

	Cu	ırrent	Δ from YD		Δ from 7D Avg	
Nat Gas Prompt	\$	7.57	\$	0.19	* \$ (0.39)	

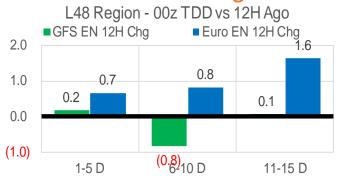
	Current	Δ from YD	Δ from 7D Ava
WTI Prompt	\$ 103.81	\$ 4.05	* \$ (3.1)

	Current	Δ from YD	Δ from 7D			
	Current		Avg			
Brent	¢ 106 35	\$ \$ 3.80	\$ (3.2)			
Prompt	φ 100.33	_ ψ 3.09	• φ (3.2)			

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	95.6	- 0.57	- 0.39		

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	27.2	▼ -0.45	a 0.59

	Current	Δ from YD	Δ from 7D Avg		
US ResComm	12.4	- 0.51	▼ -3.23		

	Current	Δ from YD	Δ from 7D Avg		
Canadian Imports	4.7	▼ -0.44	▼ -0.86		

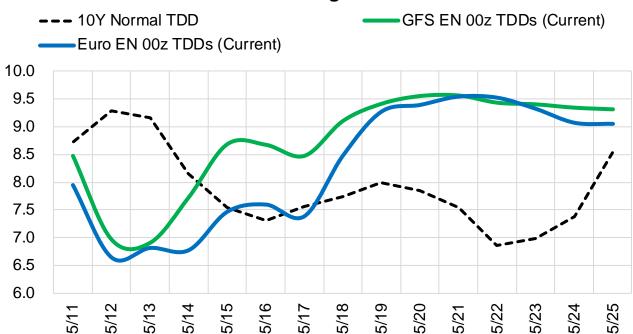
	Current	Δ from YD	Δ from 7D Avg		
Net LNG Exports	12.3	▼ -0.28	▲ 0.02		

	Current	Δ from YD	Δ from 7D Avg		
Mexican Exports	7.0	▼ -0.25	- 0.06		

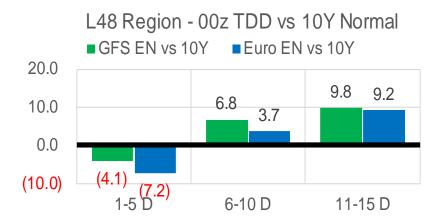


Short-term Weather Model Outlooks (00z)

L48 Region



Vs. 10Y Normal



Source: WSI, Bloomberg



Lower 48 Component Models

Daily Balances

	5-May	6-May	7-May	8-May	9-May	10-May	11-May	DoD	vs. 7D
Lower 48 Dry Production	95.8	96.1	96.2	96.0	96.3	96.2	95.6	▼-0.6	▼ -0.5
Canadian Imports	6.1	5.7	5.1	5.1	5.2	5.1	4.7	▼-0.4	▼ -0.7
L48 Power	28.9	27.4	24.0	23.2	25.5	27.6	27.2	▼-0.4	1.1
L48 Residential & Commercial	15.0	15.4	17.0	17.7	14.5	12.9	12.4	▼-0.5	-3.0
L48 Industrial	21.9	21.7	21.9	22.0	21.7	21.5	21.1	▼-0.4	-0.6
L48 Lease and Plant Fuel	5.2	5.2	5.2	5.2	5.2	5.2	5.2	▼-0.1	▼ 0.0
L48 Pipeline Distribution	2.5	2.4	2.3	2.3	2.3	2.3	2.2	▼-0.1	- 0.1
L48 Regional Gas Consumption	73.4	72.1	70.3	70.4	69.1	69.6	68.2	▼-1.4	▼ -2.7
Net LNG Delivered	12.39	11.95	12.12	12.34	12.29	12.57	12.29	▼-0.3	_ 0.0
Total Mexican Exports	7.1	7.2	6.9	6.6	7.0	7.2	7.0	▼-0.2	▼ 0.0
Implied Daily Storage Activity EIA Reported Daily Storage Activity	9.0	10.6	11.9	11.6	13.0	11.9	12.9		
Daily Model Error									

