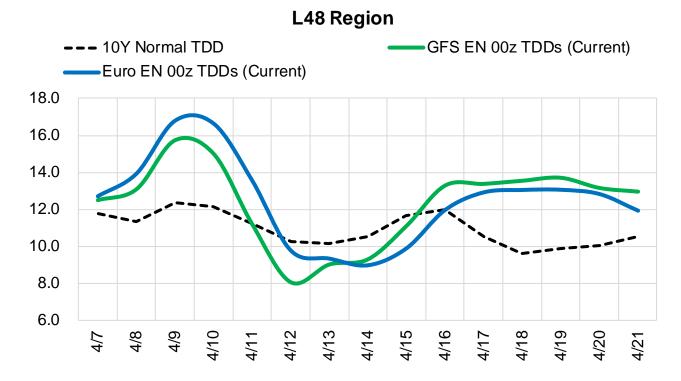
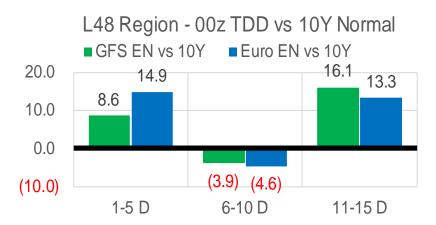




Short-term Weather Model Outlooks (00z)



Vs. 10Y Normal



Source: WSI, Bloomberg

Market Report

7 April 2022

Daily Balances

	1-Apr	2-Apr	3-Apr	4-Apr	5-Apr	6-Apr	7-Apr	DoD	vs. 7D
Lower 48 Dry Production	97.2	96.3	96.8	96.3	95.1	95.6	95.0	-0.6	▼ -1.2
Canadian Imports	6.1	5.4	5.6	5.4	5.8	5.7	6.0	0.3	0.3
L48 Power	26.4	24.7	24.8	26.3	27.6	29.0	28.9	- 0.1	2 .4
L48 Residential & Commercial	27.7	26.1	25.2	24.4	21.9	20.7	22.3	1 .6	- 2.0
L48 Industrial	22.4	22.0	21.7	21.5	21.3	21.3	21.6	a 0.3	- 0.2
L48 Lease and Plant Fuel	5.3	5.3	5.3	5.3	5.2	5.2	5.2	▼ -0.1	▼ -0.1
L48 Pipeline Distribution	3.0	2.8	2.8	2.8	2.7	2.7	2.8	A 0.1	0 .0
L48 Regional Gas Consumption	84.7	80.9	79.7	80.2	78.7	78.9	80.8	🔺 1.9	0.2
Net LNG Delivered	12.36	13.36	13.01	12.22	11.82	11.85	12.61	A 0.8	0.2
Total Mexican Exports	6.8	6.4	6.4	6.6	7.1	7.0	6.7	-0.3	▼ 0.0
Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error	-0.5	1.0	3.2	2.6	3.3	3.6	1.0		

Lower 48 Component Models

Daily Model Error

EIA Storage Week Balances

	25-Feb	4-Mar	11-Mar	18-Mar	25-Mar	1-Apr	WoW	vs. 4W
Lower 48 Dry Production	94.4	94.2	94.8	93.9	95.4	96.0	▲ 0.6	▲ 1.4
Canadian Imports	6.4	5.9	5.2	5.2	4.8	5.7	0.9	0.4
L48 Power	28.7	29.4	27.6	27.3	25.6	27.0	1.4	- 0.5
L48 Residential & Commercial	41.1	38.1	33.2	31.5	23.4	29.7	6 .3	T -1.9
L48 Industrial	25.4	23.1	22.7	20.7	20.8	21.2	0 .4	— -0.7
L48 Lease and Plant Fuel	5.2	5.1	5.2	5.1	5.2	5.2	▲ 0.0	— 0.1
L48 Pipeline Distribution	3.3	3.3	3.2	3.1	2.6	3.0	0 .4	— -0.1
L48 Regional Gas Consumption	103.6	99.1	91.8	87.7	77.5	86.0	8.5	▼ -3.0
Net LNG Exports	11.7	12.5	12.8	12.9	13.0	13.1	0.1	0.3
Total Mexican Exports	6.1	6.4	6.6	6.6	6.5	6.4	▼ -0.1	T -0.1
Implied Daily Storage Activity	-20.6	-17.9	-11.1	-7.9	3.2	-3.8	-7.0	
EIA Reported Daily Storage Activity Daily Model Error	-19.9 -0.8	-17.7 -0.2	-11.3 0.1	-7.3 -0.7	3.7 -0.5			

