

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 2.91 ▲	\$ 0.03 ▲	\$ 0.04 ▲

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 44.23 ▼	\$ (0.32) ▼	\$ (1.2) ▼

	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 47.17 ▼	\$ (0.25) ▼	\$ (0.8) ▼

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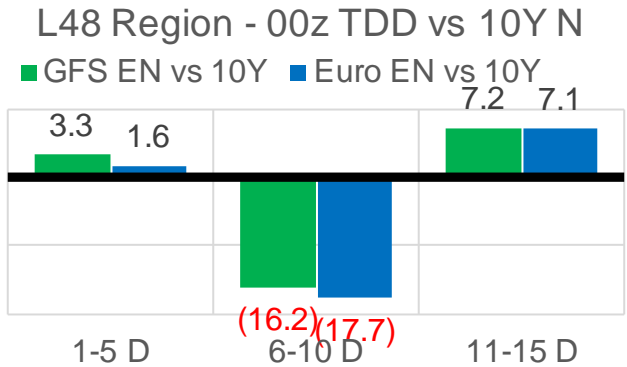
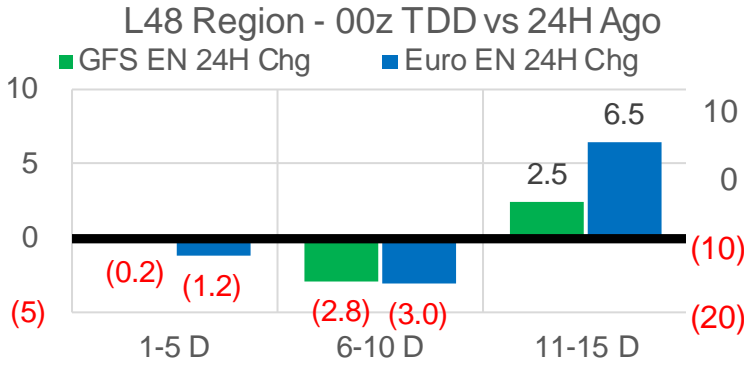
[Weather Model Storage Projection](#)

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	Current	Δ from YD	Δ from 7D Avg
US Dry Production	91.0 ▼	-0.16 ▼	-0.52 ▼

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	28.8 ▼	-0.04 ▼	3.82 ▲

	Current	Δ from YD	Δ from 7D Avg
US ResComm	38.7 ▼	-1.00 ▼	8.14 ▲

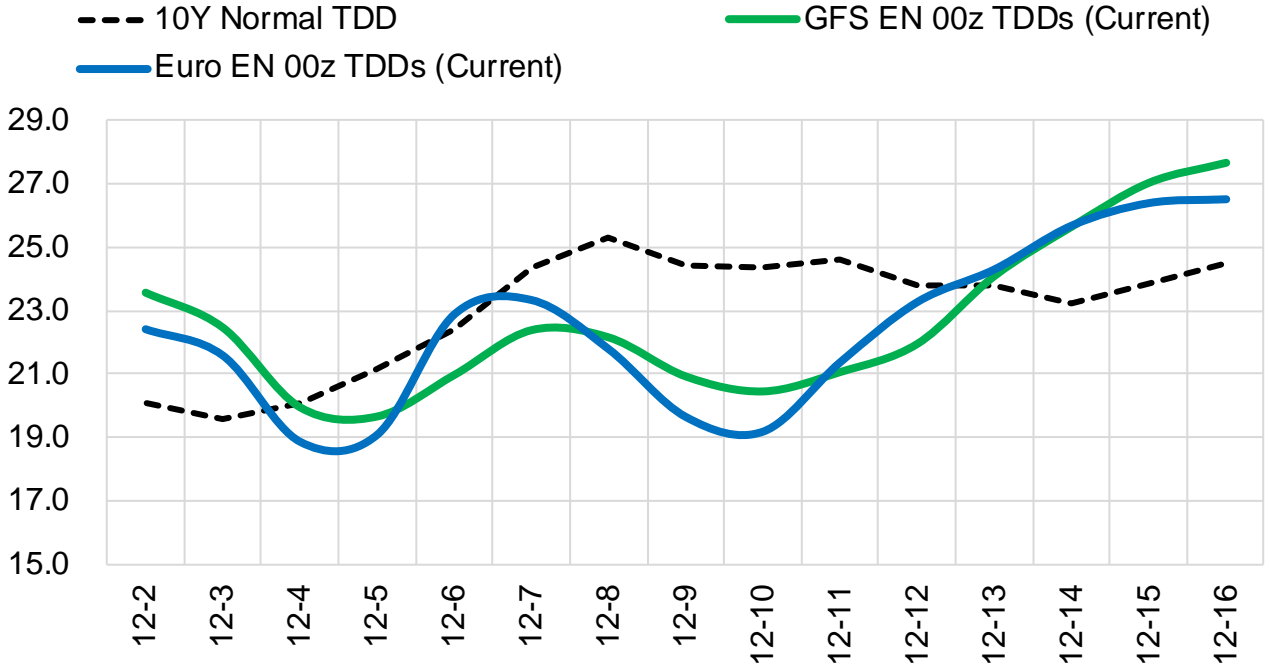
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	5.8 ▲	0.14 ▲	0.97 ▲

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	11.3 ▲	0.53 ▲	1.05 ▲

	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.7 ▲	0.05 ▲	0.28 ▲

Short-term Weather Model Outlooks (00z)

