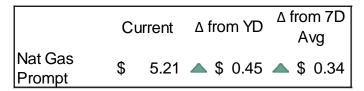


2 February 2022



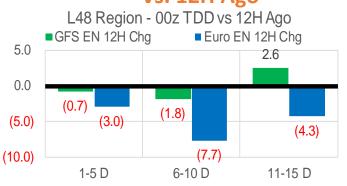
	С	urrent	Δf	ro	m YD		m 7D vg
WTI Prompt	\$	89.08		\$	0.88	\$	1.8

	_	urrent	Λ fr	om VD	∆ fro	m 7D
	C	urreni	ΔΙΙ	טוו ווט	Α	vg
Brent Prompt	\$	89.88	A §	0.72	- \$	(0.1)

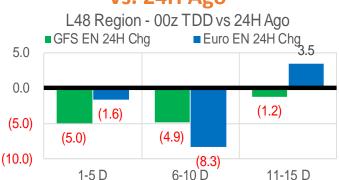
Page Menu

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

Vs. 12H Ago



Vs. 24H Ago



	Current	Δ from YD	Δ from 7D Avg
US Dry Production	91.8	▼ -3.00	▼ -3.80

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	29.4	1.28	▼ -0.78

	Current	Δfr	om YD	Δ from 7D Avg
US ResComm	42.2		1.60	▼ -8.31

	Current	Δfı	rom YD	Δf	rom 7D Avg
Canadian Imports	7.1	_	0.16		0.12

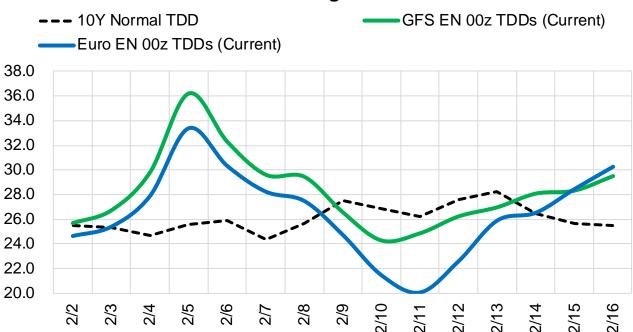
	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	12.2	0.27	- 0.03

	Current	Δ from YD	Δ from 7D Avg		
Mexican Exports	6.4	0.05	- 0.03		

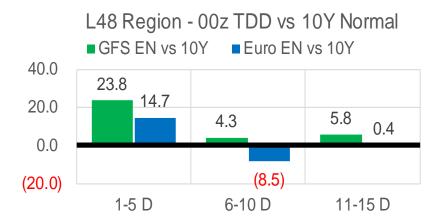


Short-term Weather Model Outlooks (00z)

L48 Region



Vs. 10Y Normal



Source: WSI, Bloomberg



Lower 48 Component Models

Daily Balances

	27-Jan	28-Jan	29-Jan	30-Jan	31-Jan	1-Feb	2-Feb	DoD	vs. 7D
Lower 48 Dry Production	95.0	96.0	96.0	96.3	96.5	94.8	91.8	▼ -3.0	▼ -3.9
Canadian Imports	6.6	7.2	6.9	7.0	6.9	6.9	7.1	0.2	0.2
L48 Power	30.8	31.1	30.3	30.4	28.9	28.2	29.4	1.3	- 0.5
L48 Residential & Commercial	51.4	51.5	54.8	50.7	47.0	40.6	42.2	1.6	▼ -7.1
L48 Industrial	27.7	28.9	29.6	29.2	28.8	27.9	27.5	▼ -0.4	▼ -1.2
L48 Lease and Plant Fuel	5.2	5.2	5.3	5.3	5.3	5.2	5.0	▼ -0.2	▼ -0.2
L48 Pipeline Distribution	4.0	4.0	4.1	3.9	3.7	3.3	3.4	0.1	- 0.4
L48 Regional Gas Consumption	119.2	120.8	124.0	119.6	113.7	105.2	107.6	2.4	▼ -9.5
Net LNG Delivered	12.74	12.43	12.61	11.85	11.21	12.00	12.19	0.2	▲ 0.1
Total Mexican Exports	6.5	6.3	6.2	6.3	6.5	6.3	6.4	▲ 0.0	0.0
Implied Daily Storage Activity EIA Reported Daily Storage Activity	-36.8	-36.5	-40.0	-34.5	-27.9	-21.7	-27.2		
Daily Model Error									