Monthly Balances

-	2Yr Ago	LY					MTD		
	Apr-20	Apr-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	MoM	vs. LY
Lower 48 Dry Production	92.7	92.5	96.1	93.6	93.6	95.0	96.2	1.2	3.8
Canadian Imports	4.0	4.7	4.8	6.7	6.6	5.2	5.7	0.4	1.0
L48 Power	25.6	25.0	28.7	31.4	29.0	26.9	26.4	- 0.5	1 .4
L48 Residential & Commercial	20.5	19.6	33.9	48.6	42.7	29.6	24.3	▼ -5.2	4.8
L48 Industrial	20.4	21.4	22.5	25.5	25.3	21.7	21.7	0.0	a 0.3
L48 Lease and Plant Fuel	5.0	5.0	5.3	5.1	5.1	5.2	5.3	A 0.1	a 0.2
L48 Pipeline Distribution	2.4	2.5	3.2	3.8	3.4	2.9	2.8	T -0.1	a 0.3
L48 Regional Gas Consumption	74.0	73.5	93.6	114.4	105.5	86.3	80.5	▼ -5.7	7.1
Net LNG Exports	8.2	11.5	12.1	12.4	12.4	12.9	12.4	▼ -0.4	1.0
Total Mexican Exports	4.8	6.7	6.2	6.3	6.2	6.5	6.7	0.2	▲ 0.0
Implied Daily Storage Activity EIA Reported Daily Storage Activity	9.7	5.5	-11.0	-32.8	-23.8	-5.4	2.2		
Daily Model Error									

Source: Bloomberg, analytix.ai



7 April 2022

Daily Average Generation Data

Nuclear Generation Daily Average - GWh (NRC)

ENERGY

	30-Mar	31-Mar	1-Apr	2-Apr	3-Apr	4-Apr	5-Apr	DoD	vs. 7D
NRC Nuclear Daily Output	79.1	78.8	78.8	75.9	75.5	73.7	73.4	-0.3	-3.6
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	25.8	26.1	26.1	28.9	29.3	31.2	31.5	0.3	3.6
NRC % Nuclear Cap Utilization	80.4	80.1	80.1	77.2	76.8	75.0	74.6	-0.3	-3.7

Wind Generation Daily Average - MWh (EIA)

	30-Mar	31-Mar	1-Apr	2-Apr	3-Apr	4-Apr	5-Apr	DoD	vs.7D
CALI Wind	3257	3143	1540	2615	4218	4120	3346	-773	197
TEXAS Wind	17439	6087	19130	6752	18760	10130	14381	4252	1332
US Wind	77952	51776	54689	41509	60690	52917	66686	13769	10097

Generation Daily Average - MWh (EIA)

	30-Mar	31-Mar	1-Apr	2-Apr	3-Apr	4-Apr	5-Apr	DoD	vs.7D
US Wind	77952	51776	54689	41509	60690	52917	66686	13769	10097
US Solar	12777	13676	15296	16052	14573	14815	15147	332	616
US Petroleum	1089	858	915	934	961	1165	1055	-110	68
US Other	7092	6865	6905	6875	6700	6869	7335	466	450
US Coal	74228	79600	79899	81477	73445	81517	78025	-3492	-336
US Nuke	83107	82852	82646	79972	79480	77932	77244	-688	-3754
US Hydro	33862	33741	34254	30530	30779	32239	31584	-654	-983
US Gas	132937	143416	132768	130132	115074	139943	143805	3861	11426

See National Wind and Nuclear daily charts

Source: Bloomberg, analytix.ai

Storage Week Average Generation Data

Nuclear Generation Weekly Average - GWh (NRC)