L48 Region



Source: WSI , Bloomberg

Lower 48 Component Models

Daily Balances

	26-Nov	27-Nov	28-Nov	29-Nov	30-Nov	1-Dec	2-Dec	DoD	vs. 7D
Lower 48 Dry Production	91.3	91.1	91.5	91.6	92.5	91.2	91.0	▼0.2	▼-0.5
Canadian Imports	4.5	4.5	4.7	4.8	5.0	5.6	5.8	▲0.1	▲0.9
L48 Power	22.5	22.5	23.4	23.8	28.9	28.9	28.8	▼0.0	▲3.8
L48 Residential & Commercial	24.2	26.8	29.8	31.6	35.0	39.7	38.7	▼-1.0	▲7.5
L48 Industrial	22.7	22.8	23.0	23.3	24.1	24.4	23.9	▼-0.5	▲0.5
L48 Lease and Plant Fuel	5.0	5.0	5.1	5.1	5.1	5.1	5.0	▼0.0	▼0.0
L48 Pipeline Distribution	2.2	2.3	2.5	2.6	3.0	3.1	3.1	▼0.0	▲0.5
L48 Regional Gas Consumption	76.6	79.5	83.8	86.4	96.1	101.2	99.6	▼-1.6	▲12.4
Net LNG Delivered	10.05	9.32	10.38	10.39	10.82	10.78	11.31	▲0.5	▲1.0
Total Mexican Exports	6.5	6.6	6.2	6.2	6.4	6.7	6.7	▲0.1	▲0.3
Implied Daily Storage Activity	2.6	0.3	-4.2	-6.6	-15.8	-21.8	-20.8		
EIA Reported Daily Storage Activity									
Daily Model Error									

EIA Storage Week Balances

	23-Oct	30-Oct	6-Nov	13-Nov	20-Nov	27-Nov	WoW	vs. 4W
Lower 48 Dry Production	89.2	87.4	89.6	88.2	90.9	91.6	▲0.7	▲2.6
Canadian Imports	3.6	4.8	4.9	3.9	5.1	4.5	▼-0.6	▼-0.2
L48 Power	28.6	28.0	24.6	24.4	24.6	24.8	▲0.1	▼-0.6
L48 Residential & Commercial	16.1	22.7	23.1	16.8	27.2	26.7	▼-0.5	▲4.2
L48 Industrial	22.5	24.1	23.0	24.0	23.4	23.1	▼-0.3	▼-0.5
L48 Lease and Plant Fuel	4.9	4.8	4.9	4.9	5.0	5.1	▲0.0	▲0.1
L48 Pipeline Distribution	2.2	2.5	2.3	1.9	2.4	2.4	▼0.0	▲0.1
L48 Regional Gas Consumption	74.2	82.1	78.0	72.1	82.7	82.0	▼-0.7	▲3.3
Net LNG Exports	8.0	9.2	10.2	10.4	10.2	9.7	▼-0.4	▼-0.3
Total Mexican Exports	6.3	6.2	6.0	6.3	6.1	6.3	▲0.2	▲0.2
Implied Daily Storage Activity	4.2	-5.3	0.3	3.4	-2.9	-2.0	1.0	
EIA Reported Daily Storage Activity	4.1	-5.1	1.1	4.4	-2.6			
Daily Model Error	0.1	-0.2	-0.8	-1.1	-0.4			

Monthly Balances

	2Yr Ago Dec-18	LY Dec-19	Jul-20	Aug-20	Sep-20	Oct-20	MTD Nov-20	MoM	vs. LY
Lower 48 Dry Production	87.5	95.1	88.2	88.6	87.8	87.5	90.3	▲2.8	▼-4.9
Canadian Imports	4.8	4.5	4.4	4.9	3.8	4.3	5.5	▲1.2	▲1.0
L48 Power	24.4	28.9	43.8	41.0	34.1	29.4	24.9	▼-4.5	▼-4.0
L48 Residential & Commercial	39.3	39.1	7.9	7.7	8.8	16.2	27.5	▲11.2	▼-11.6
L48 Industrial	22.4	24.4	19.2	20.3	19.2	22.3	23.2	▲0.9	▼-1.3
L48 Lease and Plant Fuel	4.9	5.3	4.9	4.9	4.9	4.8	5.0	▲0.2	▼-0.3
L48 Pipeline Distribution	2.8	3.1	2.4	2.4	2.2	2.2	2.4	▲0.2	▼-0.7
L48 Regional Gas Consumption	93.9	100.7	78.3	76.3	69.1	74.9	82.9	▲8.0	▼-17.9
Net LNG Exports	4.5	7.8	3.3	4.0	5.9	8.0	10.1	▲2.1	▲2.3
Total Mexican Exports	4.5	5.0	6.1	6.3	6.4	6.2	5.9	▼-0.3	▲0.9
Implied Daily Storage Activity	-10.7	-13.9	4.9	6.8	10.2	2.7	-3.1		
EIA Reported Daily Storage Activity									
Daily Model Error									

