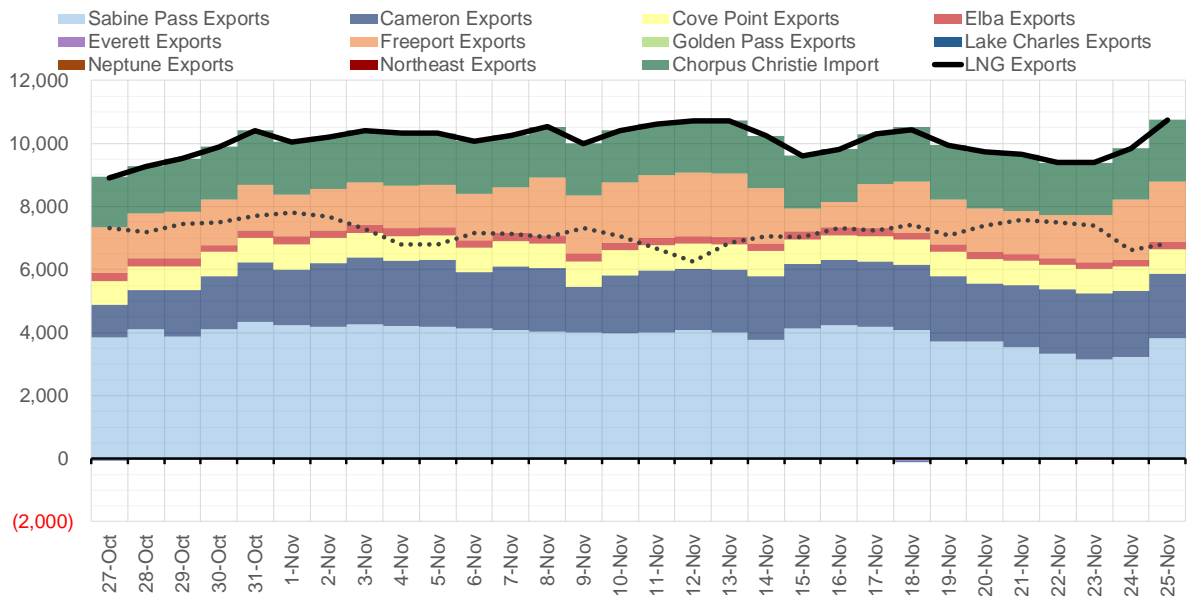


Source: Bloomberg

Mexican Exports (MMcf/d)



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



Source: Bloomberg

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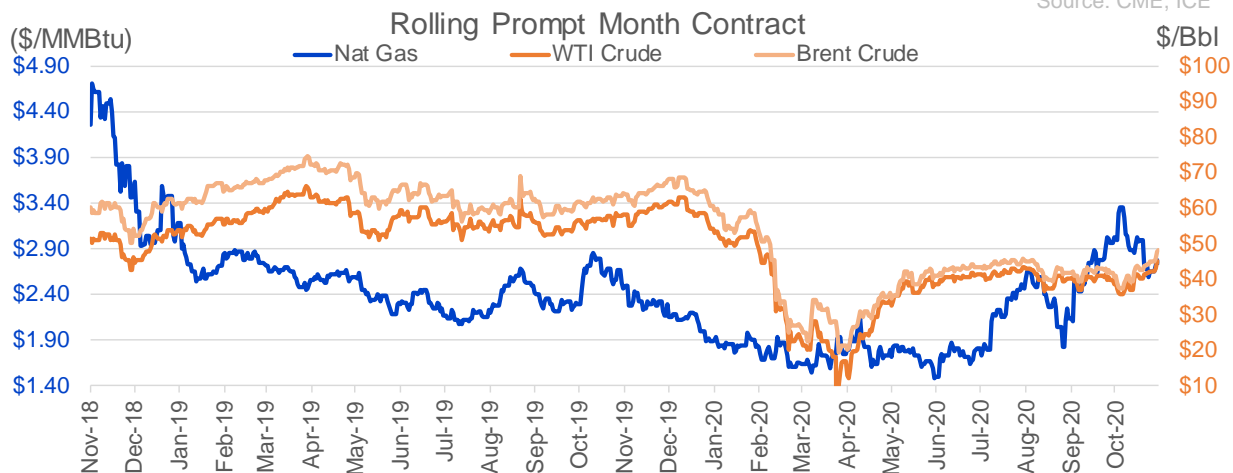
Nat Gas Options Volume and Open Interest CME, ICE and Nasdaq Combined

