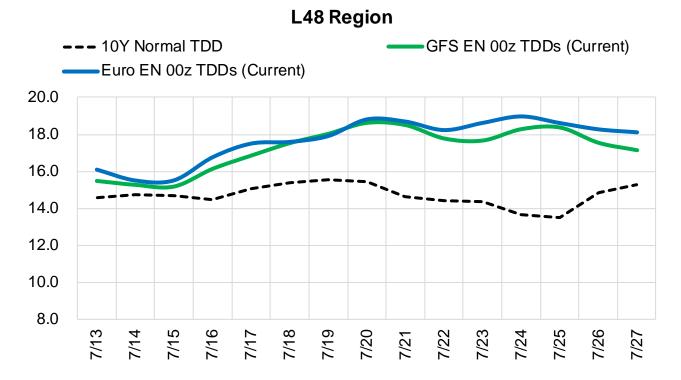
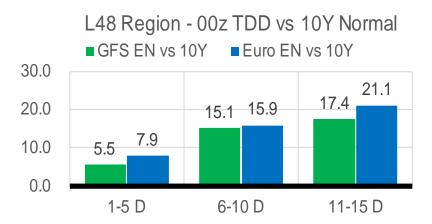




Short-term Weather Model Outlooks (00z)



Vs. 10Y Normal



Source: WSI, Bloomberg

Market Report

Daily Balances

	7-Jul	8-Jul	9-Jul	10-Jul	11-Jul	12-Jul	13-Jul	DoD	vs. 7D
Lower 48 Dry Production	96.4	97.0	96.4	96.5	96.5	95.3	94.9	-0.4	T -1.5
Canadian Imports	6.0	6.0	5.5	5.6	5.8	6.2	6.5	0.3	0.7
L48 Power	43.9	43.4	39.1	38.4	43.0	44.2	42.8	T -1.4	a 0.8
L48 Residential & Commercial	8.5	8.3	8.0	8.0	8.3	8.6	8.6	▼ -0.1	a 0.3
L48 Industrial	20.3	20.2	20.3	20.2	20.4	20.3	20.5	A 0.2	a 0.2
L48 Lease and Plant Fuel	5.2	5.3	5.2	5.2	5.2	5.2	5.1	▼ -0.1	v -0.1
L48 Pipeline Distribution	2.8	2.8	2.5	2.5	2.7	2.8	2.7	▼ -0.1	a 0.1
L48 Regional Gas Consumption	80.7	80.0	75.1	74.3	79.7	81.1	79.7	▼ -1.4	1.2
Net LNG Delivered	11.19	11.27	11.06	10.85	11.00	11.06	11.23	0.2	0.2
Total Mexican Exports	6.8	6.9	6.6	6.6	6.9	7.2	7.2	0.0	0.4
Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error	3.7	4.8	9.2	10.3	4.8	2.2	3.3		

Lower 48 Component Models

Daily Model Error

EIA Storage Week Balances

	3-Jun	10-Jun	17-Jun	24-Jun	1-Jul	8-Jul	WoW	vs. 4W
Lower 48 Dry Production	97.2	96.9	96.7	96.7	97.0	97.0	▼ 0.0	0.1
Canadian Imports	4.8	5.5	6.1	5.6	5.7	5.6	T -0.1	T-0.1
L48 Power	30.3	32.3	37.8	37.7	40.2	41.3	A 1.1	4 .3
L48 Residential & Commercial	9.1	8.6	8.3	8.7	8.2	8.3	a 0.1	- 0.2
L48 Industrial	21.4	21.3	21.5	20.1	21.0	20.3	▼ -0.7	- 0.7
L48 Lease and Plant Fuel	5.2	5.2	5.2	5.2	5.3	5.3	▲ 0.0	▲ 0.0
L48 Pipeline Distribution	2.2	2.2	2.5	2.5	2.6	2.6	0.0	a 0.2
L48 Regional Gas Consumption	68.3	69.7	75.3	74.2	77.3	77.7	0.4	3.6
Net LNG Exports	12.8	12.3	10.7	10.6	10.6	11.2	0.6	0.1
Total Mexican Exports	7.1	7.1	7.2	7.0	7.0	6.7	▼ -0.3	▼-0.3
Implied Daily Storage Activity	13.9	13.2	9.6	10.5	7.7	6.9	-0.8	
EIA Reported Daily Storage Activity	14.6	13.1	10.6	11.7	8.6			
Daily Model Error	-0.6	0.1	-1.0	-1.2	-0.8			