	25-Feb	4-Mar	11-Mar	18-Mar	25-Mar	1-Apr	WoW	WoW Bcf/d Impact
NRC Nuclear Daily Output	86.9	85.8	82.3	80.9	80.9	79.3	-1.6	0.3
NRC Nuclear Max Capacity	104.9	104.9	104.9	104.9	104.9	104.9	0.0	
NRC Nuclear Outage	18.0	19.1	22.5	23.9	24.0	25.5	1.6	
NRC % Nuclear Cap Utilization	88.3	87.2	83.7	82.3	82.3	80.7	-1.6	

Wind Generation Weekly Average - MWh (EIA)

	25-Feb	4-Mar	11-Mar	18-Mar	25-Mar	1-Apr	WoW	WoW Bcf/d Impact
CALI Wind	2049	815	2602	2297	2037	2643	606	-0.1
TEXAS Wind	13068	6269	14469	17742	16108	14530	-1578	0.3
US Wind	60313	36019	56828	63171	62107	61695	-412	0.1
							-1%	
						-0.1		

Generation Weekly Average - MWh (EIA)

	25-Feb	4-Mar	11-Mar	18-Mar	25-Mar	1-Apr	WoW	WoW Bcf/d Impact
US Wind	60313	36019	56828	63171	62107	61695	-412	0.1
US Solar	11899	13920	12600	13807	13675	15159	1484	-0.3
US Petroleum	2961	3130	1742	961	864	1048	184	0.0
US Other	8211	7510	6616	7114	7740	7399	-341	0.1
US Coal	99888	103399	86717	86035	72503	77722	5219	-0.9
US Nuke	91458	90157	86449	84775	84027	83506	-521	0.1
US Hydro	33214	32197	34571	34883	33229	33461	232	0.0
US Gas	147276	158687	140401	137079	124817	134699	9881	1.8

See National Wind and Nuclear daily charts

Source: Bloomberg, analytix.ai

est.



Monthly Average Generation Data

Nuclear Generation Monthly Average - GWh (NRC)

	2Yr Ago	LY				MTD			
	Same 30 days	Same 30 days	Jan-22	Feb-22	Mar-22	Apr-22	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY
NRC Nuclear Daily Output	80.8	79.7	90.2	87.6	81.3	74.9	79.2	-6.4	-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	24.1	25.1	14.7	17.3	23.6	30.0	25.7	6.4	0.6
NRC % Nuclear Cap Utilization	82.2	81.1	91.7	89.0	82.7	76.2	80.5	-6.5	-0.6

Wind Generation Monthly Average - MWh (EIA)

	2Yr Ago	LY				MTD			
	Same 30 S days	Same 30 days	Jan-22	Feb-22	Mar-22	Apr-22	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY
CALI Wind	1759	2543	1244	1559	2250	3219	2553	969	11
TEXAS Wind	9630	14618	11355	12294	14837	13988	15361	-849	743
US Wind	36910	56135	51045	56539	58520	58552	60353	31	4218

Generation Monthly Average - MWh (EIA)

	2Yr Ago	LY				MTD			
	Same 30 days	Same 30 days	Jan-22	Feb-22	Mar-22	Apr-22	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY
US Wind	36910	56135	51045	56539	58520	58552	60353	1801.4	4218
US Solar	7771	11422	9476	12088	13894	15168	14337	▼ -831.4	2915
US Petroleum	3262	2801	5021	3451	1335	1020	960	-60	💌 -1841
US Other	7214	7473	8792	8832	7164	7050	7311	260	💌 -163
US Coal	65109	78659	117971	106588	82274	78630	79796	A 1165	A 1137
US Nuke	83685	84041	95259	92280	85157	78823	82984	🔺 4161	T -1057
US Hydro	31278	29900	34040	32213	33927	31793	33550	🔺 1757	a 3649
US Gas	149935	124336	164024	152058	135532	135619	134989	& 8252	4 10653
US Total	383211	393615	485812	464578	419864	406008	416011	A 14704	A 22396