EIA Storage Week Balances

	24-Dec	31-Dec	7-Jan	14-Jan	21-Jan	28-Jan	WoW	vs. 4W
Lower 48 Dry Production	96.6	98.4	94.9	95.0	94.7	94.5	▼ -0.2	▼-1.3
Canadian Imports	5.0	4.2	5.7	6.5	7.0	7.1	0.1	1.3
L48 Power	29.9	26.3	29.8	30.4	30.3	32.1	1.8	2 .9
L48 Residential & Commercial	38.3	31.8	42.9	46.3	47.1	52.8	5.7	1 0.7
L48 Industrial	26.0	23.7	27.3	26.8	28.1	29.6	1.5	3.1
L48 Lease and Plant Fuel	5.2	5.3	5.2	5.2	5.2	5.2	▼ 0.0	▼ -0.1
L48 Pipeline Distribution	3.4	2.9	3.5	3.7	3.8	4.1	0.4	a 0.6
L48 Regional Gas Consumption	102.8	90.1	108.7	112.4	114.4	123.7	9.3	17.3
Net LNG Exports	12.7	12.3	11.9	12.3	12.9	12.5	▼ -0.4	0.2
Total Mexican Exports	6.1	5.8	5.9	6.3	6.4	6.5	▲ 0.0	0.3
Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error	-20.0 -19.4 -0.6	-5.5 -4.4 -1.1	-25.9 -25.6 -0.3	-29.5 -29.4 -0.1	-32.0 -31.3 -0.8	-41.1	-9.0	

Monthly Balances									
	2Yr Ago	LY					MTD		
	Feb-20	Feb-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	MoM	vs. LY
Lower 48 Dry Production	94.2	84.3	94.3	95.6	96.9	94.9	94.8	▼ 0.0	▲10.5
Canadian Imports	5.3	6.4	5.4	5.3	4.8	6.7	6.9	0.2	0.6
L48 Power	30.2	27.6	30.5	29.1	28.4	30.7	28.2	▼ -2.6	0.5
L48 Residential & Commercial	40.6	48.1	12.4	27.1	32.6	48.3	40.6	▼ -7.7	▼ -7.4
L48 Industrial	25.1	21.1	21.1	24.3	25.1	27.7	27.9	0.2	6.9
L48 Lease and Plant Fuel	5.1	4.6	5.2	5.2	5.3	5.2	5.2	▼ 0.0	a 0.6
L48 Pipeline Distribution	3.5	3.6	2.4	2.9	3.0	3.8	3.3	▼ -0.6	▼-0.3
L48 Regional Gas Consumption	104.5	104.9	71.6	88.7	94.4	115.8	105.2	▼-10.7	0.2
Net LNG Exports	8.5	8.4	10.6	11.4	12.1	12.4	12.0	▼-0.4	3.6
Total Mexican Exports	5.2	5.7	6.6	6.1	6.1	6.3	6.3	▲ 0.0	0.6
Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error	-18.7	-28.4	10.9	-5.3	-11.0	-32.9	-21.7		



Daily Average Generation Data

Nuclear Generation Daily Average - GWh (NRC)

	25-Jan	26-Jan	27-Jan	28-Jan	29-Jan	30-Jan	31-Jan	DoD	vs. 7D
NRC Nuclear Daily Output	88.5	88.8	89.3	88.9	89.8	89.6	89.6	0.1	0.5
NRC Nuclear Max Capacity	104.9	104.9	104.9	104.9	104.9	104.9	104.9	0.0	0.0
NRC Nuclear Outage	16.4	16.1	15.6	15.9	15.1	15.3	15.2	-0.1	-0.5
NRC % Nuclear Cap Utilization	90.0	90.3	90.8	90.4	91.3	91.1	91.1	0.1	0.5