Source: Bloomberg, analytix.ai

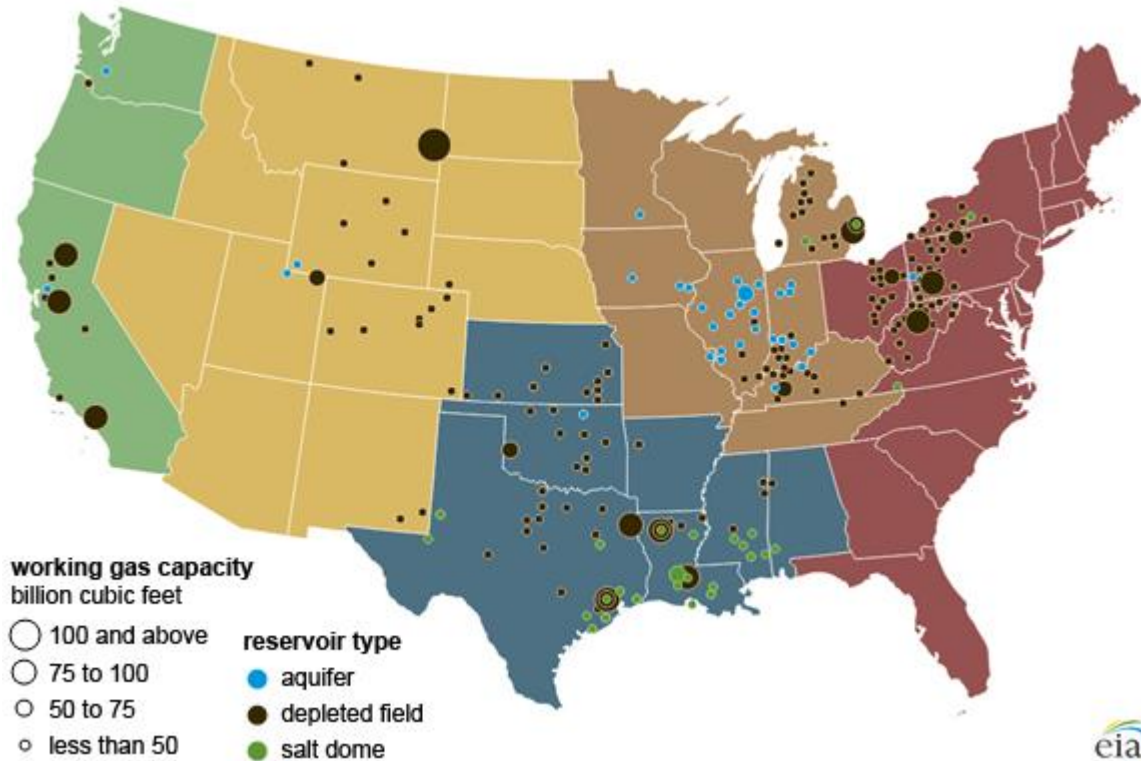
Regional S/D Models Storage Projection

Week Ending 27-Nov

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	-2.1	0.9	-1.2	-8
East	-2.6	1.6	-1.0	-7
Midwest	-1.5	0.3	-1.3	-9
Mountain	3.2	-3.5	-0.3	-2
South Central	-1.1	2.5	1.5	10
Pacific	-0.1	0.0	-0.1	0

*Adjustment Factor is calculated based on historical regional deltas

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

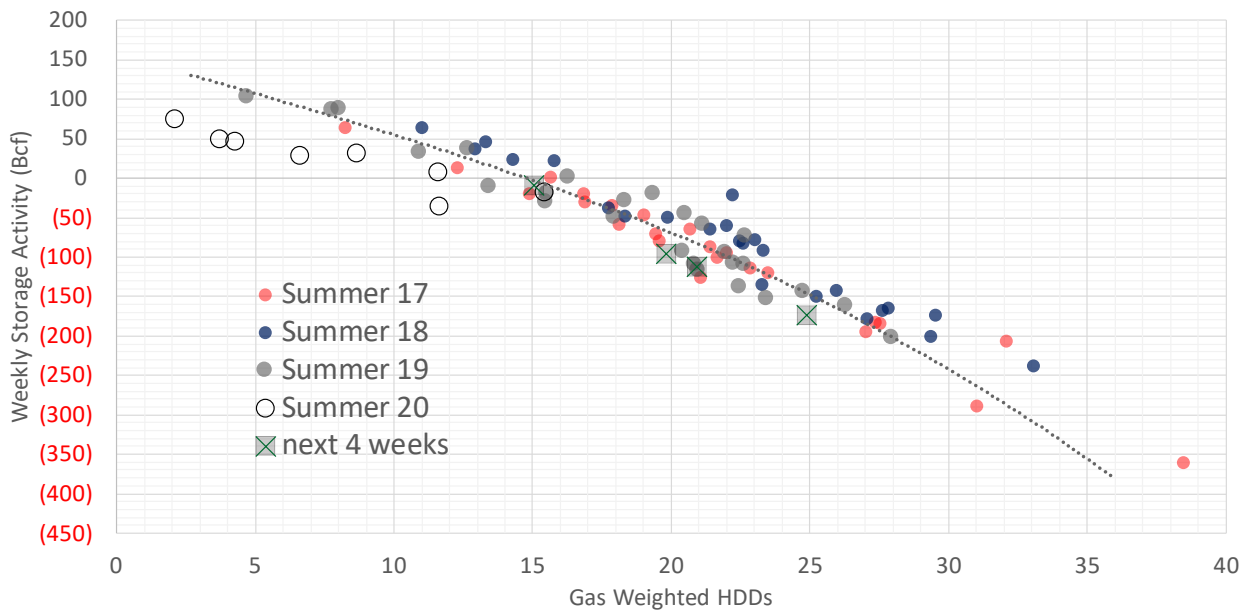


Weather Model Storage Projection

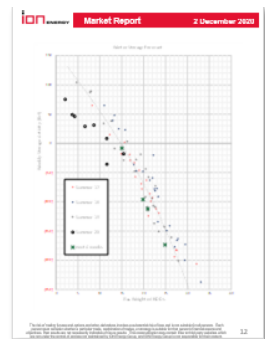
Next report
and beyond

Week Ending	Temp	Week Storage Projection
27-Nov	15.1	-8
04-Dec	19.8	-96
11-Dec	20.9	-112
18-Dec	24.9	-174