Monthly Balances

	2Yr Ago	LY					MTD		
	Jul-20	Jul-21	Mar-22	Apr-22	May-22	Jun-22	Jul-22	MoM	vs. LY
Lower 48 Dry Production	89.0	93.5	93.4	95.2	96.2	96.8	96.7	T-0.1	3.2
Canadian Imports	4.4	5.2	5.2	5.8	5.1	5.7	5.7	0.1	0.6
L48 Power	43.8	39.7	25.4	24.7	28.8	36.8	41.4	4 .6	1 .7
L48 Residential & Commercial	7.9	8.1	31.5	22.5	12.3	8.5	8.3	- 0.2	a 0.2
L48 Industrial	20.1	20.8	19.7	21.5	21.1	20.8	20.3	- 0.5	V -0.5
L48 Lease and Plant Fuel	4.9	5.1	5.2	5.2	5.2	5.2	5.2	0.0	a 0.2
L48 Pipeline Distribution	2.6	2.5	2.9	2.6	2.3	2.5	2.6	a 0.2	A 0.1
L48 Regional Gas Consumption	79.3	76.2	84.7	76.6	69.8	73.8	77.8	4.1	1.7
Net LNG Exports	3.3	10.8	12.9	12.3	12.5	11.2	11.1	▼ 0.0	0.3
Total Mexican Exports	5.9	7.1	6.5	6.7	7.0	7.1	6.8	-0.3	T -0.3
Implied Daily Storage Activity	4.9	4.6	-5.4	5.4	12.0	10.5	6.7		
EIA Reported Daily Storage Activity Daily Model Error									

Source: Bloomberg, analytix.ai

Daily Average Generation Data

Nuclear Generation Daily Average - GWh (NRC)

ENERGY

	5-Jul	6-Jul	7-Jul	8-Jul	9-Jul	10-Jul	11-Jul	DoD	vs. 7D
NRC Nuclear Daily Output	90.9	91.1	91.4	91.8	91.0	91.3	91.8	0.5	0.6
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	14.0	13.8	13.5	13.1	13.8	13.6	13.1	-0.5	-0.6
NRC % Nuclear Cap Utilization	92.4	92.6	92.9	93.4	92.6	92.8	93.4	0.5	0.6

Wind Generation Daily Average - MWh (EIA)

	5-Jul	6-Jul	7-Jul	8-Jul	9-Jul	10-Jul	11-Jul	DoD	vs.7D
CALI Wind	2048	2048	2048	2048	2048	2048	2048	0	0
TEXAS Wind	22879	22879	22879	22879	22879	22879	22879	0	0
US Wind	63443	63443	63443	63443	63443	63443	63443	0	0

Generation Daily Average - MWh (EIA)

EIA 930 data is not being updated. EIA experiencing some issues.

	5-Jul	6-Jul	7-Jul	8-Jul	9-Jul	10-Jul	11-Jul	DoD	vs. 7D
Genscape Wind	54309	38704	30219	30526	28862	35417	42460	7042	6120
US Solar	19728	19728	19728	19728	19728	19728	19728	0	0
US Petroleum	1333	1333	1333	1333	1333	1333	1333	0	0
US Other	9775	9775	9775	9775	9775	9775	9775	0	0
US Coal	119543	119543	119543	119543	119543	119543	119543	0	0
US Nuke	90696	90696	90696	90696	90696	90696	90696	0	0
US Hydro	39690	39690	39690	39690	39690	39690	39690	0	0
US Gas	220700	220700	220700	220700	220700	220700	220700	0	0

See National Wind and Nuclear daily charts

Source: Bloomberg, analytix.ai

Storage Week Average Generation Data

Nuclear Generation Weekly Average - GWh (NRC)

	3-Jun	10-Jun	17-Jun	24-Jun	1-Jul	8-Jul	WoW	WoW Bcf/d Impact
NRC Nuclear Daily Output	86.2	88.3	88.2	89.0	88.9	90.6	1.7	-0.3
NRC Nuclear Max Capacity	104.9	104.9	104.9	104.9	104.9	104.9	0.0	
NRC Nuclear Outage	18.7	16.6	16.7	15.9	16.0	14.2	-1.7	
NRC % Nuclear Cap Utilization	87.6	89.8	89.7	90.5	90.4	92.2	1.8	

Wind Generation Weekly Average - MWh (EIA)