Wind Generation Daily Average - MWh (EIA)

	25-Jan	26-Jan	27-Jan	28-Jan	29-Jan	30-Jan	31-Jan	DoD	vs. 7D
CALI Wind	1612	648	1080	1293	799	1038	2063	1025	985
TEXAS Wind	11708	7315	6744	9646	10115	10315	9531	-784	224
US Wind	41872	41872	49737	40068	48485	37156	53483	16326	10284

Generation Daily Average - MWh (EIA)

	25-Jan	26-Jan	27-Jan	28-Jan	29-Jan	30-Jan	31-Jan	DoD	vs. 7D
US Wind	41872	41872	49737	40068	48485	37156	53483	16326	10284
US Solar	9342	9527	10633	9530	10247	12155	9716	-2439	-523
US Petroleum	5892	5130	5365	5235	5564	6345	6204	-141	615
US Other	9470	9845	9365	9516	10082	9660	9683	24	27
US Coal	128040	134952	132793	133767	135669	134595	126890	-7704	-6412
US Nuke	93631	93941	94240	94418	95134	95024	94848	-176	450
US Hydro	32494	33965	34702	33539	32782	31641	30925	-716	-2262
US Gas	169353	182574	172032	173221	167130	159658	155403	-4255	-15258

See National Wind and Nuclear daily charts



Storage Week Average Generation Data

	24-Dec	31-Dec	7-Jan	14-Jan	21-Jan	28-Jan	WoW	WoW Bcf/d Impact
NRC Nuclear Daily Output	92.1	92.1	91.3	90.6	89.7	89.7	-0.1	0.0
NRC Nuclear Max Capacity	104.9	104.9	104.9	104.9	104.9	104.9	0.0	
NRC Nuclear Outage	12.8	12.8	13.6	14.3	15.1	15.2	0.1	
NRC % Nuclear Cap Utilization	0.1	0.1	0.1	0.1	0.1	0.1	0.0	

Wind Generation Weekly Average - MWh (EIA)

	24-Dec	31-Dec	7-Jan	14-Jan	21-Jan	28-Jan	WoW	WoW Bcf/d Impact
CALI Wind	943	2591	1603	1266	1273	1580	306	-0.1
TEXAS Wind	11007	13891	13603	10192	15630	7185	-8446	1.5
US Wind	48727	53100	57136	50736	55682	44869	-10812	1.9
					4945.7 10%			

Generation Weekly Average - MWh (EIA)

	24-Dec	31-Dec	7-Jan	14-Jan	21-Jan	28-Jan	WoW	WoW Bcf/d Impact
US Wind	48727	53100	57136	50736	55682	44869	-10812	1.9
US Solar	7098	6957	8464	9382	8373	9704	1331	-0.2
US Petroleum	3581	3084	3038	4915	5255	5935	680	-0.1
US Other	8532	7584	8301	8319	7992	9405	1413	-0.3
US Coal	87380	80022	94994	115155	117852	130316	12464	-2.2
US Nuke	97422	97083	96342	95714	94644	94647	3	0.0
US Hydro	32560	31279	34583	34191	34393	34077	-316	0.1
US Gas	166457	136071	154295	161867	156254	176819	20565	

See National Wind and Nuclear daily charts



Monthly Average Generation Data

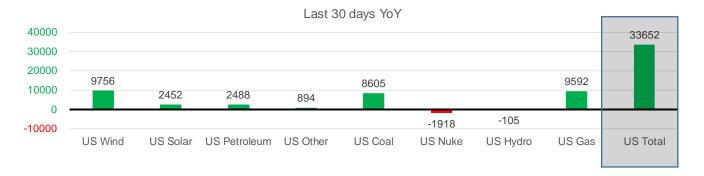
Nuclear Generation Monthly Average - GWh (NRC)										
	2Yr Ago	2Yr Ago LY				MTD				
	Same 30 days	Same 30 days	Nov-21	Dec-21	Jan-22	Feb-22	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY	
NRC Nuclear Daily Output	94.6	91.7	82.8	90.3	90.2	89.8	90.0	-0.4	-1.7	
NRC Nuclear Max Capacity	104.9	104.9	104.9	104.9	104.9	104.9	104.9	0.0	0.0	
NRC Nuclear Outage	10.3	13.2	22.0	14.6	14.7	15.1	14.8	0.4	1.7	
NRC % Nuclear Cap Utilization	96.2	93.2	84.2	91.8	91.7	91.3	91.6	-0.4	-1.7	