Winter Storage Forecast

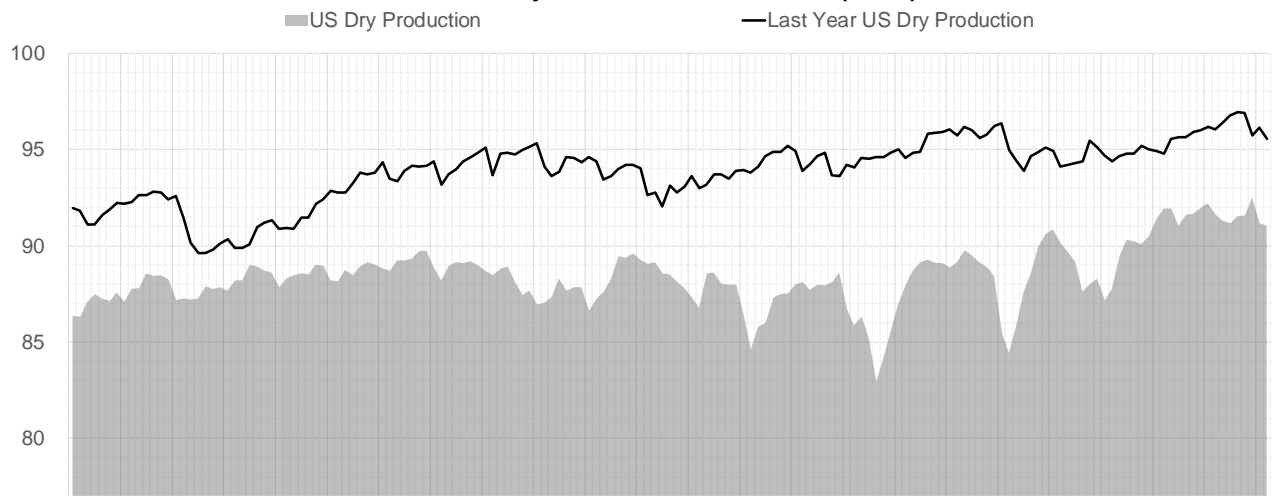


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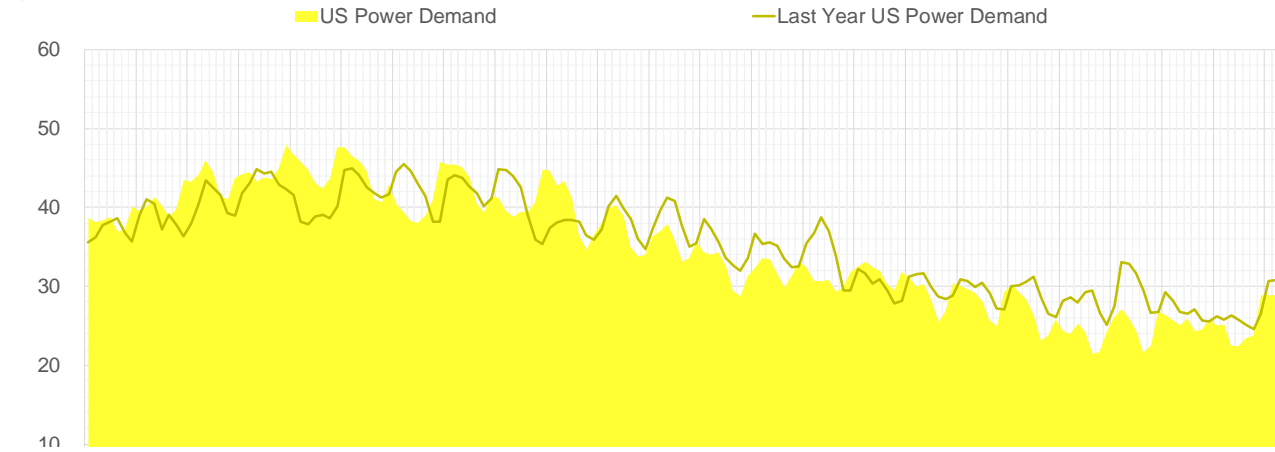


Supply – Demand Trends

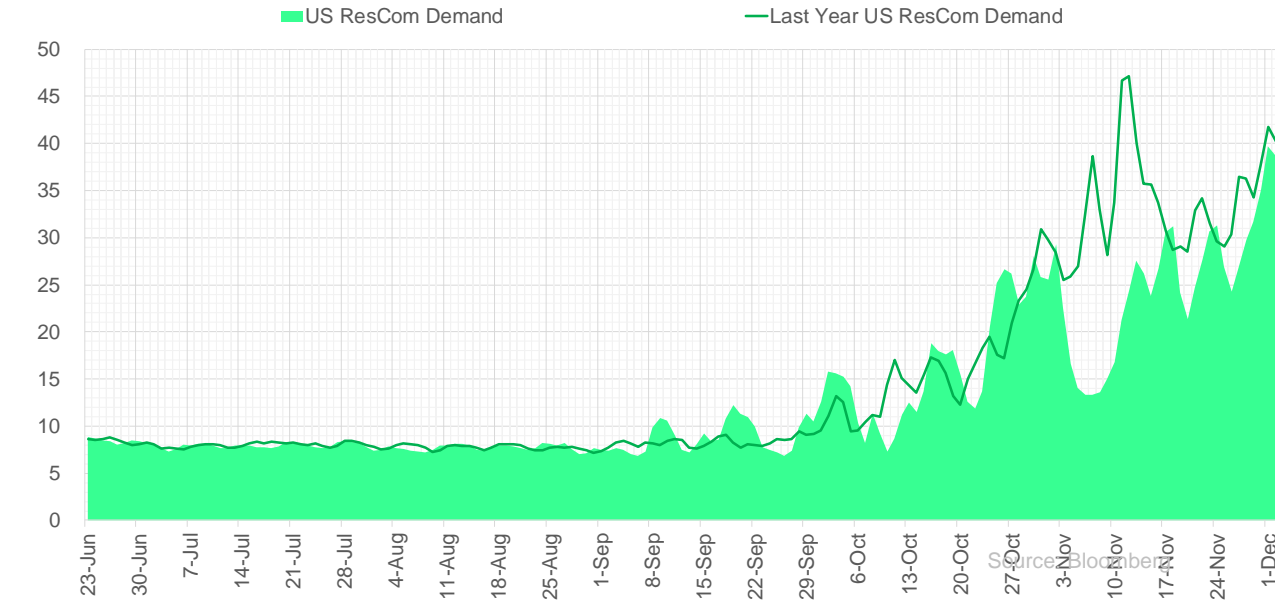
US Dry Natural Gas Production (Bcf/d)