	3-Jun	10-Jun	17-Jun	24-Jun	1-Jul	8-Jul	WoW	WoW Bcf/d Impact
CALI Wind	3268	3842	3032	2048	2048	2048	0	0.0
TEXAS Wind	17915	12449	20462	22879	22879	22879	0	0.0
US Wind	57939	37417	57090	63443	63443	63443	0	0.0
							0%	

Ge

Generation Weekly Average -	EIA 930 data is not being updated. EIA experiencing							
				l		some issue	es.	loW
	3-Jun	10-Jun	17-Jun	24-Jun	1-Jul	8-Jul	WoW	Bcf/d
								Impact
Genscape Wind	59474	38198	57792	50581	45558	42730	-2828	0.5
US Solar	18656	18807	18731	19728	19728	19728	0	0.0
US Petroleum	863	968	1244	1333	1333	1333	0	0.0
US Other	7866	8001	8688	9775	9775	9775	0	0.0
US Coal	89706	95415	106566	119543	119543	119543	0	0.0
US Nuke	89728	91641	91235	90696	90696	90696	0	0.0
US Hydro	35051	36328	37495	39690	39690	39690	0	0.0
US Gas	163383	178204	201845	220700	220700	220700	0	0.0

See National Wind and Nuclear daily charts

Source: Bloomberg, analytix.ai

0.0



Monthly Average Generation Data

Nuclear Generation Monthly Average - GWh (NRC)

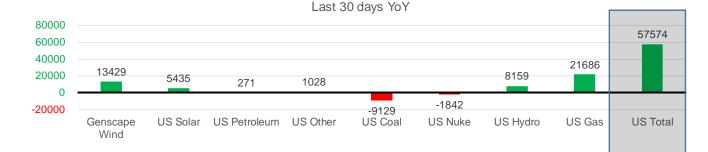
	2Yr Ago	LY				MTD			
	Same 30 days	Same 30 days	Apr-22	May-22	Jun-22	Jul-22	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY
NRC Nuclear Daily Output	91.8	89.3	73.4	81.7	88.5	91.0	89.8	2.5	0.4
NRC Nuclear Max Capacity	104.9	104.9	104.9	104.9	104.9	104.9	104.9	0.0	0.0
NRC Nuclear Outage	13.1	15.5	31.5	23.2	16.3	13.8	15.1	-2.5	-0.4
NRC % Nuclear Cap Utilization	93.3	90.8	74.6	83.0	90.0	92.6	91.3	2.5	0.5

Wind Generation Monthly Average - MWh (EIA)

	2Yr Ago	LY				MTD			
	Same 30 days	Same 30 days	Apr-22	May-22	Jun-22	Jul-22	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY
CALI Wind	2694	2617	3218	3361	2724	2048	2069	-676	-548
TEXAS Wind	11702	8157	16384	16756	19072	22879	22915	3807	14757
US Wind	36578	33788	64240	56462	54014	63443	63811	9428	30022

Generation Monthly Average - MWh (EIA)

	2Yr Ago	LY				MTD			
	Same 30 days	Same 30 days	Apr-22	May-22	Jun-22	Jul-22	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY
Genscape Wind	37756	33100	63684	56803	47280	40099	46530	6430.1	A 13429
US Solar	12297	14222	16265	18186	19216	19728	19656	▼ -71.4	435
US Petroleum	1247	1057	979	518	1204	1333	1328	▼ -5	271
US Other	9299	8719	7373	7724	8994	9775	9748	-28	1028
US Coal	103158	128451	77400	85273	109706	119543	119322	-222	v -9129
US Nuke	94876	92556	77317	85496	91073	90696	90714	1 8	T -1842
US Hydro	35541	31432	28877	31369	38153	39690	39591	-99	A 8159
US Gas	206056	198660	132665	157565	204668	220700	220346	6024	21686
US Total	497472	509130	405650	443965	530484	566968	566704	5618	4 57574