Wind Generation Monthly Average - MWh (EIA)

	2Yr Ago	LY				MTD			
	Same 30 days	Same 30 days	Nov-21	Dec-21	Jan-22	Feb-22	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY
CALI Wind	1494	1181	1224	1585	1364	2063	1427	699	247
TEXAS Wind	10165	10411	11678	12927	11355	9531	11052	-1824	641
US Wind	36042	41593	49835	54821	51086	53483	51350	2397	9756

Generation Monthly Average - MWh (EIA)

, ,	2Yr Ago	LY				MTD			
	Same 30 days	Same 30 days	Nov-21	Dec-21	Jan-22	Feb-22	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY
US Wind	36042	41593	49835	54821	51086	53483	51350	▼ -2133.0	9756
US Solar	5424	6914	9687	7376	9269	9716	9366	▼ -349.9	2452
US Petroleum	3645	2782	3022	3134	5003	6204	5270	▼ -934	2488
US Other	9244	7935	8442	8214	8690	9683	8829	▼ -854	894
US Coal	80729	112587	80906	81683	117990	126890	121192	- 5699	8605
US Nuke	95822	97035	87547	95408	95240	94848	95117	268	▼ -1918
US Hydro	33392	33917	26646	30805	34063	30925	33812	2887	▼ -105
US Gas	153556	154687	151967	152503	163497	155403	164279	▼ -6815	9592
US Total	435670	455982	418457	434203	485172	488479	489634	▼-11497	33652



See National Wind and Nuclear daily charts



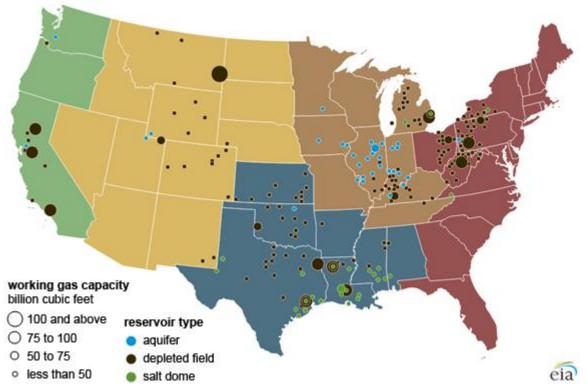
Regional S/D Models Storage Projection

Week Ending 28-Jan

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	-41.3	0.9	-40.4	-283
East	-12.9	1.8	-11.2	-78
Midwest	-11.0	-0.3	-11.3	-79
Mountain	1.5	-3.0	-1.5	-10
South Central	-18.5	2.7	-15.7	-110
Pacific	-0.3	-0.3	-0.7	-5

^{*}Adjustment Factor is calcuated 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	GWDDs	Week Storage Projection
28-Jan	32	-283
04-Feb	29	-219
11-Feb	28	-210
18-Feb	26	-177

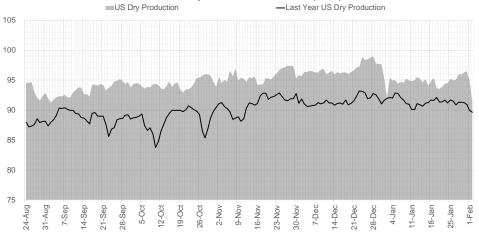
Weather Storage Model - Next 4 Week Forecast