EIA Storage Week Balances

	1-Apr	8-Apr	15-Apr	22-Apr	29-Apr	6-May	WoW	vs. 4W
Lower 48 Dry Production	96.1	95.8	96.4	96.7	95.8	95.9	▲ 0.0	▼-0.3
Canadian Imports	5.7	5.8	5.6	5.8	6.1	5.9	▼-0.2	0.1
L48 Power	25.5	25.0	24.6	25.1	25.0	26.4	1.5	1.5
L48 Residential & Commercial	30.8	25.2	22.4	24.1	18.5	16.5	▼ -2.0	▼ -6.0
L48 Industrial	22.9	22.5	21.7	21.8	22.0	21.5	▼ -0.5	▼-0.5
L48 Lease and Plant Fuel	5.2	5.2	5.3	5.3	5.2	5.2	▼ 0.0	▼ 0.0
L48 Pipeline Distribution	2.9	2.8	2.6	2.7	2.4	2.4	0.0	▼ -0.2
L48 Regional Gas Consumption	87.3	80.7	76.5	79.0	73.1	72.1	▼-1.0	▼-5.2
Net LNG Exports	13.1	12.4	12.5	12.1	12.2	12.2	▼ 0.0	▼-0.1
Total Mexican Exports	6.4	6.8	6.6	6.7	6.9	6.9	▲ 0.0	0.2
Implied Daily Storage Activity	-5.1	1.7	6.4	4.7	9.8	10.6	0.9	
EIA Reported Daily Storage Activity	-4.7	2.1	7.6	5.7	11.0			
Daily Model Error	-0.4	-0.4	-1.1	-1.0	-1.2			

Monthly Balances									
•	2Yr Ago	LY					MTD		
	May-20	May-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	MoM	vs. LY
Lower 48 Dry Production	87.0	93.0	93.4	92.7	95.0	96.2	96.0	▼-0.2	3.0
Canadian Imports	3.9	4.5	6.7	6.6	5.2	5.8	5.6	▼-0.2	1.1
L48 Power	26.9	26.5	31.5	28.9	25.6	24.8	26.6	1.8	0.1
L48 Residential & Commercial	12.8	12.8	49.1	44.4	30.7	22.2	15.9	▼ -6.3	3.1
L48 Industrial	19.4	20.9	24.7	22.5	21.8	22.0	21.6	▼-0.3	0.7
L48 Lease and Plant Fuel	4.7	5.0	5.1	5.1	5.2	5.2	5.2	▼-0.1	0.2
L48 Pipeline Distribution	2.2	2.2	3.8	3.6	2.9	2.6	2.4	▼-0.2	0.2
L48 Regional Gas Consumption	65.9	67.5	114.3	104.4	86.2	76.8	71.7	▼ -5.1	4.3
Net LNG Exports	6.7	10.8	12.4	12.4	12.9	12.3	12.3	▼ 0.0	1.4
Total Mexican Exports	4.8	6.8	6.3	6.2	6.5	6.7	7.0	0.2	0.2
Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error	13.6	12.4	-32.9	-23.7	-5.4	6.2	10.6		



Daily Average Generation Data

Nuclear Generation Daily Average - GWh (NRC)

	3-May	4-May	5-May	6-May	7-May	8-May	9-May	DoD	vs. 7D
NRC Nuclear Daily Output	78.3	77.7	77.8	78.2	78.2	78.2	79.2	0.9	1.1
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	26.6	27.1	27.1	26.6	26.6	26.6	25.7	-0.9	-1.1
NRC % Nuclear Cap Utilization	79.6	79.0	79.1	79.6	79.6	79.6	80.5	1.0	1.1

Wind Generation Daily Average - MWh (EIA)

	3-May	4-May	5-May	6-May	7-May	8-May	9-May	DoD	vs. 7D
CALI Wind	2655	1322	2941	4342	4672	4621	3997	-624	571
TEXAS Wind	12638	16925	14500	8908	15424	20061	21168	1106	6425
US Wind	49015	39659	42897	40592	68633	67856	81548	13692	30106

Generation Daily Average - MWh (EIA)