See National Wind and Nuclear daily charts

Source: Bloomberg, analytix.ai

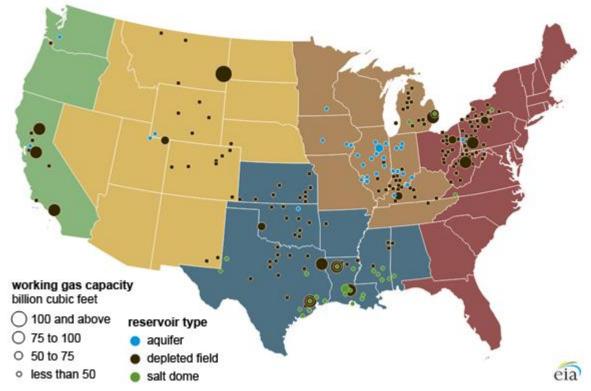


Regional S/D Models Storage Projection

Week Ending	8-Jul			
			Daily	
			Average	Weekly
		Daily	Storage	Adjusted
	Daily Raw	Adjustment	Activity	Storage
	Storage	Factor	(Adjusted) *	Activity
L48	8.1	-0.5	7.6	53
East	0.7	1.8	2.5	18
Midwest	3.6	-1.2	2.5	17
Mountain	4.7	-4.0	0.7	5
South Central	-3.2	3.6	0.4	3
Pacific	2.3	-0.8	1.4	10

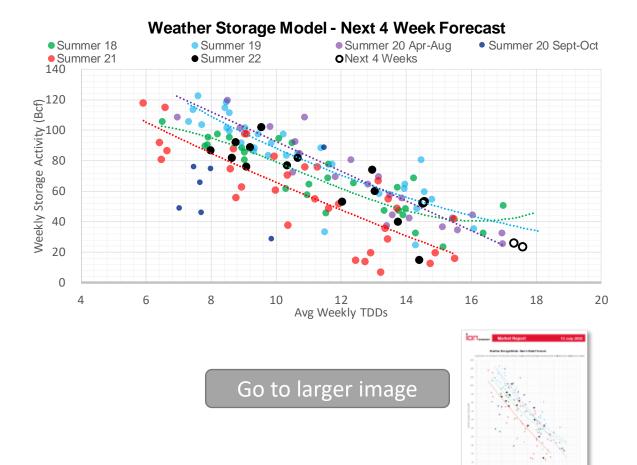
*Adjustment Factor is calcuated based on historical regional deltas

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

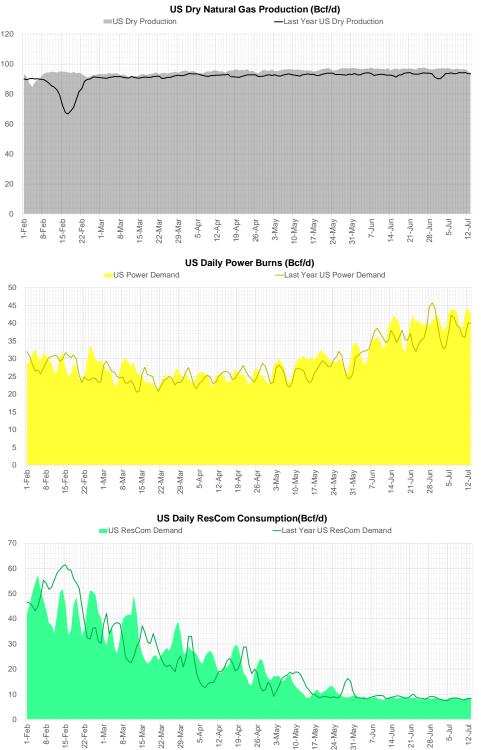


Weather Model Storage Projection

Next report and beyond		
Week Ending	GWDDs	Week Storage Projection
08-Jul	14.6	53
15-Jul	14.5	52
22-Jul	17.6	23
29-Jul	17.3	26