See National Wind and Nuclear daily charts

Source: Bloomberg, analytix.ai

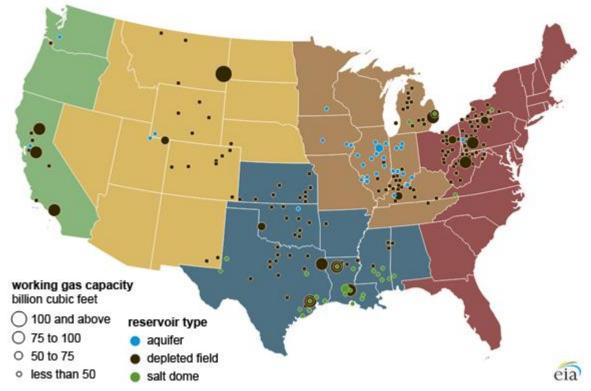


Regional S/D Models Storage Projection

Week Ending	1-Apr			
			Daily	
			Average	Weekly
		Daily	Storage	Adjusted
	Daily Raw	Adjustment	Activity	Storage
	Storage	Factor	(Adjusted) *	Activity
L48	-3.4	0.1	-3.3	-23
East	-5.6	1.8	-3.9	-27
Midwest	-1.8	-0.7	-2.6	-18
Mountain	3.4	-3.2	0.2	2
South Central	0.2	2.0	2.3	16
Pacific	0.4	0.2	0.7	5

*Adjustment Factor is calcuated based on historical regional deltas

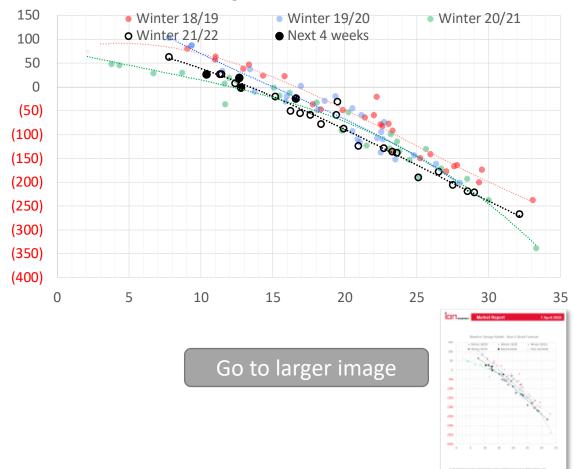
U.S. underground natural gas storage facilities by type (July 2015)

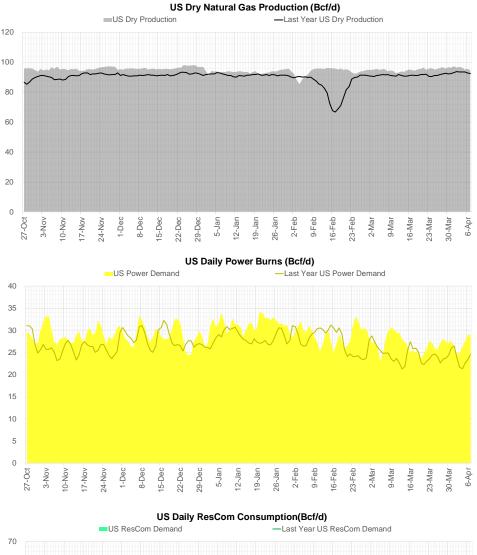


Weather Model Storage Projection

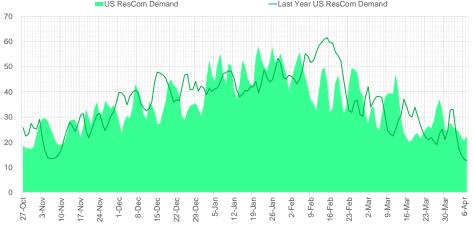
Next report and beyond		
Week Ending	GWDDs	Week Storage Projection
01-Apr	17	-23
08-Apr	13	-1
15-Apr	10	27
22-Apr	13	20