	3-May	4-May	5-May	6-May	7-May	8-May	9-May	DoD	vs. 7D
US Wind	49015	39659	42897	40592	68633	67856	81548	13692	30106
US Solar	16041	16603	16197	17119	16372	17257	18125	868	1526
US Petroleum	985	903	990	828	187	187	248	62	-432
US Other	7404	7687	7693	7309	7188	7188	7049	-139	-362
US Coal	81083	87450	88667	88525	74987	74092	77860	3768	-4607
US Nuke	81088	81408	81629	82169	82325	82340	83649	1309	1822
US Hydro	25750	29371	28851	28345	23660	24523	28437	3914	1687
US Gas	161259	167274	160830	159472	128594	121031	136644	15613	-13099

See National Wind and Nuclear daily charts



US Nuke

US Hydro

US Gas

Nuclear Generation Weekly Average - GWh (NRC)

Storage Week Average Generation Data

Nuclear Generation Weekly	Average - G	wn (NRC	•)					
	1-Apr	8-Apr	15-Apr	22-Apr	29-Apr	6-May	WoW	WoW Bcf/d Impact
NRC Nuclear Daily Output	79.3	75.0	71.9	72.3	73.5	76.7	3.1	-0.6
NRC Nuclear Max Capacity	104.9	104.9	104.9	104.9	104.9	104.9	0.0	
NRC Nuclear Outage	25.5	29.9	32.9	32.6	31.4	28.2	-3.1	
NRC % Nuclear Cap Utilization	80.7	76.3	73.2	73.5	74.8	78.0	3.2	
Wind Generation Weekly Av	erage - MWI	h (EIA)						
	1-Apr	8-Apr	15-Apr	22-Apr	29-Apr	6-May	WoW	WoW Bcf/d Impact
CALI Wind	2643	2611	3434	3613	3153	2929	-225	0.0
TEXAS Wind	14530	14468	16530	15612	18327	16902	-1425	0.3
US Wind	61679	59878	66240	61556	66986	57256	-9731	1.8
							-15%	
						-0.1		
Generation Weekly Average	- MWh (EIA)						
,	(————	,				est.		
								WoW
	1-Apr	8-Apr	15-Apr	22-Apr	29-Apr	6-May	WoW	Bcf/d
	•	•		•	•	•		Impact
US Wind	61679	59878	66240	61556	66986	57256	-9731	1.8
US Solar	15451	15518	16118	15897	16968	16616	-352	0.1
US Petroleum	1048	1015	964	984	992	931	-61	0.0
US Other	7481	7183	7154	7544	7717	7429	-287	0.1
US Coal	77743	77514	77087	79632	77532	78889	1357	-0.2

See National Wind and Nuclear daily charts

78807

32524

134633

75674

29415

134338

76478

28355

133367

77438

26722

131482

80545

26753

145265

3107

31

13782

-0.6

0.0

83506

33463

136004



Monthly Average Generation Data

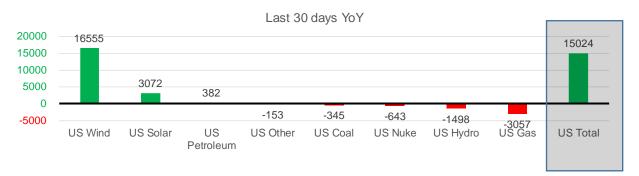
Nuclear Generation Monthly Average - GWh (NRC)									
	2Yr Ago	LY							
	Same 30 days	Same 30 Same 30 days Feb-22 Mar-22 Apr-22 May-22 days							
NRC Nuclear Daily Output	78.7	76.0	87.3	81.3	73.3	78.3	74.9	-1.1	
NRC Nuclear Max Capacity	104.9	104.9	104.9	104.9	104.9	104.9	104.9	0.0	
NRC Nuclear Outage	26.2	28.9	17.5	23.6	31.6	26.6	30.0	1.1	
NRC % Nuclear Cap Utilization	80.0	77.3	88.8	82.7	74.5	79.6	76.2	-1.1	

Wind Generation Monthly Average - MWh (EIA)