US Daily Power Burns (Bcf/d)

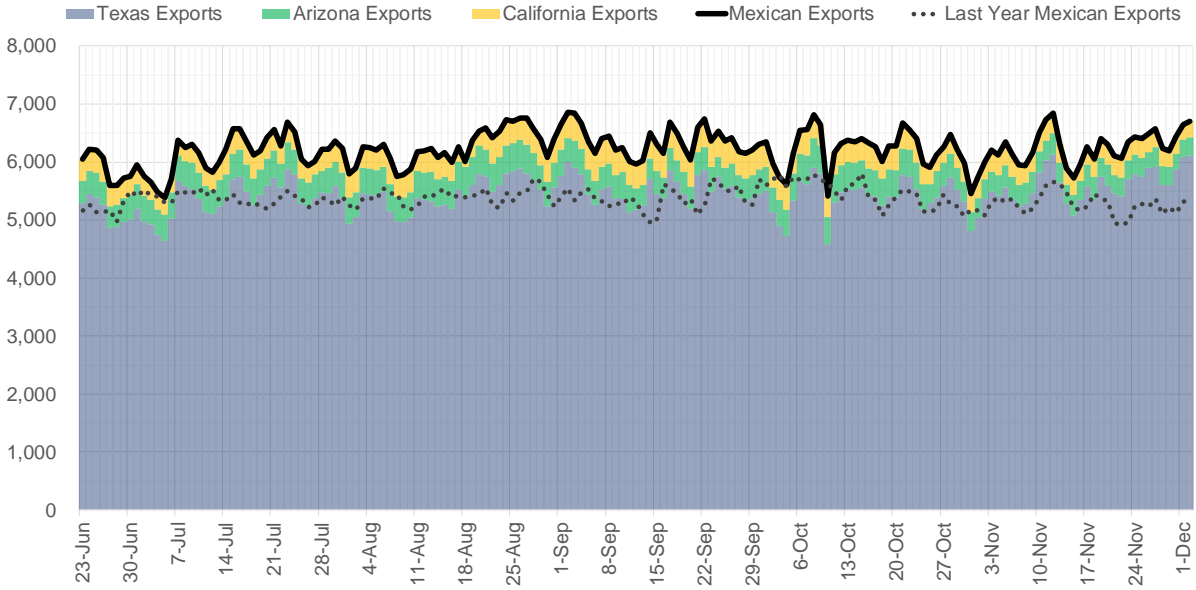


US Daily ResCom Consumption (Bcf/d)

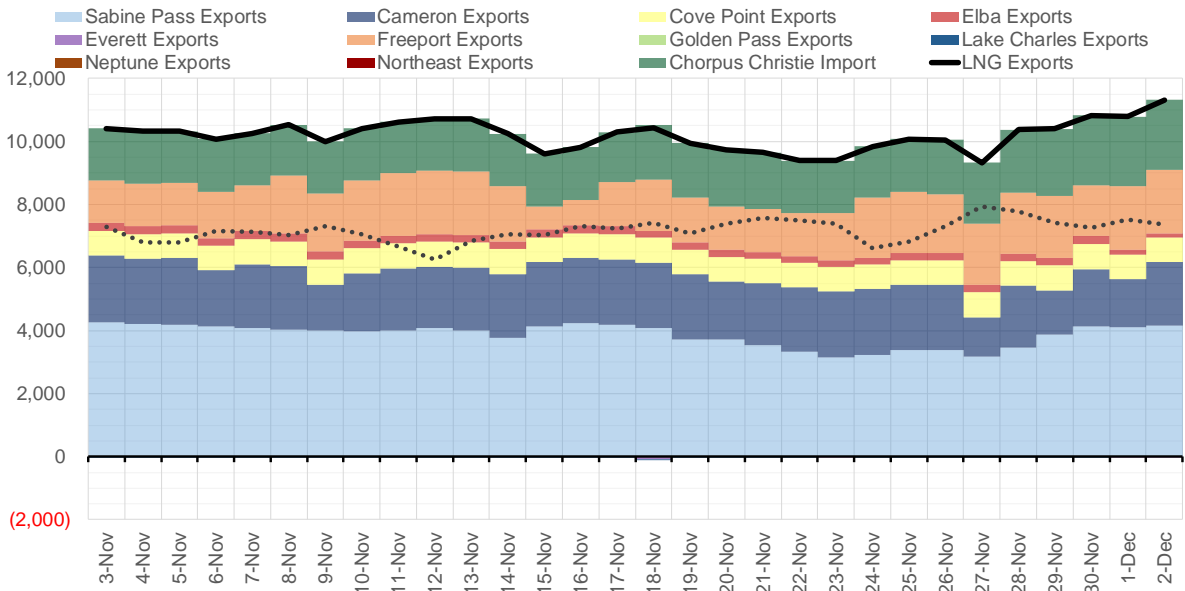


Source: Bloomberg

Mexican Exports (MMcf/d)