Weather Storage Model - Next 4 Week Forecast



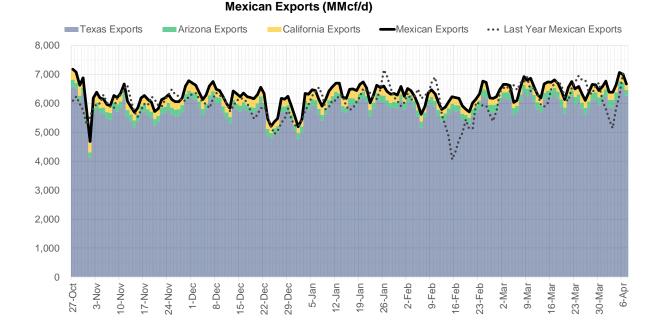


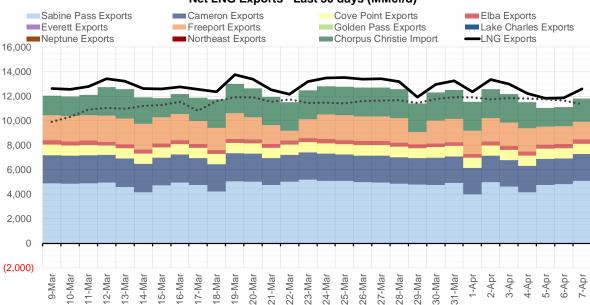
Supply – Demand Trends



Source: Bloomberg







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

Source: Bloomberg

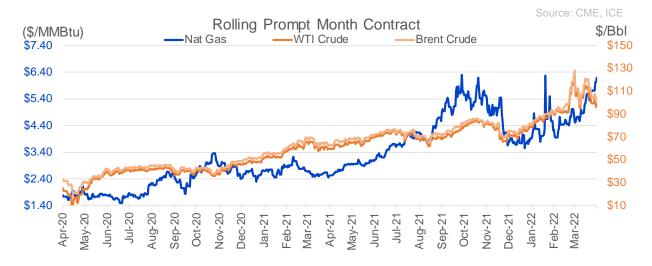


Nat Gas Options Volume and Open Interest CME and ICE Combined

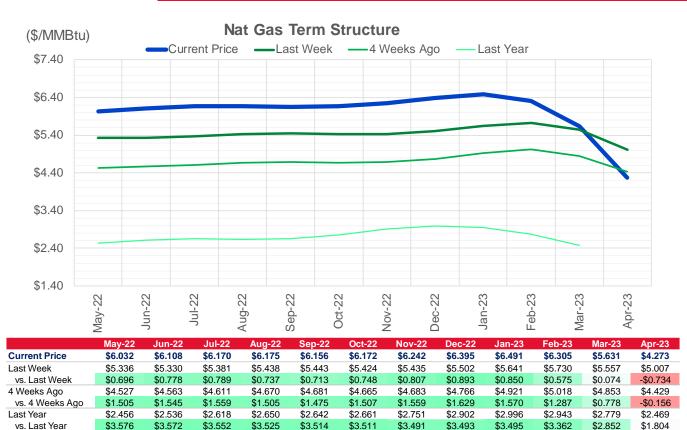
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
5	2022	С	7.00	11961	8	2022	С	10.00	44412
8	2022	С	9.00	7807	8	2022	С	10.50	40500
6	2022	С	9.00	7743	10	2022	С	6.00	29466
6	2022	С	8.00	7520	5	2022	Р	4.00	27066
7	2022	С	9.00	7214	10	2022	С	5.00	26880
5	2022	С	8.00	6379	5	2022	С	6.00	24006
5	2022	С	9.00	5958	9	2022	С	6.00	24006
6	2022	С	12.00	5878	6	2022	С	6.00	22853
10	2022	С	9.00	5520	5	2022	Р	3.00	22636
1	2023	С	7.00	5200	5	2022	С	5.00	21633
1	2023	С	6.00	5150	5	2022	С	7.00	21280
6	2022	С	10.00	4758	10	2022	Р	3.00	20875
5	2022	Р	5.50	4753	8	2022	С	6.00	20404
9	2022	С	9.00	4650	5	2022	Р	4.50	20346
5	2022	С	6.00	4594	5	2022	Р	2.50	19874
9	2022	С	10.00	4406	6	2022	Р	4.00	19559
6	2022	Р	5.50	4401	7	2022	С	6.00	18824
6	2022	С	6.00	4117	8	2022	С	7.00	18723
6	2022	Р	4.20	4001	1	2023	С	6.00	18324
10	2022	С	10.00	3989	5	2022	P	3.50	18270
8	2022	С	8.00	3922	6	2022	С	8.00	18213
7	2022	С	10.00	3577	7	2022	С	7.00	17962
6	2022	С	7.00	3567	7	2022	P C	3.25	17855
10	2022	С	8.00	3545	12 5	2022 2022	P	5.00 2.75	17771 17685
5	2022	С	10.00	3414	5 5	2022	P C	2.75	17596
1	2023	С	10.00	3299	5 10	2022	c	8.00 7.00	17463
2	2023	С	10.00	3275	6	2022	c	7.00 5.00	17463
3	2023	С	10.00	3250	10	2022	P	5.00 2.50	17361
5	2022	Р	5.00	3222	6	2022	P	3.00	17174
7	2022	С	8.00	3122	9	2022	C	7.00	16817
8	2022	С	10.00	3002	9 5	2022	P	3.75	16132
2	2023	С	9.00	3000	6	2022	C	7.00	16129
3	2023	С	1.00	3000	10	2022	P	4.00	16061
3	2023	С	9.00	3000	6	2022	P	3.50	15470
3	2023	Р	1.00	3000	9	2022	P	2.50	15366
5	2022	Р	6.00	2838	9 1	2022	C	5.00	15277
5	2022	С	8.50	2835	10	2023	P	3.50	14972