	2Yr Ago	LY				MTD		
	Same 30 days	Same 30 days	Feb-22	Mar-22	Apr-22	May-22	Last 30 days	Last 30 days YoY
CALI Wind	2647	3096	1495	2250	3186	3656	3443	347
TEXAS Wind	11183	11873	11750	14837	16311	17405	17183	5310
US Wind	41690	47874	54541	58515	64179	61796	64429	16555

Generation Monthly Average - MWh (EIA)

	2Yr Ago	LY				MTD		
	Same 30 days	Same 30 days	Feb-22	Mar-22	Apr-22	May-22	Last 30 days	Last 30 days YoY
US Wind	41690	47874	54541	58515	64179	61796	64429	16555
US Solar	10797	13487	12442	14054	16208	16974	16559	3072
US Petroleum	622	457	1328	981	985	600	840	382
US Other	7914	7614	8629	7187	7386	7315	7461	▼ -153
US Coal	56602	78855	105630	82291	77558	79911	78509	▼ -345
US Nuke	82883	79515	92013	85157	77217	82169	78872	▼ -643
US Hydro	33881	28924	32280	33927	29023	27049	27426	▼ -1498
US Gas	135398	139986	153708	137092	133060	143711	136929	▼ -3057
US Total	368453	396904	461067	419866	406190	421062	411928	15024



See National Wind and Nuclear daily charts



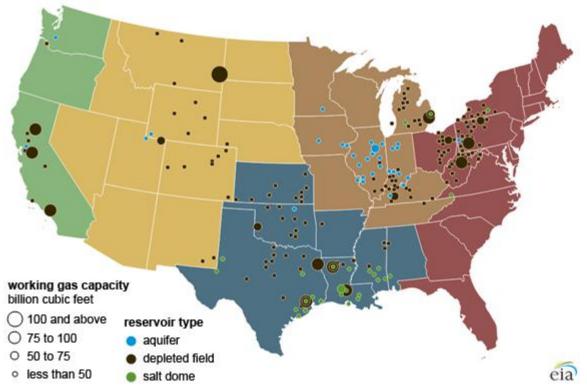
Regional S/D Models Storage Projection

Week Ending 6-May

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	11.3	0.5	11.8	83
East	0.3	2.3	2.5	18
Midwest	3.2	-0.3	3.0	21
Mountain	3.9	-3.5	0.4	3
South Central	2.1	2.7	4.8	34
Pacific	1.7	-0.7	1.0	7

^{*}Adjustment Factor is calcuated based on historical regional deltas

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

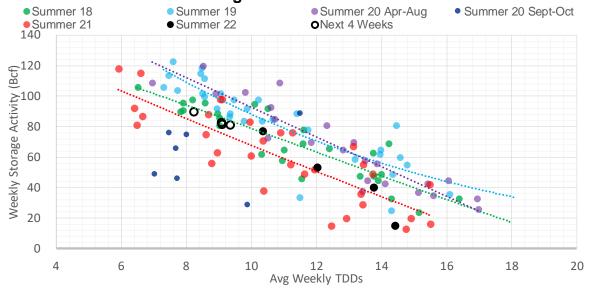




Weather Model Storage Projection



Weather Storage Model - Next 4 Week Forecast



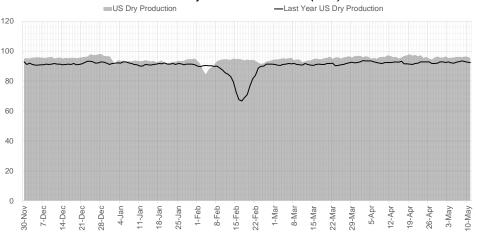
Go to larger image



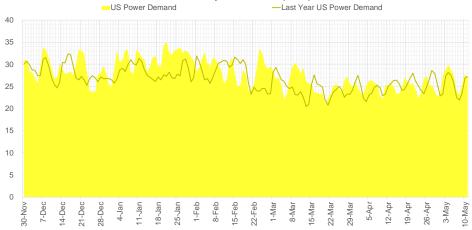


Supply - Demand Trends

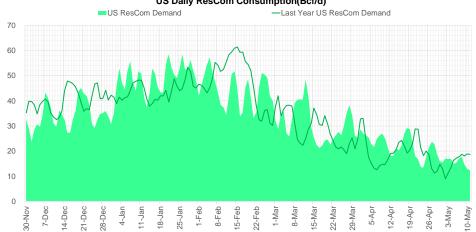
US Dry Natural Gas Production (Bcf/d)