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



Source: Bloomberg

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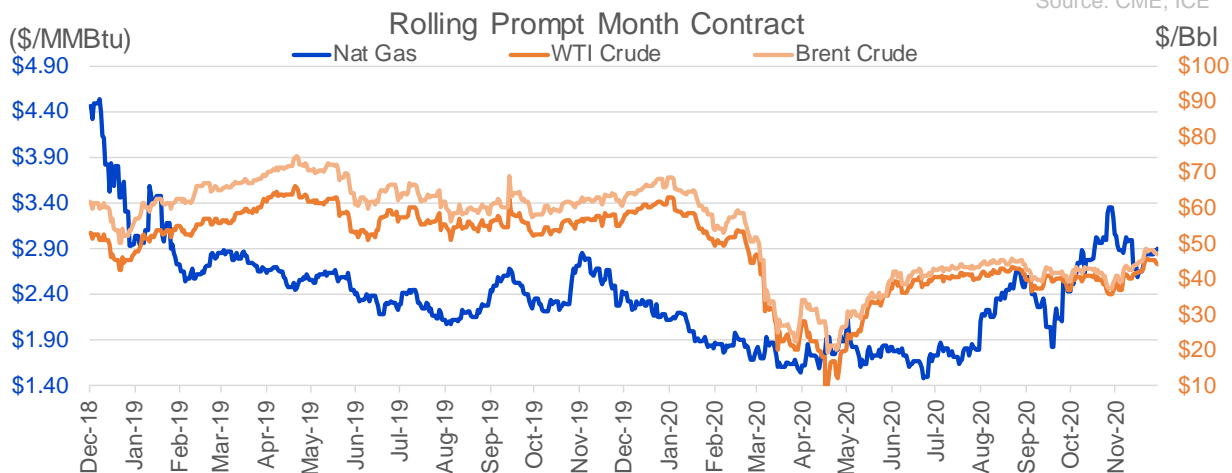
Nat Gas Options Volume and Open Interest CME, ICE and Nasdaq Combined

CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
1	2021	P	2.50	9197	1	2021	C	3.50	40903
1	2021	C	3.50	8911	3	2021	P	2.00	40360
1	2021	C	4.00	7103	3	2021	C	4.00	35827
1	2021	C	3.00	4494	1	2021	P	2.50	29930
1	2021	P	2.75	4486	4	2021	C	4.00	28547
3	2021	C	3.25	3758	4	2021	C	3.50	28071
3	2021	C	5.00	3553	3	2021	C	3.25	27860
1	2021	C	3.25	3300	10	2021	C	4.00	27636
3	2021	C	4.00	2746	1	2021	C	4.50	26562
3	2021	P	2.25	2625	3	2021	C	6.00	26210
3	2021	C	3.75	2548	1	2021	C	5.00	25742
1	2021	C	4.20	2366	3	2021	C	5.00	24899
1	2021	P	2.90	2333	1	2021	C	4.00	24428
1	2021	P	2.60	2324	2	2021	P	2.25	24340
1	2021	C	3.90	2158	10	2021	C	3.25	24002
2	2021	P	2.25	2010	3	2021	C	7.00	23989
4	2021	C	3.50	2010	3	2021	C	3.00	23136
4	2021	C	4.75	2000	3	2021	C	3.50	22944
5	2021	C	3.50	2000	1	2021	C	3.00	22909
6	2021	C	3.50	2000	3	2021	C	4.50	22386
7	2021	C	3.50	2000	1	2021	C	3.75	22088
8	2021	C	3.50	2000	3	2021	P	2.50	22052
9	2021	C	3.50	2000	2	2021	C	3.50	21802
10	2021	C	3.50	2000	1	2021	C	6.00	21139
3	2021	C	3.50	1935	4	2021	C	3.25	20734
2	2021	C	4.00	1706	2	2021	P	2.50	20555
1	2021	P	2.25	1615	8	2021	C	4.00	19759
1	2021	P	2.65	1385	2	2021	C	4.00	18986
3	2021	C	6.00	1385	4	2021	C	5.00	18828
1	2021	C	3.40	1342	10	2021	C	5.00	18574
2	2021	C	3.50	1330	1	2021	P	2.00	18249
4	2021	C	3.00	1300	8	2021	P	2.25	18217
4	2021	C	3.75	1250	1	2021	C	3.25	18113
2	2021	C	3.25	1236	5	2021	C	3.00	18013
3	2021	C	2.75	1200	4	2021	C	2.75	17236
5	2021	C	3.00	1123	2	2021	C	5.00	16940
6	2021	C	3.00	1100	1	2021	P	2.25	16666
7	2021	C	3.00	1100	4	2021	C	3.00	15808
8	2021	C	3.00	1100	4	2021	P	2.00	15460
9	2021	C	3.00	1100	10	2021	C	3.00	15289
10	2021	C	3.00	1100	5	2021	C	3.50	14763
2	2021	P	2.75	1080	1	2021	P	3.00	13823
1	2021	C	4.50	1036	6	2021	C	4.00	13681
2	2021	C	3.00	1008	2	2021	C	4.50	13605
1	2021	P	2.80	946	1	2021	C	7.00	13527
1	2021	C	3.75	913	5	2021	C	3.25	13496
3	2021	P	2.70	867	6	2021	P	2.50	13285
2	2021	P	2.50	845	2	2021	C	3.00	13128
2	2021	P	1.75	804	2	2021	P	2.00	13013
					4	2021	P	2.25	12950