9	2022	С	8.00	2802	9	2022	P	2.75	14933
5	2022	С	6.10	2799	7	2022	P	3.50	14881
7	2022	С	7.00	2637	6	2022	P	4.75	14839
10	2022	Р	4.00	2630	10	2022	P	2.00	14675
6	2022	Р	5.00	2522	7	2022	c	8.00	14593
6	2022	Р	6.00	2460	12	2022	c	6.00	14509
6	2022	Р	4.70	2305	6	2022	P	3.75	14103
1	2023	С	9.00	2245	5	2022	P	5.00	13833
8	2022	C	12.00	2235	1	2023	c	10.00	13784
5	2022	C	6.25	2230	5	2022	č	3.00	13733
7	2022	C	12.00	2204	8	2022	P	3.00	13700
1	2023	C	7.50	2075	7	2022			
							Source	e: 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		Current	Prior	Daily Change		
MAY 22	220275	229488	-9213	MAY 22	75415	80272	-4857		
JUN 22	84996	81692	3304	JUN 22	65523	65230	293		
JUL 22	101807	100961	846	JUL 22	72542	68998	3544		
AUG 22	48811	47878	933	AUG 22	60802	60576	226		
SEP 22	76235	76319	-84	SEP 22	65032	64565	466		
OCT 22	96090	94538	1552	OCT 22	73276	72379	897		
NOV 22	45118	45071	47	NOV 22	53568	53440	128		
DEC 22	45629	44920	709	DEC 22	59572	59744	-172		
JAN 23	64388	64876	-488	JAN 23	67941	67015	925		
FEB 23	20600	20633	-33	FEB 23	47012	46695	317		
MAR 23	40695	40490	205	MAR 23	52938	52245	693		
APR 23	52645	52189	456	APR 23	51227	50937	289		
MAY 23	40987	38176	2811	MAY 23	45213	45251	-38		
JUN 23	20309	19837	472	JUN 23	42761	42566	195		
JUL 23	16358	15743	615	JUL 23	42476	42206	270		
AUG 23	13936	13320	616	AUG 23	42027	41706	320		
SEP 23	16745	16386	359	SEP 23	41910	41655	255		
OCT 23	34517	33837	680	OCT 23	46391	46105	287		
NOV 23	12116	11932	184	NOV 23	41737	41670	67		
DEC 23	14705	14640	65	DEC 23	37786	37519	267		
JAN 24	21537	21299	238	JAN 24	35345	35315	29		
FEB 24	4925	4365	560	FEB 24	23925	23723	202		
MAR 24	16063	15790	273	MAR 24	30277	30035	242		
APR 24	10525	10715	-190	APR 24	22376	22345	32		
MAY 24	3973	2542	1431	MAY 24	21168	21101	67		
JUN 24	1713	1703	10	JUN 24	21327	21220	107		
JUL 24	1686	1676	10	JUL 24	21980	21877	102		
AUG 24	2989	2981	8	AUG 24	22138	22043	95		
SEP 24	1343	1318	25	SEP 24	20700	20608	92		
OCT 24	6854	6847	7	OCT 24	22630	22624	6		