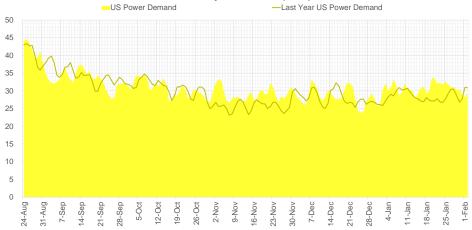


Supply - Demand Trends

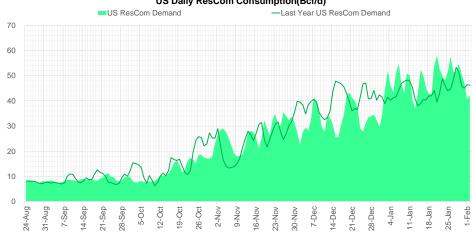
US Dry Natural Gas Production (Bcf/d)



US Daily Power Burns (Bcf/d)



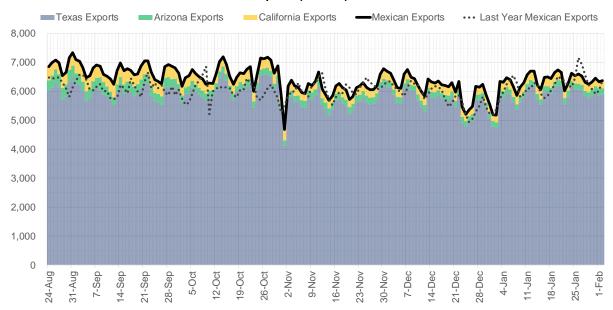
US Daily ResCom Consumption(Bcf/d)



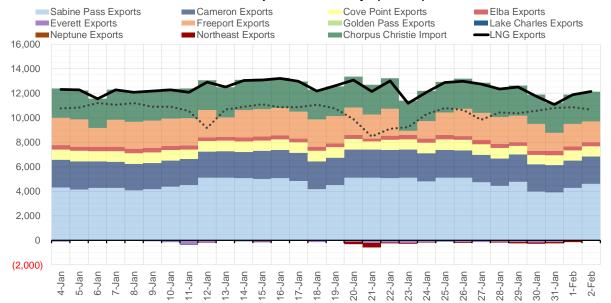
Source: Bloomberg



Mexican Exports (MMcf/d)