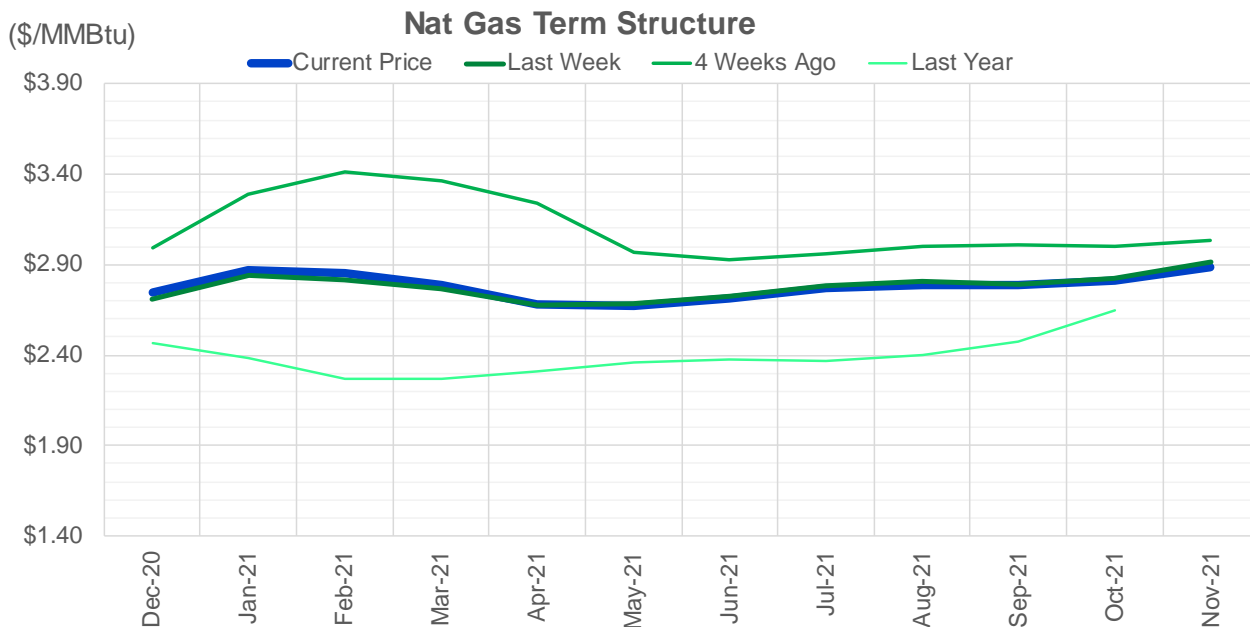
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
1	2021	C	3.50	3595	3	2021	P	2.00	40904
12	2020	P	2.75	2479	3	2021	C	4.00	38616
1	2021	P	2.40	2393	4	2021	C	4.00	32747
3	2021	P	2.40	2200	12	2020	P	2.00	31799
12	2020	C	2.80	2073	1	2021	C	3.50	29850
2	2021	P	2.40	2001	1	2021	P	2.50	29546
4	2021	P	2.40	2000	1	2021	C	4.50	28655
5	2021	P	2.40	2000	3	2021	C	3.25	28599
6	2021	P	2.40	2000	10	2021	C	4.00	28585
7	2021	P	2.40	2000	12	2020	C	3.75	27068
8	2021	P	2.40	2000	12	2020	C	3.50	25817
9	2021	P	2.40	2000	3	2021	C	6.00	25783
10	2021	P	2.40	2000	12	2020	C	4.00	25109
11	2021	P	2.40	2000	10	2021	C	3.25	24996
12	2021	P	2.40	2000	2	2021	P	2.25	24862
1	2021	P	2.75	1884	1	2021	C	5.00	24735
12	2020	C	2.75	1869	3	2021	C	7.00	23679
1	2021	P	2.70	1810	3	2021	C	3.00	23324
1	2021	P	2.50	1701	12	2020	C	3.00	22939
2	2021	P	2.00	1617	3	2021	C	4.50	22463
10	2021	P	2.00	1425	12	2020	C	4.50	22276
1	2021	C	3.00	1420	1	2021	C	3.75	21984
4	2021	P	2.00	1375	3	2021	P	2.50	21917
5	2021	P	2.00	1375	2	2021	C	3.50	21723
6	2021	P	2.00	1375	3	2021	C	3.50	21700
7	2021	P	2.00	1375	3	2021	C	5.00	21451
8	2021	P	2.00	1375	1	2021	C	4.00	21266
9	2021	P	2.00	1375	1	2021	C	6.00	21129
12	2020	P	2.65	1375	1	2021	C	3.00	20916
2	2021	C	4.00	1255	12	2020	P	2.75	20837
3	2021	P	2.00	1202	4	2021	C	3.25	20184
1	2021	C	3.25	1175	12	2020	C	3.25	20116
1	2021	C	4.50	1158	2	2021	P	2.50	19678
1	2021	P	2.60	1131	8	2021	C	4.00	19519
2	2021	C	3.50	1129	2	2021	C	4.00	19313
12	2020	P	2.70	1107	8	2021	P	2.25	19192
1	2021	P	2.00	1105	4	2021	C	3.50	19185
1	2021	C	4.00	1089	4	2021	C	5.00	18828
6	2021	P	2.70	1045	12	2020	P	3.00	18480
1	2021	C	5.00	1028	5	2021	C	3.00	18183
2	2021	P	2.70	1002	1	2021	P	2.25	18033
3	2021	P	2.70	1000	10	2021	C	5.00	17973
4	2021	P	2.70	1000	1	2021	P	2.00	17760
5	2021	P	2.70	1000	4	2021	C	3.00	17192
7	2021	P	2.70	1000	2	2021	C	5.00	16924
8	2021	P	2.70	1000	2	2021	C	4.50	16347
9	2021	P	2.70	1000	12	2020	C	5.00	15828
10	2021	P	2.70	1000	10	2021	C	3.00	15339
10	2021	P	2.70	1000	4	2021	P	2.00	15051
11	2021	P	2.00	1000	12	2020	P	2.5	15028.75