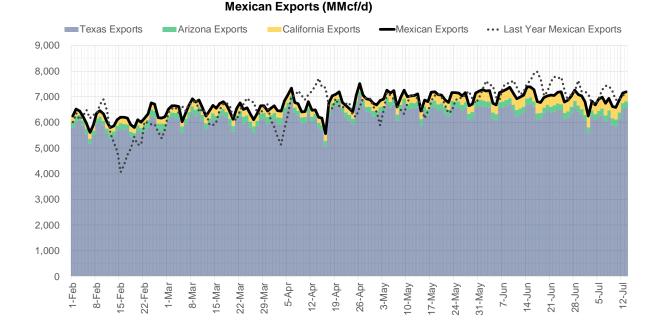


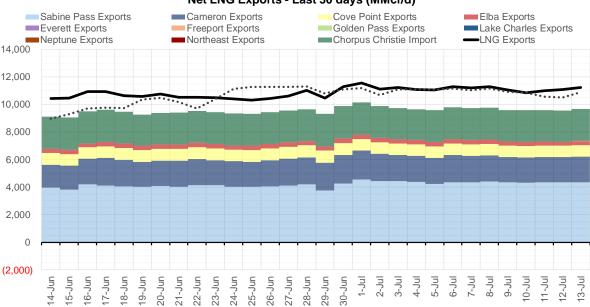




Source: Bloomberg







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

Source: Bloomberg

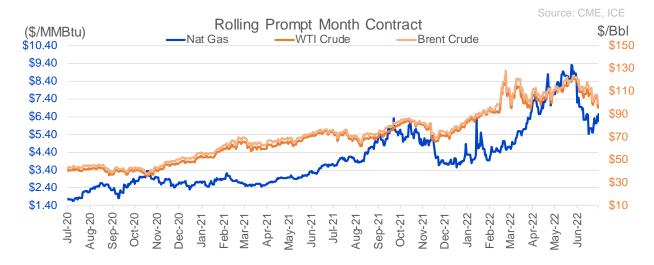


Nat Gas Options Volume and Open Interest CME and ICE Combined

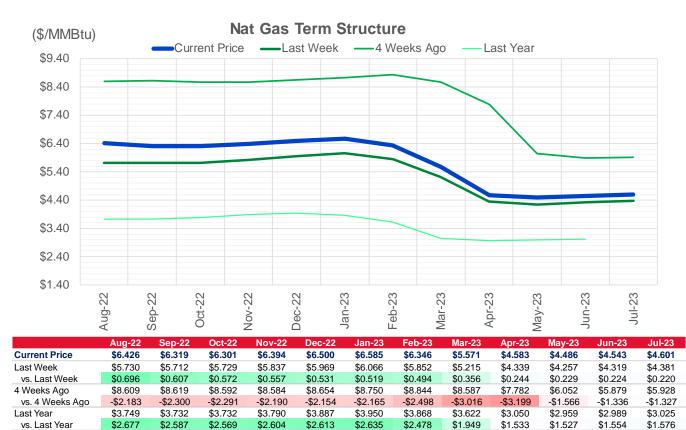
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
8	2022	С	7.00	6979	8	2022	С	10.00	42989
8	2022	Р	5.50	3483	8	2022	С	12.00	37984
8	2022	С	7.50	3311	10	2022	С	6.00	35961
8	2022	Р	6.00	3089	10	2022	Р	3.00	31947
9	2022	С	10.00	3000	8	2022	С	10.50	31573
8	2022	С	7.10	2677	8	2022	С	7.00	30634
8	2022	Р	5.00	2379	10	2022	Р	2.50	28073
9	2022	С	9.00	2366	9	2022	С	6.00	24406
10	2022	Р	3.00	2181	9	2022	С	10.00	24359
8	2022	С	9.00	2023	10	2022	Р	6.00	24090
8	2022	С	7.25	1997	10	2022	С	5.00	23368
8	2022	С	10.00	1967	8	2022	С	12.10	22001
8	2022	С	8.00	1539	10	2022	Р	3.50	21587
10	2022	Р	4.00	1427	9	2022	Р	4.00	20260
3	2023	Р	4.00	1400	8	2022	С	6.00	20113
10	2022	Р	3.50	1318	8	2022	P	6.00	19783
1	2023	Р	4.00	1300	10	2022	С	10.00	19398
2	2023	Р	4.00	1300	9	2022	C P	7.00	19011
10	2022	Р	4.50	1277	5 1	2023 2023	Р С	2.00 10.00	18818 18735
9	2022	С	8.00	1194	8	2023		8.00	18735
10	2022	Р	5.00	1148		2022	C C		
3	2023	Р	5.00	1115	12 3	2022	c	5.00 10.00	18218 18166
11	2022	Р	2.75	1100	3 10	2023	P	5.00	
11	2022	Р	3.00	1075	8	2022	P	5.00 7.00	17712 17326
1	2023	Р	5.00	1025	8	2022	F C	9.00	17326
2	2023	Р	5.00	1025	8	2022	P	9.00 5.00	16898
8	2022	Р	5.25	997	10	2022	P	2.00	16787
8	2022	С	6.50	978	10	2022	P	4.00	16765
8	2022	С	6.75	973	10	2022	C	8.00	16732
8	2022	Р	5.75	930	3	2022	P	3.00	16338
8	2022	С	6.80	903	2	2023	c	10.00	16155
8	2022	С	9.50	902	9	2023	c	4.00	15970
11	2022	Р	3.50	900	10	2022	P	2.00	15930
4	2023	Р	2.00	900	9	2022	P	3.00	15637
4	2023	Р	2.50	900	12	2022	P	5.00	15613
8	2022	С	7.75	850	9	2022	P	2.50	15471
11	2022	Р	4.50	850	8	2022	P	4.00	15215
10	2022	С	8.00	842	8	2022	Р	3.00	15130
10	2022	С	15.00	800	9	2022	С	9.00	15011
1	2023	Р	4.75	800	10	2022	C	7.00	14974
5	2023	Р	2.00	800	9	2022	P	2.75	14887
6	2023	Р	2.00	800	8	2022	С	7.50	14628
7	2023	Р	2.00	800	8	2022	P	5.50	14585
8	2023	Р	2.00	800	9	2022	Р	5.00	14266
9	2023	Р	2.00	800	10	2022	Р	3.25	14154
10	2023	Р	2.00	800	12	2022	С	6.00	14037
1	2023	С	7.50	750	10	2023	Р	2.50	13740
9	2022	Р	5.50	717	10	2022	С	4.00	13308
10	2022	С	10.00	681	8	2022	C	e: CME, ICE	13226
							Source	e: CIVIE, ICE	