Source: Bloomberg



Nat Gas Options Volume and Open Interest CME and ICE Combined

ICE Data not updated today

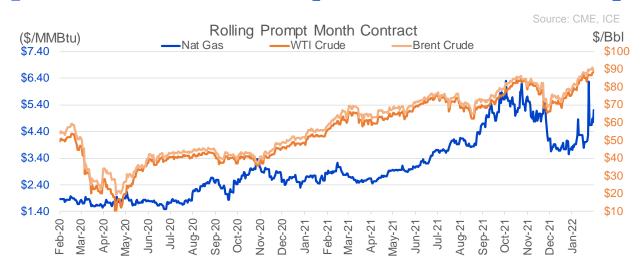
CONTRACT	CONTRACT	PUT/CALL	STRIKE	CUMULATIVE	CONTRACT		CONTRACT	PUT/CALL	STRIKE	CUMULATIVE OI
MONTH	YEAR	FUI/CALL	STRIKE	VOL		MONTH	YEAR	PUI/CALL	STRIKE	COMOLATIVE OF
3	2022	Р	4.00	13393		3	2022	Р	3.00	43252
3	2022	P	3.90	8385		3	2022	Ċ	10.00	34381
4	2022	P	4.00	6427		3	2022	Ċ	5.00	33942
3	2022	Ċ	6.00	4822		3	2022	P	3.50	31396
4	2022	P	3.50	4548		3	2022	Р	4.00	31372
4	2022	Р	3.00	3550		3	2022	С	8.00	30435
3	2022	C	5.00	2757		3	2022	C	6.00	27635
3	2022	P	4.50	2449		3	2022	Р	2.50	24084
3	2022	C	4.75	2302		10	2022	С	6.00	23831
5	2022	P	3.75	2250		3	2022	С	4.00	23269
3	2022	P	4.25	2100		3	2022	Р	3.75	22442
4	2022	Р	3.20	2011		12	2022	С	5.00	20828
3	2022	Ċ	7.00	1952		3	2022	Р	3.25	20668
6	2022	Č	6.00	1821		4	2022	Р	3.00	19896
7	2022	P	3.50	1750		4	2022	С	3.00	19711
8	2022	P	3.50	1750		6	2022	С	5.00	19313
9	2022	P				3	2022	С	4.50	18328
			3.50	1750		5	2022	P	3.00	17946
4	2022	P	3.75	1735		6	2022	Р	3.00	17711
5	2022	P	3.50	1714		3	2022	P	4.50	17675
3	2022	C	5.50	1667		4	2022	C	5.00	17595
5	2022	Р	4.00	1656		4	2022	P	2.50	17370
4	2022	С	6.00	1604		10	2022	C	5.00	17338
5	2022	С	6.00	1591		3	2022	Č	7.00	17310
10	2022	Р	3.50	1575		5	2022	Č	5.00	16723
3	2022	Р	3.75	1560		10	2022	P	3.00	16149
4	2022	С	4.60	1509		4	2022	C	6.00	16028
6	2022	Р	3.50	1501		6	2022	Č	6.00	14988
6	2022	Р	4.00	1461		3	2022	P	2.00	14981
6	2022	С	7.00	1439		5	2022	P	3.50	14677
3	2022	Р	3.25	1413		4	2022	P	3.50	14617
4	2022	С	5.00	1332		3	2022	P	2.75	14562
6	2022	P	3.75	1300		3 5	2022	P P	2.75	
5	2022	P	4.50	1262		5 5		C		14485
3	2022	P	3.60	1258			2022	P	6.00	13967
4	2022	C	7.00	1078		10	2022		2.00	13921
4	2023	Č	4.00	1075		4	2022	С	4.00	13920
5	2022	P	2.50	1000		3	2022	P	2.25	13916
5	2022	Ċ	7.00	844		12	2022	С	4.50	13737
10	2022	Č	7.00	844		5	2022	С	3.00	13733
3	2022	P	3.70	825		3	2022	P	5.00	13719
3	2022	P	4.75	789		9	2022	С	6.00	13558
3	2022	C	5.10	765		6	2022	С	3.00	13438
						3	2022	С	3.50	13281
4	2022	P	4.25	745		3	2022	С	3.00	13270
5	2022	С	5.00	729		7	2022	С	3.00	13230
3	2022	С	5.75	703		8	2022	С	3.00	13226
5	2022	P	3.25	702		9	2022	C	3.00	13225
5	2022	P	4.25	701		10	2022	C	3.00	13114
4	2022	С	8.00	662		7	2022	P	3.00	12846
3	2022	Р	3.00	645		3	2022	C Source	: CME, ICE	12764.25



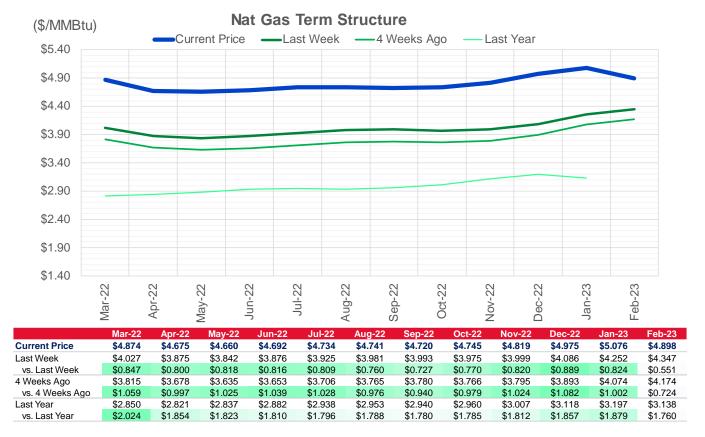
Nat Gas Futures Open Interest CME and ICE Combined