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	2858	17462	-14604	DEC 20	68345	66187	2157.75
JAN 21	296068	303193	-7125	JAN 21	99250	99155	94.75
FEB 21	95689	95779	-90	FEB 21	69889	69133	756.5
MAR 21	193976	190628	3348	MAR 21	88432	86901	1530.75
APR 21	83660	83301	359	APR 21	70270	69797	473
MAY 21	60877	60332	545	MAY 21	71814	71941	-126.75
JUN 21	35758	36401	-643	JUN 21	59380	59163	217
JUL 21	30860	30677	183	JUL 21	61946	61701	245
AUG 21	25859	27354	-1495	AUG 21	63821	63990	-169
SEP 21	40238	41735	-1497	SEP 21	58121	57915	205.75
OCT 21	95465	96660	-1195	OCT 21	72645	71915	730.25
NOV 21	40208	40436	-228	NOV 21	51679	51811	-131.75
DEC 21	33297	33398	-101	DEC 21	49645	49495	150.25
JAN 22	32458	30911	1547	JAN 22	48555	48702	-146.5
FEB 22	23120	22984	136	FEB 22	38582	38701	-118.75
MAR 22	25840	25418	422	MAR 22	41403	41425	-21.5
APR 22	23362	23067	295	APR 22	39655	39781	-125.75
MAY 22	12085	11985	100	MAY 22	31675	31701	-25.25
JUN 22	6491	6404	87	JUN 22	30630	30578	52
JUL 22	5674	5749	-75	JUL 22	32457	32520	-63.25
AUG 22	4834	4781	53	AUG 22	31126	31166	-40.25
SEP 22	4229	4181	48	SEP 22	30720	30661	59.5
OCT 22	7986	7941	45	OCT 22	34865	34913	-48
NOV 22	5215	5269	-54	NOV 22	31495	31505	-10
DEC 22	5656	5617	39	DEC 22	33836	33847	-10.75
JAN 23	4799	4800	-1	JAN 23	15136	15049	87.5
FEB 23	1133	1133	0	FEB 23	14107	14008	99
MAR 23	2556	2556	0	MAR 23	14050	13909	141.75
APR 23	2368	2368	0	APR 23	13188	13077	110.75
MAY 23	451	451	0	MAY 23	12309	12195	114.25