US Daily Power Burns (Bcf/d)



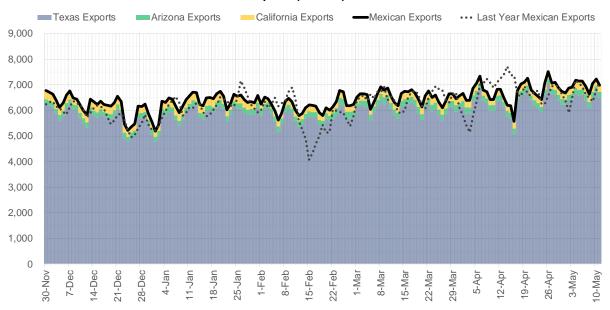
US Daily ResCom Consumption(Bcf/d)



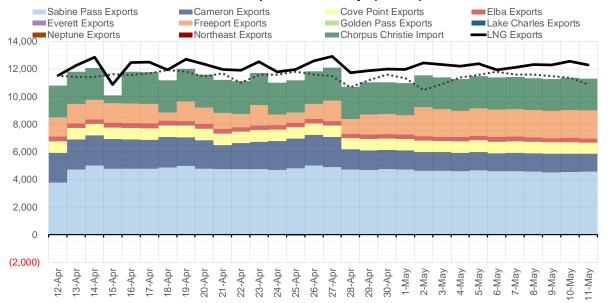
Source: Bloomberg



Mexican Exports (MMcf/d)







Source: Bloomberg



Nat Gas Options Volume and Open Interest CME and ICE Combined

CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
						2000		40.00	50077
6	2022	P	6.00	3344	8 8	2022 2022	C	10.00 10.50	52677 44125
6	2022	P	6.25	3278	10	2022	C		
7	2022	С	9.00	2168	6	2022	C	6.00 6.00	34882 25146
6	2022	С	8.00	2050	10	2022	C	5.00	24389
6	2022	P	5.50	1781	9	2022	C	6.00	23730
7	2022	С	10.00	1567	10	2022	P	3.00	20817
6	2022	С	9.00	1408	10	2022	P	3.50	20509
6	2022	С	10.00	1189	6	2022	P	4.00	20398
6	2022	С	12.00	1088	6	2022	P	6.00	19851
10	2022	P	4.00	1048	8	2022	C	6.00	19667
7	2022	С	8.00	1027	10	2022	P	2.50	19630
7	2022	P	6.00	1014	6	2022	C	7.00	19469
9	2022	P	5.00	969	7	2022	Č	8.00	19110
7	2022	P	5.00	958	7	2022	Č	6.00	19029
6	2022	P	7.00	955	6	2022	Č	10.00	18768
6	2022	P	4.50	953	12	2022	Ċ	5.00	18221
6	2022	С	8.25	903	8	2022	Č	7.00	18212
6	2022	С	7.00	873	6	2022	P	4.75	18193
6	2022	P	5.25	864	9	2022	C	7.00	17849
6	2022	С	20.00	801	6	2022	Č	5.00	17847
8	2022	P	5.00	767	9	2022	Ċ	10.00	17667
7	2022	P	7.00	748	7	2022	P	3.25	17645
6	2022	P	4.75	708	7	2022	С	7.00	17470
8	2022	P	7.00	700	10	2022	P	6.00	17406
11	2022	P -	4.00	700	10	2022	Р	2.00	17320
11	2022	P	5.00	700	6	2022	Р	3.00	17223
3	2023	С	9.00	700	6	2022	Р	7.00	16966
8	2022	P	4.00	669	10	2022	Р	4.00	16914
9	2022	P	6.00	661	6	2022	Р	5.50	16679
6	2022	С	7.50	660	6	2022	С	12.00	16487
6	2022	P	6.50	634	7	2022	С	10.00	16406
7	2022	С	7.00	623	7	2022	С	9.00	16380
8	2022	С	8.50	613	6	2022	Р	5.00	16174
8	2022	P	4.50	600	1	2023	С	10.00	16014
9	2022	P	4.00	600	6	2022	Р	3.50	15955
9	2022	P P	4.50	600	6	2022	С	9.00	15840
10	2022	P P	4.50	600	5	2023	Р	2.00	15686
10	2022	P P	3.25	589	2	2023	С	10.00	15669
6	2022		5.00	581	11	2022	Р	4.00	15346
10	2022	P	5.00	580	9	2022	Р	2.50	15291
8 7	2022	C P	12.00	536	9	2022	P	2.75	14933
7 10	2022 2022	P P	6.25 2.00	504 500	7	2022	P	3.50	14931
10	2022 2022	P P		500 500	7	2022	P	3.00	14550
10 6	2022	C	6.00 7.25	500 477	8	2022	P	3.00	14503
	2022	P			9	2022	P	3.00	14391
10 6	2022	C	3.50 9.75	458 452	8	2022	C P	9.00	14335
7	2022	C	9.75 15.00	433	6 10	2022 2022	P P	3.75 3.25	14266 14249
6	2022	C	8.45	415	6	2022	C		14249
ō	2022	C	0.40	410	Ö	2022	Source	E: CME, ICE	14108.70