Market Report



		Cash	Prompt	Cash to
	Units	Settled	Settle	Prompt
AGT Citygate	\$/MMBtu	5.55	4.87	-0.69
TETCO M3	\$/MMBtu	6.18	4.84	-1.34
FGT Zone 3	\$/MMBtu	6.25	5.61	-0.64
Zone 6 NY	\$/MMBtu	6.25	4.72	-1.53
Chicago Citygate	\$/MMBtu	6.21	5.21	-1.00
Michcon	\$/MMBtu	6.17	5.25	-0.92
Columbia TCO Pool	\$/MMBtu	5.93	4.93	-1.00
Ventura	\$/MMBtu	6.16	5.15	-1.01
Rockies/Opal	\$/MMBtu	6.01	4.94	-1.07
El Paso Permian Basin	\$/MMBtu	5.65	4.57	-1.08
Socal Citygate	\$/MMBtu	6.27	5.03	-1.24
Malin	\$/MMBtu	5.95	5.03	-0.92
Houston Ship Channel	\$/MMBtu	6.19	5.30	-0.89
Henry Hub Cash	\$/MMBtu	6.20	5.22	-0.98
AECO Cash	C\$/GJ	5.11	3.92	-1.19
Station2 Cash	C\$/GJ	5.11	4.70	-0.41
Dawn Cash	C\$/GJ	6.15	5.30	-0.85

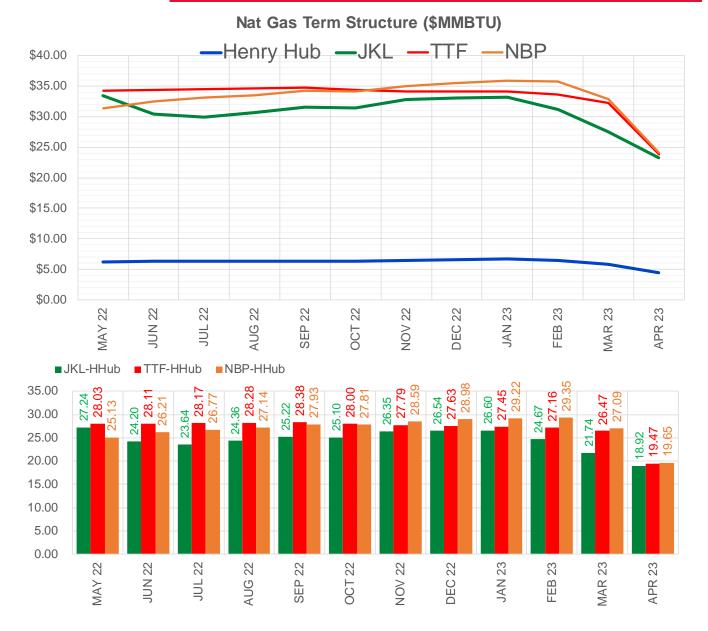
7 April 2022

Source: CME, Bloomberg



				vs. 4 Weeks	
	Units	Current Price	vs. Last Week	Ago	vs. Last Year
NatGas Jul21/Oct21	\$/MMBtu	2.224	0.000	0.000	2 .184
NatGas Oct21/Nov21	\$/MMBtu	0.361	0.000	a 0.000	a 0.275
NatGas Oct21/Jan22	\$/MMBtu	-1.817	a 0.000	0.000	- 2.147
NatGas Apr22/Oct22	\$/MMBtu	0.841	a 0.475	a 0.684	0.806
WTI Crude	\$/Bbl	96.23	- 11.590	- 12.470	a 36.460
Brent Crude	\$/Bbl	101.07	- 12.380	-10.070	A 37.910
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18	0.000	0.000	▲ 0.000
Heating Oil	cents/Gallon	334.52	▼ -46.330	- 11.910	1 53.730
Propane, Mt. Bel	cents/Gallon	1.29	- 0.147	-0.194	a 0.399
Ethane, Mt. Bel	cents/Gallon	0.48	a 0.050	a 0.062	a 0.252
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			