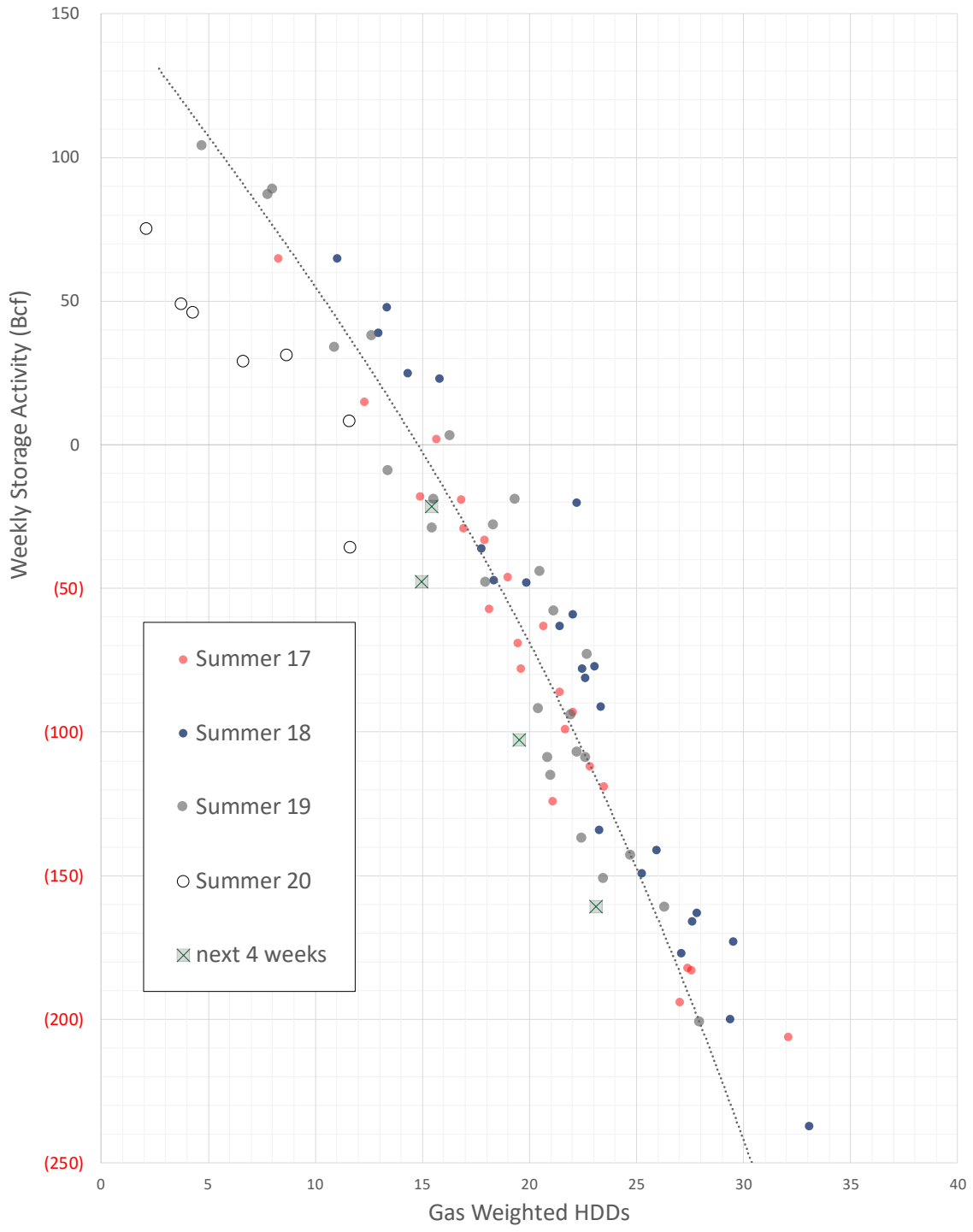
	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21
Current Price	\$2.750	\$2.871	\$2.854	\$2.789	\$2.684	\$2.672	\$2.712	\$2.767	\$2.786	\$2.784	\$2.814	\$2.888
Last Week	\$2.712	\$2.838	\$2.818	\$2.767	\$2.680	\$2.684	\$2.728	\$2.784	\$2.805	\$2.794	\$2.828	\$2.912
vs. Last Week	\$0.038	\$0.033	\$0.036	\$0.022	\$0.004	-\$0.012	-\$0.016	-\$0.017	-\$0.019	-\$0.010	-\$0.014	-\$0.024
4 Weeks Ago	\$2.996	\$3.291	\$3.411	\$3.363	\$3.236	\$2.970	\$2.929	\$2.960	\$3.000	\$3.011	\$2.999	\$3.034
vs. 4 Weeks Ago	-\$0.246	-\$0.420	-\$0.557	-\$0.574	-\$0.552	-\$0.298	-\$0.217	-\$0.193	-\$0.214	-\$0.227	-\$0.185	-\$0.146
Last Year	\$2.501	\$2.470	\$2.383	\$2.272	\$2.270	\$2.312	\$2.361	\$2.377	\$2.368	\$2.402	\$2.474	\$2.650
vs. Last Year	\$0.249	\$0.401	\$0.471	\$0.517	\$0.414	\$0.360	\$0.351	\$0.390	\$0.418	\$0.382	\$0.340	\$0.238