Source: CME, ICE

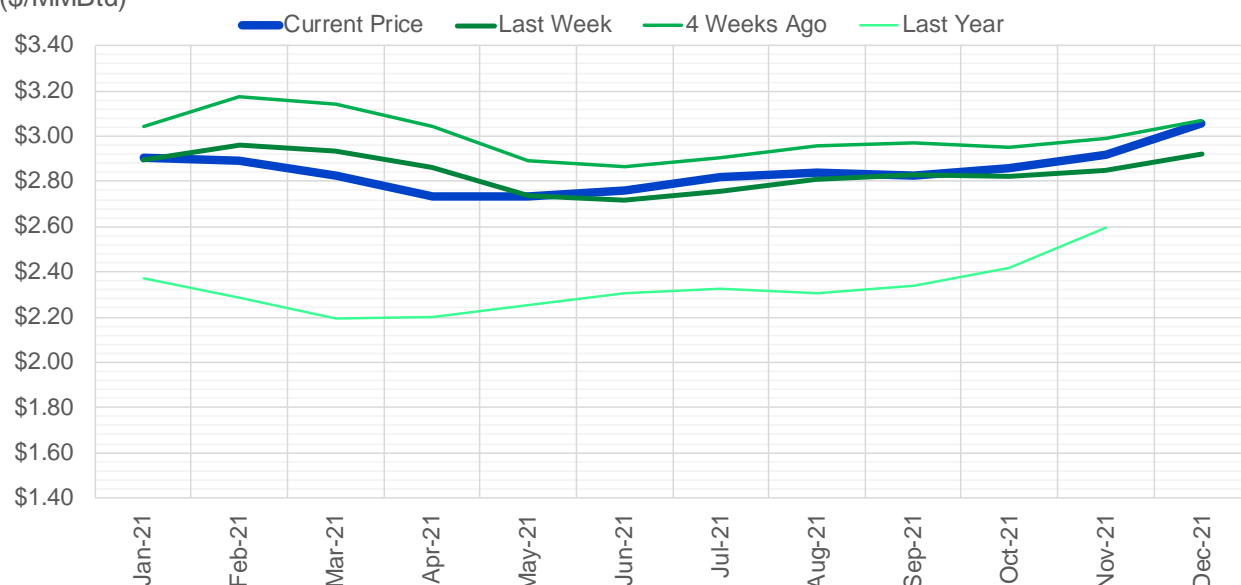
Nat Gas Futures Open Interest CME, and ICE Combined

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	299999	297347	2652	JAN 21	102079	104292	-2213.5
FEB 21	97335	96056	1279	FEB 21	71429	71482	-53.25
MAR 21	194305	195005	-700	MAR 21	93189	92420	769.25
APR 21	86188	83445	2743	APR 21	70339	71354	-1014.25
MAY 21	55403	54336	1067	MAY 21	72934	72727	207
JUN 21	37323	37026	297	JUN 21	61262	60918	343.25
JUL 21	29648	30228	-580	JUL 21	62762	62376	385.75
AUG 21	26219	26233	-14	AUG 21	64256	64077	178.75
SEP 21	37747	38130	-383	SEP 21	59310	59067	243.25
OCT 21	92138	91883	255	OCT 21	73171	73194	-22.75
NOV 21	39617	39924	-307	NOV 21	51871	51772	99.5
DEC 21	33259	33244	15	DEC 21	50334	50148	186
JAN 22	33758	32740	1018	JAN 22	47604	47611	-7.5
FEB 22	22452	22364	88	FEB 22	38322	38323	-0.75
MAR 22	26700	26224	476	MAR 22	40867	40869	-2.5
APR 22	24317	24050	267	APR 22	40957	40880	77
MAY 22	12493	12465	28	MAY 22	32127	32008	119.5
JUN 22	6678	6561	117	JUN 22	31090	31005	84.5
JUL 22	5735	5669	66	JUL 22	32654	32537	116.75
AUG 22	5035	4933	102	AUG 22	31218	31168	49.75
SEP 22	4449	4340	109	SEP 22	31049	30981	67.5
OCT 22	8197	8090	107	OCT 22	35230	35132	98.75
NOV 22	5868	5489	379	NOV 22	31577	31419	157.75
DEC 22	6311	6223	88	DEC 22	34034	33850	183.75
JAN 23	4905	4904	1	JAN 23	15338	15279	59.25
FEB 23	1130	1134	-4	FEB 23	14451	14237	214
MAR 23	2562	2555	7	MAR 23	14275	14193	82.25
APR 23	2368	2368	0	APR 23	13333	13305	28
MAY 23	451	451	0	MAY 23	12388	12357	31
JUN 23	517	517	0	JUN 23	12301	12278	23



(\$/MMBtu)