ICE Data not updated today

ONE and the combined										
CME Henry	Hub Futures (10			ICE Henry I	Hub Futures Con	Futures Contract Equivalent (10,000 MM				
	Current	Prior	Daily Change		Current	Prior	Daily Change			
MAR 22	263272	268920	-5648	MAR 22	102142	103315	-1173			
APR 22	93030	90373	2657	APR 22	76756	77562	-806			
MAY 22	128513	130113	-1600	MAY 22	74569	73737	832			
JUN 22	65842	65083	759	JUN 22	67144	66529	615			
JUL 22	68333	67043	1290	JUL 22	62642	62461	181			
AUG 22	41680	42343	-663	AUG 22	59978	59700	278			
SEP 22	52802	52936	-134	SEP 22	60512	60529	-18			
OCT 22	80101	81618	-1517	OCT 22	66354	65256	1098			
NOV 22	36665	36685	-20	NOV 22	54178	53980	198			
DEC 22	40155	40633	-478	DEC 22	62615	62492	123			
JAN 23	56403	56619	-216	JAN 23	53391	52784	607			
FEB 23	18143	18173	-30	FEB 23	42371	42028	343			
MAR 23	35360	33695	1665	MAR 23	47358	46837	521			
APR 23	36028	35592	436	APR 23	46638	46563	75			
MAY 23	19743	18728	1015	MAY 23	39640	39610	30			
JUN 23	12347	12315	32	JUN 23	37872	37684	188			
JUL 23	11485	11381	104	JUL 23	37302	37124	178			
AUG 23	7300	7242	58	AUG 23	36379	36200	178			
SEP 23	10477	10433	44	SEP 23	36611	36423	188			
OCT 23	15428	14618	810	OCT 23	40613	40687	-74			
NOV 23	9643	9439	204	NOV 23	39919	39441	478			
DEC 23	12785	11298	1487	DEC 23	34162	34192	-30			
JAN 24	9466	8574	892	JAN 24	25157	24900	258			
FEB 24	2446	2164	282	FEB 24	18491	18404	87			
MAR 24	10905	11037	-132	MAR 24	24272	24202	70			
APR 24	5417	5250	167	APR 24	17676	17588	88			
MAY 24	2113	2107	6	MAY 24	17451	17319	132			
JUN 24	978	978	0	JUN 24	17570	17494	77			
JUL 24	618	618	0	JUL 24	17961	17883	78			
AUG 24	730	729	1	AUG 24	18057	17979	78			







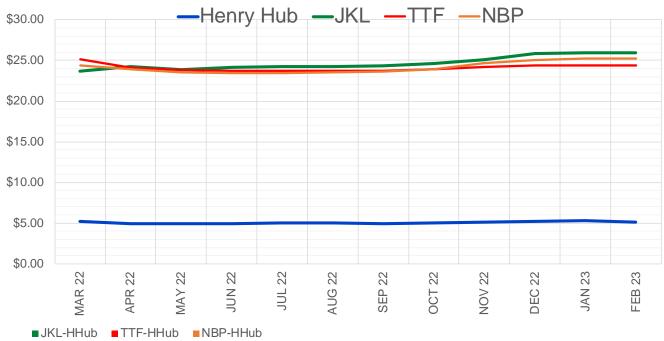
		Cash	Prompt	Cash to	
	Units	Settled	Settle	Prompt	
AGT Citygate	\$/MMBtu	16.23	16.92	0.69	
TETCO M3	\$/MMBtu	5.93	6.77	0.84	
FGT Zone 3	\$/MMBtu	6.16	4.21	-1.95	
Zone 6 NY	\$/MMBtu	6.16	8.88	2.72	
Chicago Citygate	\$/MMBtu	5.31	4.78	-0.53	
Michcon	\$/MMBtu	5.06	3.98	-1.08	
Columbia TCO Pool	\$/MMBtu	5.05	3.57	-1.49	
Ventura	\$/MMBtu	5.59	5.87	0.28	
Rockies/Opal	\$/MMBtu	5.92	4.72	-1.20	
El Paso Permian Basin	\$/MMBtu	5.13	4.23	-0.90	
Socal Citygate	\$/MMBtu	6.08	5.41	-0.67	
Malin	\$/MMBtu	5.88	4.98	-0.90	
Houston Ship Channel	\$/MMBtu	4.95	4.20	-0.75	
Henry Hub Cash	\$/MMBtu	5.40	3.95	-1.45	
AECO Cash	C\$/GJ	4.42	3.70	-0.72	
Station2 Cash	C\$/GJ	4.58	5.06	0.48	
Dawn Cash	C\$/GJ	5.09	4.16	-0.94	