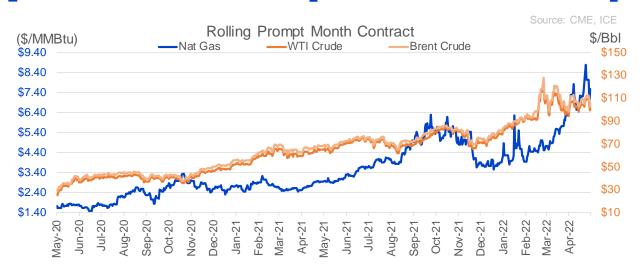




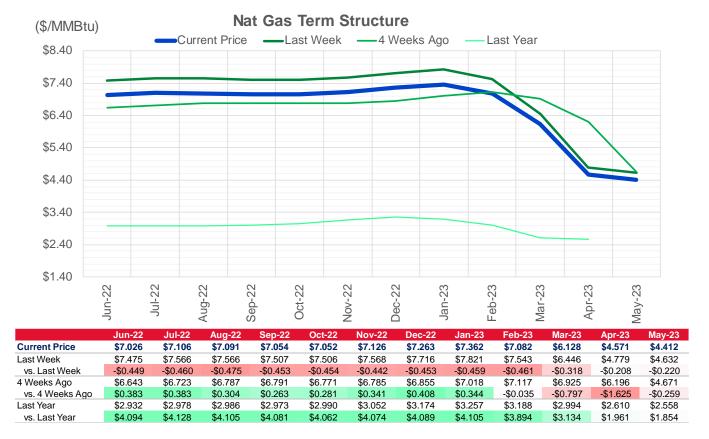
Nat Gas Futures Open Interest

CME and ICE Combined

CME Henry I	Hub Futures (10		u)		Hub Futures Con	tract Equiva	alent (10,000 MM
	Current	Prior	Daily Change		Current	Prior	Daily Change
JUN 22	84500	95626	-11126	JUN 22	81733	84556	-2822
JUL 22	177589	175399	2190	JUL 22	73366	72567	798
AUG 22	58783	58878	-95	AUG 22	59580	59757	-177
SEP 22	85037	85655	-618	SEP 22	65694	65669	25
OCT 22	95136	94728	408	OCT 22	77398	76998	400
NOV 22	49964	48056	1908	NOV 22	58561	58649	-88
DEC 22	48512	48260	252	DEC 22	62410	62584	-174
JAN 23	62655	63074	-419	JAN 23	65487	65703	-217
FEB 23	26948	27260	-312	FEB 23	56403	56708	-305
MAR 23	38522	39219	-697	MAR 23	55743	56253	-510
APR 23	57812	57937	-125	APR 23	53849	53474	374
MAY 23	60719	61026	-307	MAY 23	52508	52401	108
JUN 23	24636	24364	272	JUN 23	44780	44751	29
JUL 23	20820	20883	-63	JUL 23	44164	44029	135
AUG 23	13314	13461	-147	AUG 23	43953	43888	65
SEP 23	18070	17994	76	SEP 23	43450	43327	123
OCT 23	33226	32981	245	OCT 23	50246	50206	40
NOV 23	12750	12708	42	NOV 23	44167	43815	352
DEC 23	13950	13804	146	DEC 23	40212	40067	145
JAN 24	20115	20054	61	JAN 24	38492	38052	440
FEB 24	5752	5992	-240	FEB 24	26134	26074	60
MAR 24	14364	14755	-391	MAR 24	30563	30604	-42
APR 24	11660	11558	102	APR 24	26158	26035	123
MAY 24	6252	6345	-93	MAY 24	25567	25558	9
JUN 24	1716	1815	-99	JUN 24	22052	22022	30
JUL 24	1980	1892	88	JUL 24	22148	22117	31
AUG 24	2949	3062	-113	AUG 24	22252	22221	31
SEP 24	1367	1371	-4	SEP 24	21637	21607	30
OCT 24	6690	6730	-40	OCT 24	24050	23984	66
NOV 24	4672	4812	-140	NOV 24	22441	22391	50