Nat Gas Term Structure



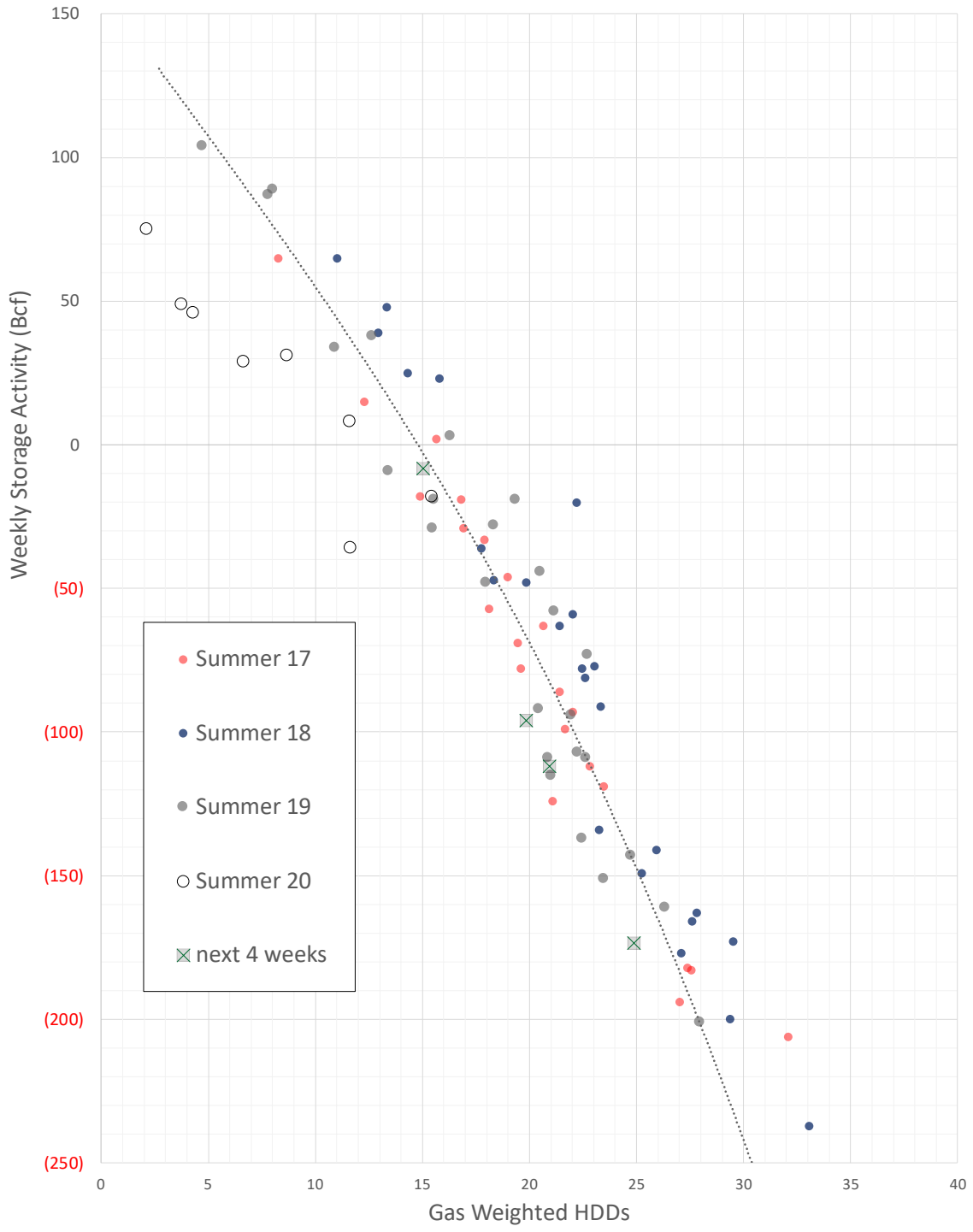
	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21
Current Price	\$2.906	\$2.889	\$2.826	\$2.733	\$2.732	\$2.760	\$2.821	\$2.837	\$2.827	\$2.857	\$2.921	\$3.059
Last Week	\$2.896	\$2.961	\$2.936	\$2.865	\$2.734	\$2.718	\$2.754	\$2.807	\$2.827	\$2.822	\$2.851	\$2.924
vs. Last Week	\$0.010	-\$0.072	-\$0.110	-\$0.132	-\$0.002	\$0.042	\$0.067	\$0.030	\$0.000	\$0.035	\$0.070	\$0.135
4 Weeks Ago	\$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. 4 Weeks Ago	-\$0.140	-\$0.288	-\$0.314	-\$0.312	-\$0.162	-\$0.108	-\$0.087	-\$0.120	-\$0.141	-\$0.096	-\$0.070	-\$0.009
Last Year	\$2.399	\$2.374	\$2.288	\$2.192	\$2.203	\$2.253	\$2.307	\$2.322	\$2.308	\$2.337	\$2.416	\$2.595
vs. Last Year	\$0.507	\$0.515	\$0.538	\$0.541	\$0.529	\$0.507	\$0.514	\$0.515	\$0.519	\$0.520	\$0.505	\$0.464

	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	2.74	3.74	1.00
TETCO M3	\$/MMBtu	2.31	2.36	0.05
FGT Zone 3	\$/MMBtu	2.63	2.90	0.27
Zone 6 NY	\$/MMBtu	2.63	2.64	0.01
Chicago Citygate	\$/MMBtu	2.53	1.73	-0.80
Michcon	\$/MMBtu	2.48	2.59	0.11
Columbia TCO Pool	\$/MMBtu	2.35	2.04	-0.31
Ventura	\$/MMBtu	2.50	2.62	0.12
Rockies/Opal	\$/MMBtu	3.14	2.63	-0.51
El Paso Permian Basin	\$/MMBtu	2.63	2.30	-0.33
Socal Citygate	\$/MMBtu	4.76	3.23	-1.53
Malin	\$/MMBtu	3.15	3.26	0.11
Houston Ship Channel	\$/MMBtu	2.75	2.81	0.06
Henry Hub Cash	\$/MMBtu	2.81	2.62	-0.19
AECO Cash	C\$/GJ	2.04	2.24	0.20
Station2 Cash	C\$/GJ	2.01	3.91	1.90
Dawn Cash	C\$/GJ	2.52	2.59	0.07

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks Ago	vs. Last Year
NatGas Jan21/Apr21	\$/MMBtu	-0.173	▲ 0.054	▲ 0.110	▲ 0.246
NatGas Mar21/Apr21	\$/MMBtu	-0.093	▲ 0.038	▼ -0.244	▼ -0.355
NatGas Oct21/Nov21	\$/MMBtu	0.064	▼ -0.009	▼ -0.013	▼ -0.007
NatGas Apr21/Oct21	\$/MMBtu	0.124	▲ 0.014	▼ -0.062	▼ -0.219
WTI Crude	\$/Bbl	44.23	▼ -1.480	▲ 5.080	▼ -14.200
Brent Crude	\$/Bbl	47.17	▼ -1.440	▲ 5.940	▼ -15.830
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18	▲ 0.000	▲ 0.000	▲ 0.000
Heating Oil	cents/Gallon	134.39	▼ -4.270	▲ 17.040	▼ -57.900
Propane, Mt. Bel	cents/Gallon	0.57	▲ 0.019	▲ 0.003	▲ 0.034
Ethane, Mt. Bel	cents/Gallon	0.20	▼ -0.019	▼ -0.028	▲ 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	▼ -4.000
Coal, ILB	\$/MMBtu	1.32			

Winter Storage Forecast



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