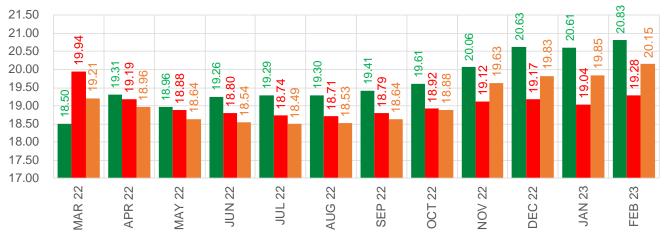
Source: CME, Bloomberg



					VS	s. 4 Weeks		
	Units	Current Price	vs.	Last Week		Ago	VS	s. Last Year
NatGas Jul21/Oct21	\$/MMBtu	2.224		0.000		0.000		2.206
NatGas Oct21/Nov21	\$/MMBtu	0.361		0.000		0.000		0.309
NatGas Oct21/Jan22	\$/MMBtu	-1.817		0.000		0.000		-2.064
NatGas Apr22/Oct22	\$/MMBtu	0.099		-0.062		-0.073		0.085
WTI Crude	\$/Bbl	88.20		2.600		11.210		33.440
Brent Crude	\$/Bbl	89.16		0.960		9.160		31.700
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18		0.000		0.000		0.000
Heating Oil	cents/Gallon	274.12		7.210		33.170		106.660
Propane, Mt. Bel	cents/Gallon	1.31		0.153		0.192		0.462
Ethane, Mt. Bel	cents/Gallon	0.43		0.064		0.090		0.158
Coal, PRB	\$/MTon	12.30		0.000		0.000		0.000
Coal, PRB	\$/MMBtu	0.70						
Coal, ILB	\$/MTon	31.05		0.000		0.000		0.000
Coal, ILB	\$/MMBtu	1.32						

Nat Gas Term Structure (\$MMBTU)





	MAR 22	APR 22	MAY 22	JUN 22	JUL 22	AUG 22	SEP 22	OCT 22	NOV 22	DEC 22	JAN 23	FEB 23
Henry Hub	\$5.205	\$4.917	\$4.911	\$4.940	\$4.986	\$4.993	\$4.967	\$4.990	\$5.071	\$5.218	\$5.341	\$5.120
JKL	\$23.705	\$24.225	\$23.870	\$24.195	\$24.275	\$24.290	\$24.380	\$24.595	\$25.135	\$25.850	\$25.950	\$25.945
JKL-HHub	\$18.500	\$19.308	\$18.959	\$19.255	\$19.289	\$19.297	\$19.413	\$19.605	\$20.064	\$20.632	\$20.609	\$20.825
TTF	\$25.143	\$24.107	\$23.795	\$23.740	\$23.723	\$23.701	\$23.757	\$23.908	\$24.186	\$24.391	\$24.382	\$24.399
TTF-HHub	\$19.938	\$19.190	\$18.884	\$18.800	\$18.737	\$18.708	\$18.790	\$18.918	\$19.115	\$19.173	\$19.041	\$19.279
NBP	\$24.414	\$23.880	\$23.547	\$23.479	\$23.477	\$23.521	\$23.606	\$23.871	\$24.699	\$25.046	\$25.192	\$25.272
NBP-HHub	\$19.209	\$18.963	\$18.636	\$18.539	\$18.491	\$18.528	\$18.639	\$18.881	\$19.628	\$19.828	\$19.851	\$20.152



Weather Storage Model - Next 4 Week Forecast