Market Report

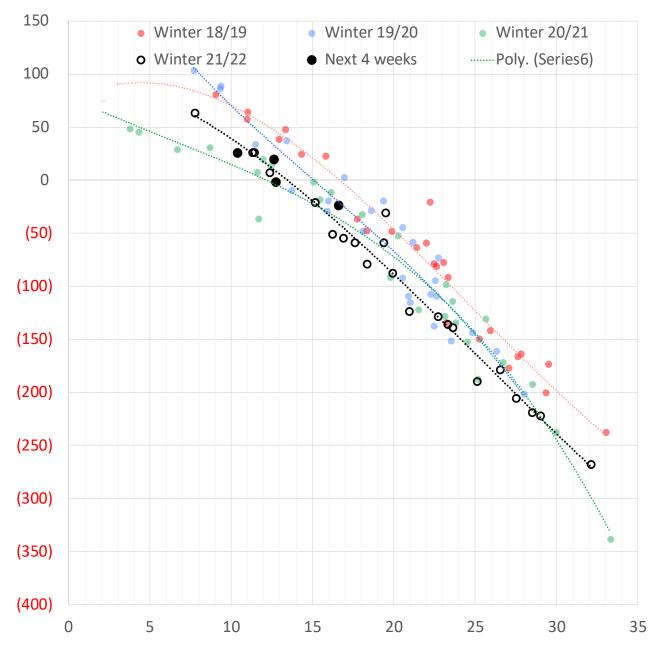


	MAY 22	JUN 22	JUL 22	AUG 22	SEP 22	OCT 22	NOV 22	DEC 22	JAN 23	FEB 23	MAR 23	APR 23
Henry Hub	\$6.197	\$6.285	\$6.354	\$6.346	\$6.333	\$6.357	\$6.421	\$6.565	\$6.668	\$6.474	\$5.815	\$4.410
JKL	\$33.440	\$30.485	\$29.990	\$30.705	\$31.555	\$31.455	\$32.770	\$33.100	\$33.270	\$31.145	\$27.555	\$23.330
JKL-HHub	\$27.243	\$24.200	\$23.636	\$24.359	\$25.222	\$25.098	\$26.349	\$26.535	\$26.602	\$24.671	\$21.740	\$18.920
TTF	\$34.231	\$34.392	\$34.528	\$34.621	\$34.717	\$34.353	\$34.210	\$34.190	\$34.114	\$33.630	\$32.289	\$23.881
TTF-HHub	\$28.034	\$28.107	\$28.174	\$28.275	\$28.384	\$27.996	\$27.789	\$27.625	\$27.446	\$27.156	\$26.474	\$19.471
NBP	\$31.331	\$32.495	\$33.120	\$33.482	\$34.264	\$34.171	\$35.009	\$35.545	\$35.892	\$35.824	\$32.909	\$24.056
NBP-HHub	\$25.134	\$26.210	\$26.766	\$27.136	\$27.931	\$27.814	\$28.588	\$28.980	\$29.224	\$29.350	\$27.094	\$19.646

The risk of trading futures and options and other derivatives involves a substantial risk of loss and is not suitable for all persons. Each person must consider whether a particular trade, combination of trades, or strategy is suitable for that person's financial means and objectives. Past results are not necessarily indicative of future results. This communication may contain links to third party websites which are not under the control of and are not maintained by ION Energy Group, and ION Energy Group is not responsible for their content.

7 April 2022

Weather Storage Model - Next 4 Week Forecast



Market Report

ENERGY

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