Nat Gas Futures Open Interest CME and ICE Combined

CME Henry H	lub Futures (10			ICE Henry	Hub Futures Cont		alent (10,000 MM			
	Current	Prior	Daily Change		Current	Prior	Daily Change			
AUG 22	68951	76360	-7409	AUG 22	78390	81179	-2789			
SEP 22	144559	145963	-1404	SEP 22	79725	79720	6			
OCT 22	90353	90697	-344	OCT 22	75409	73948	1461			
NOV 22	64355	63087	1268	NOV 22	62056	61335	722			
DEC 22	51601	51614	-13	DEC 22	65104	65882	-778			
JAN 23	70003	69404	599	JAN 23	63588	63648	-60			
FEB 23	32478	31924	554	FEB 23	54791	54084	708			
MAR 23	47914	48472	-558	MAR 23	50498	50196	302			
APR 23	65601	66387	-786	APR 23	50507	50707	-200			
MAY 23	55499	55312	187	MAY 23	49992	50477	-486			
JUN 23	20707	20657	50	JUN 23	44338	44447	-109			
JUL 23	20047	20009	38	JUL 23	43219	43678	-459			
AUG 23	17360	16642	718	AUG 23	42614	42911	-297			
SEP 23	15639	15704	-65	SEP 23	41426	41764	-338			
OCT 23	41063	41091	-28	OCT 23	48215	48764	-549			
NOV 23	12245	12292	-47	NOV 23	44291	44235	57			
DEC 23	11830	11905	-75	DEC 23	39754	39825	-71			
JAN 24	17954	18630	-676	JAN 24	39405	39333	71			
FEB 24	7624	7586	38	FEB 24	28622	28570	52			
MAR 24	16199	15660	539	MAR 24	33468	33451	17			
APR 24	13373	13490	-117	APR 24	27444	27382	62			
MAY 24	6441	6437	4	MAY 24	26620	26587	33			
JUN 24	2386	2385	1	JUN 24	23648	23585	63			
JUL 24	2127	2126	1	JUL 24	23362	23329	34			
AUG 24	3112	3112	0	AUG 24	23708	23675	34			
SEP 24	1593	1593	0	SEP 24	23162	23092	71			
OCT 24	8125	8116	9	OCT 24	26454	26354	100			
NOV 24	4707	4707	0	NOV 24	24148	24073	75			
DEC 24	7127	7127	0	DEC 24	27212	27135	77			
JAN 25	14764	14724	40	JAN 25	19707	19708	-1			