		Cash	Prompt	Cash to
	Units	Settled	Settle	Prompt
AGT Citygate	\$/MMBtu	8.15	7.46	-0.69
TETCO M3	\$/MMBtu	6.20	7.16	0.96
FGT Zone 3	\$/MMBtu	6.40	7.83	1.43
Zone 6 NY	\$/MMBtu	6.40	7.05	0.65
Chicago Citygate	\$/MMBtu	6.73	7.58	0.85
Michcon	\$/MMBtu	6.66	7.55	0.89
Columbia TCO Pool	\$/MMBtu	6.24	7.12	0.88
Ventura	\$/MMBtu	8.03	7.47	-0.56
Rockies/Opal	\$/MMBtu	6.53	7.28	0.75
El Paso Permian Basin	\$/MMBtu	6.00	6.95	0.95
Socal Citygate	\$/MMBtu	6.64	7.61	0.97
Malin	\$/MMBtu	6.48	7.37	0.89
Houston Ship Channel	\$/MMBtu	6.68	7.64	0.96
Henry Hub Cash	\$/MMBtu	7.00	7.46	0.46
AECO Cash	C\$/GJ	5.32	5.86	0.54
Station2 Cash	C\$/GJ	5.10	6.97	1.87
Dawn Cash	C\$/GJ	6.61	7.55	0.94

Source: CME, Bloomberg

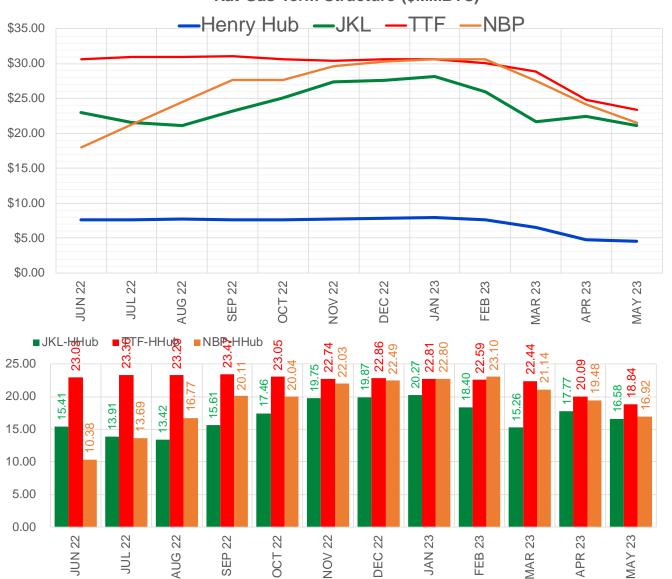




					V	s. 4 Weeks		
	Units	Current Price	VS.	. Last Week		Ago	VS	s. Last Year
NatGas Jul21/Oct21	\$/MMBtu	2.224		0.000		0.000		2.212
NatGas Oct21/Nov21	\$/MMBtu	0.361		0.000		0.000		0.299
NatGas Oct21/Jan22	\$/MMBtu	-1.817		0.000		0.000		-2.081
NatGas Apr22/Oct22	\$/MMBtu	2.055		-0.560		0.561		2.033
WTI Crude	\$/Bbl	99.76		-2.650		-0.840		34.480
Brent Crude	\$/Bbl	102.46		-2.510		-2.180		33.910
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18		0.000		0.000		0.000
Heating Oil	cents/Gallon	393.22		-15.050		46.780		189.050
Propane, Mt. Bel	cents/Gallon	1.24		-0.025		-0.083		0.429
Ethane, Mt. Bel	cents/Gallon	0.56		-0.024		0.073		0.308
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						