	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	1.98	3.85	1.87
TETCO M3	\$/MMBtu	1.55	2.36	0.81
FGT Zone 3	\$/MMBtu	2.20	2.75	0.55
Zone 6 NY	\$/MMBtu	2.20	2.93	0.73
Chicago Citygate	\$/MMBtu	2.25	2.52	0.27
Michcon	\$/MMBtu	2.31	2.46	0.15
Columbia TCO Pool	\$/MMBtu	2.06	1.90	-0.16
Ventura	\$/MMBtu	2.22	2.56	0.34
Rockies/Opal	\$/MMBtu	3.10	2.50	-0.60
El Paso Permian Basin	\$/MMBtu	2.19	2.35	0.16
Socal Citygate	\$/MMBtu	3.82	3.21	-0.61
Malin	\$/MMBtu	2.93	3.13	0.20
Houston Ship Channel	\$/MMBtu	2.33	2.66	0.33
Henry Hub Cash	\$/MMBtu	2.23	2.47	0.24
AECO Cash	C\$/GJ	2.13	2.17	0.04
Station2 Cash	C\$/GJ	2.05	3.89	1.84
Dawn Cash	C\$/GJ	2.22	2.47	0.25

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks Ago	vs. Last Year
NatGas Jan21/Apr21	\$/MMBtu	-0.187	▼ -0.029	▲ 0.254	▲ 0.252
NatGas Mar21/Apr21	\$/MMBtu	-0.105	▼ -0.018	▼ -0.371	▼ -0.369
NatGas Oct21/Nov21	\$/MMBtu	0.074	▼ -0.010	▲ 0.013	▲ 0.005
NatGas Apr21/Oct21	\$/MMBtu	0.130	▲ 0.120	▼ -0.247	▼ -0.253
WTI Crude	\$/Bbl	45.21	▲ 3.390	▲ 7.820	▼ -12.900
Brent Crude	\$/Bbl	48.20	▲ 3.860	▲ 9.080	▼ -15.860
Fuel Oil, NY Harbour 1%	\$/Bbl	98.03	▲ 0.000	▲ 0.000	▲ 0.000
Heating Oil	cents/Gallon	136.70	▲ 10.300	▲ 25.280	▼ -57.950
Propane, Mt. Bel	cents/Gallon	0.54	▼ -0.001	▲ 0.023	▲ 0.014
Ethane, Mt. Bel	cents/Gallon	0.22	▼ -0.003	▲ 0.000	▲ 0.018
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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