Market Report

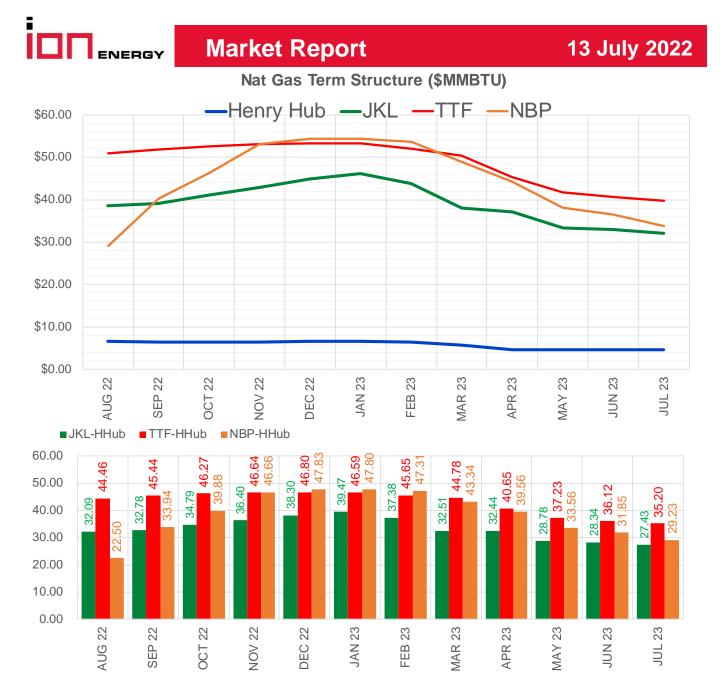


		Cash	Prompt	Cash to
	Units	Settled	Settle	Prompt
AGT Citygate	\$/MMBtu	6.40	5.46	-0.94
TETCO M3	\$/MMBtu	6.04	5.07	-0.97
FGT Zone 3	\$/MMBtu	6.17	6.77	0.60
Zone 6 NY	\$/MMBtu	6.17	5.03	-1.15
Chicago Citygate	\$/MMBtu	6.35	5.33	-1.02
Michcon	\$/MMBtu	6.26	5.28	-0.98
Columbia TCO Pool	\$/MMBtu	5.85	4.91	-0.94
Ventura	\$/MMBtu	5.95	5.19	-0.76
Rockies/Opal	\$/MMBtu	6.44	5.11	-1.33
El Paso Permian Basin	\$/MMBtu	6.43	4.87	-1.56
Socal Citygate	\$/MMBtu	7.57	6.42	-1.15
Malin	\$/MMBtu	6.36	5.58	-0.78
Houston Ship Channel	\$/MMBtu	6.53	5.32	-1.21
Henry Hub Cash	\$/MMBtu	6.81	5.20	-1.61
AECO Cash	C\$/GJ	3.43	3.46	0.03
Station2 Cash	C\$/GJ	3.35	5.33	1.98
Dawn Cash	C\$/GJ	6.22	5.32	-0.90