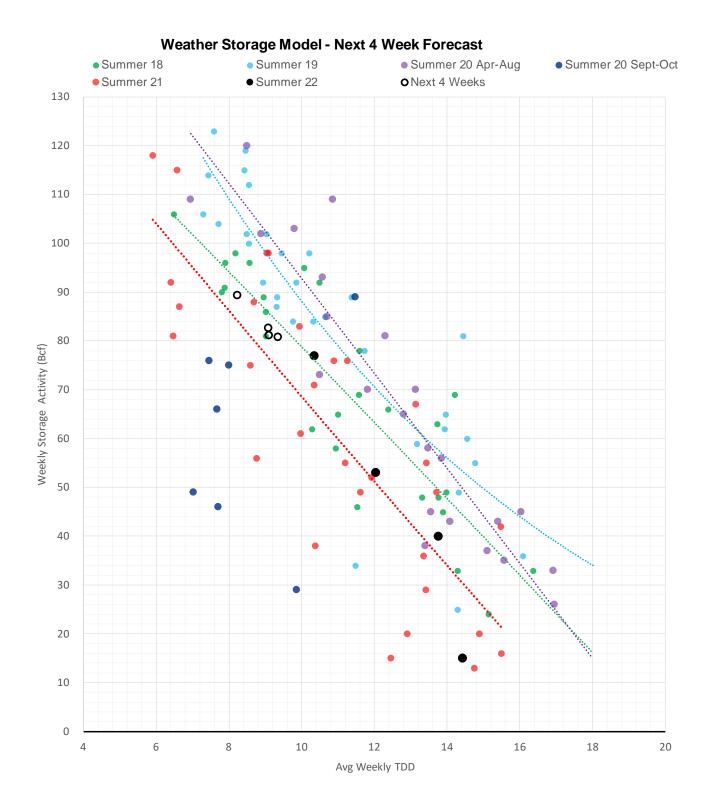


Nat Gas Term Structure (\$MMBTU)



	JUN 22	JUL 22	AUG 22	SEP 22	OCT 22	NOV 22	DEC 22	JAN 23	FEB 23	MAR 23	APR 23	MAY 23
Henry Hub	\$7.571	\$7.661	\$7.702	\$7.609	\$7.629	\$7.683	\$7.810	\$7.895	\$7.561	\$6.478	\$4.719	\$4.550
JKL	\$22.980	\$21.575	\$21.120	\$23.215	\$25.090	\$27.430	\$27.680	\$28.165	\$25.960	\$21.735	\$22.490	\$21.130
JKL-HHub	\$15.409	\$13.914	\$13.418	\$15.606	\$17.461	\$19.747	\$19.870	\$20.270	\$18.399	\$15.257	\$17.771	\$16.580
TTF	\$30.597	\$31.021	\$30.989	\$31.074	\$30.682	\$30.425	\$30.667	\$30.701	\$30.152	\$28.919	\$24.805	\$23.388
TTF-HHub	\$23.026	\$23.360	\$23.287	\$23.465	\$23.053	\$22.742	\$22.857	\$22.806	\$22.591	\$22.441	\$20.086	\$18.838
NBP	\$17.951	\$21.348	\$24.470	\$27.720	\$27.672	\$29.712	\$30.304	\$30.698	\$30.663	\$27.617	\$24.203	\$21.471
NBP-HHub	\$10.380	\$13.687	\$16.768	\$20.111	\$20.043	\$22.029	\$22.494	\$22.803	\$23.102	\$21.139	\$19.484	\$16.921







Weather Storage Model for Summer 2021 & 2022