Source: CME, Bloomberg

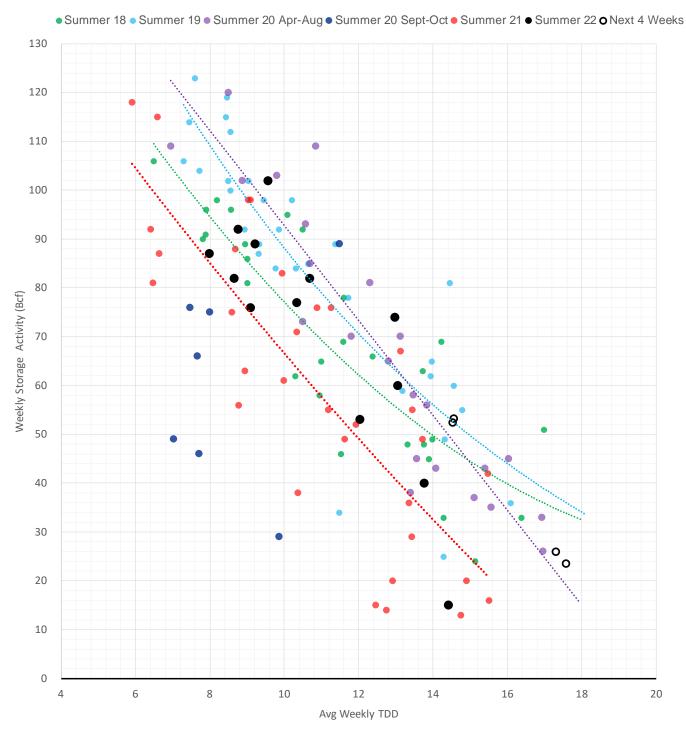


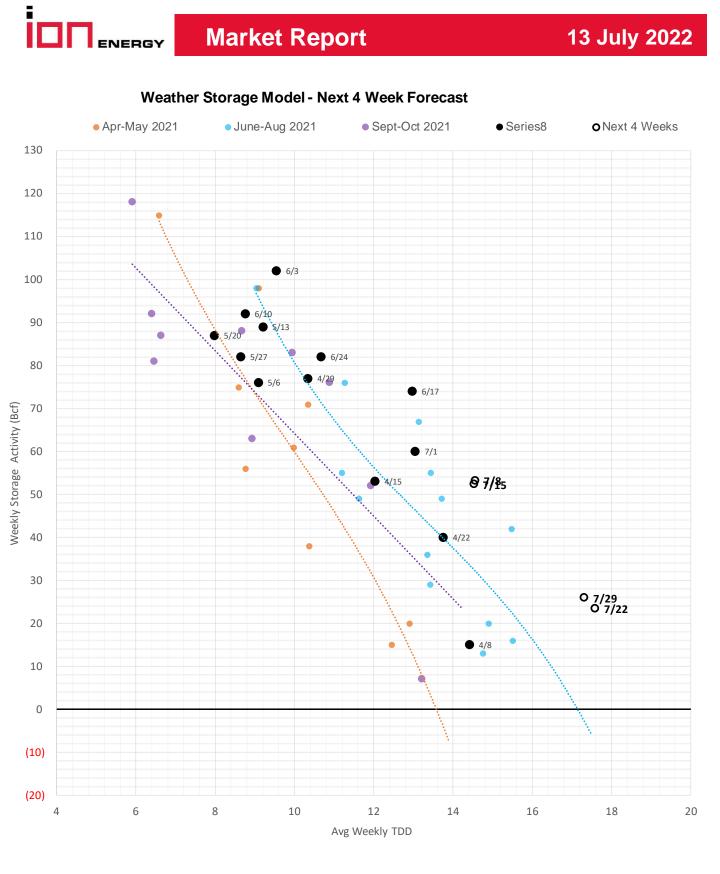
					vs	. 4 Weeks		
	Units	Current Price	vs. La	ast Week		Ago	vs	. Last Year
NatGas Jul21/Oct21	\$/MMBtu	2.224	(0.000		0.000		2.157
NatGas Oct21/Nov21	\$/MMBtu	0.361	Δ (0.000		0.000		0.297
NatGas Oct21/Jan22	\$/MMBtu	-1.817	🔺 (0.000		0.000	▼	-2.052
NatGas Apr22/Oct22	\$/MMBtu	0.667	(0.508		-1.167		0.674
WTI Crude	\$/Bbl	95.84	▼ -(3.660		-23.090		20.590
Brent Crude	\$/Bbl	99.49	▼ -:	3.280		-21.680		23.000
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18	Δ (0.000		0.000		0.000
Heating Oil	cents/Gallon	366.26	🔺 6	5.100		-73.140		147.820
Propane, Mt. Bel	cents/Gallon	1.15	-(0.019		-0.052		0.055
Ethane, Mt. Bel	cents/Gallon	0.50	🔺 (0.041		-0.143		0.197
Coal, PRB	\$/MTon	12.30	Δ (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						



	AUG 22	SEP 22	OCT 22	NOV 22	DEC 22	JAN 23	FEB 23	MAR 23	APR 23	MAY 23	JUN 23	JUL 23
Henry Hub	\$6.539	\$6.400	\$6.368	\$6.462	\$6.569	\$6.647	\$6.392	\$5.598	\$4.617	\$4.507	\$4.564	\$4.627
JKL	\$38.630	\$39.180	\$41.160	\$42.860	\$44.865	\$46.120	\$43.775	\$38.110	\$37.055	\$33.290	\$32.905	\$32.055
JKL-HHub	\$32.091	\$32.780	\$34.792	\$36.398	\$38.296	\$39.473	\$37.383	\$32.512	\$32.438	\$28.783	\$28.341	\$27.428
TTF	\$51.002	\$51.839	\$52.641	\$53.100	\$53.368	\$53.235	\$52.043	\$50.375	\$45.270	\$41.741	\$40.685	\$39.826
TTF-HHub	\$44.463	\$45.439	\$46.273	\$46.638	\$46.799	\$46.588	\$45.651	\$44.777	\$40.653	\$37.234	\$36.121	\$35.199
NBP	\$29.037	\$40.336	\$46.243	\$53.120	\$54.402	\$54.445	\$53.700	\$48.939	\$44.177	\$38.069	\$36.416	\$33.855
NBP-HHub	\$22.498	\$33.936	\$39.875	\$46.658	\$47.833	\$47.798	\$47.308	\$43.341	\$39.560	\$33.562	\$31.852	\$29.228

Weather Storage Model - Next 4 Week Forecast





Market Report

ENERGY

13 July 2022

