

MARKETS REPORT

Natural Gas Futures Maintain Momentum Amid Bullish Near-Term Fundamentals; Cash Prices Climb

- PRODUCTION FALLS TO 97 BCF/D
- FORECASTS FOR MIXED DEMAND
- NGI MODELS DRAW OF 41 BCF

Natural gas futures forged ahead to kick off April trading, supported by drops in production readings and near-term weather data that showed a bump in heating demand.

Coming off a 4.5-cent gain ahead of Good Friday last week, the May Nymex gas futures contract picked up another 7.4 cents on Monday and settled at \$1.837/MMBtu.

NGI's Spot Gas National Avg. jumped 14.0 cents to \$1.455.

[Want to visualize Henry Hub, Houston Ship Channel ...cont' pg. 3

LNG+ | REGULATORY

DC Circuit Sides with FERC in Natural Gas Pipeline, LNG Project Extensions

U.S. regulators were well within their rights to grant extensions to natural gas projects, a federal appeals court found.

FERC's decision to extend the construction deadlines for projects being undertaken by National Fuel Gas Supply Co. and Cheniere Energy Inc. "were not arbitrary and capricious," the U.S. Court of Appeals for the DC Circuit ruled on March 29.

"To the contrary, the decisions were reasonable and adequately supported by the record evidence," the decision stated.

[Get Better Intel: Where are natural gas prices in Canada heading in the next few years? NGI's Forward Look now includes Westcoast Station 2! Don't delay in getting critical natural gas price data. Request ...cont' pg. 9

ANALYSIS

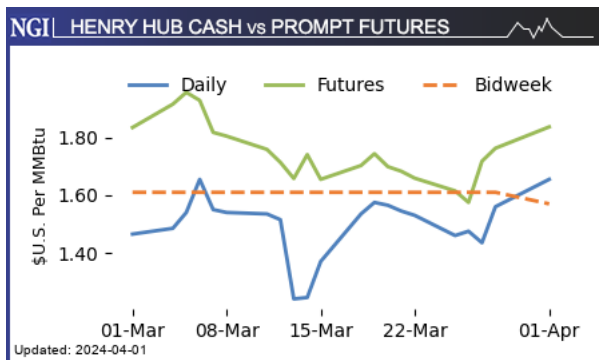
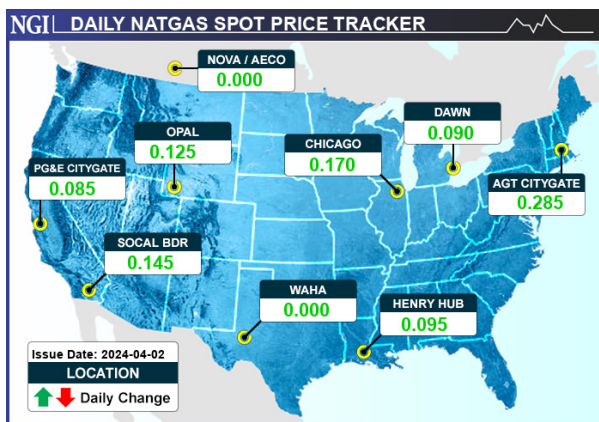
Natural Gas Futures Enter Technical 'No-Man's Land'

Prompt-month natural gas futures have ping-ponged between support levels after getting an injection of strength from the rolloff of the April contract last week.

New York Mercantile Exchange (Nymex) natural gas futures gapped up last Wednesday, creating an immediate support level at \$1.647/MMBtu, according to NGI's Pat Rau, director of Strategy & Research.

May futures stumbled on their first day as the prompt month, then cut some of those losses at the end of a holiday-shortened week. On Monday by midday, May had made up further ground, up 8.3 cents to \$1.846 on support.

[Want to visualize Henry Hub, Houston Ship Channel and Chicago Citygate prices? Check out ...cont' pg. 9



	Mar 25	Mar 26	Mar 27	Mar 28	Apr 01
Henry Hub	1.460	1.475	1.435	1.560	1.655
AGT Citygate	1.660	1.590	1.515	1.595	1.880
Chicago Citygate	1.370	1.435	1.295	1.480	1.650
NOVA/AECO	1.595	1.655	1.605	1.595	1.595
SoCal Bdr. Avg	1.365	1.420	1.350	1.275	1.420
Waha	-0.695	-0.045	-0.050	0.085	0.085
Prompt Futures	1.615	1.575	1.718	1.763	1.837
1-Year Strip	2.653	2.658	2.727	2.781	2.845
Bal Summer	2.102	2.098	2.203	2.251	2.322
Winter 2024/2025	3.342	3.356	3.310	3.370	3.431

More Detailed Market Prices on Pages 2-5.

Asian LNG Imports on the Rise as Restocking Season Gets Underway - LNG Recap..... 6	Gazprom Tightens Grip on Sakhalin 2 LNG Project by Purchasing Shell's Stake..... 8
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OUTLOOK

Will Summer Temps Move U.S. Natural Gas Demand? Wind, Solar May Have a Word

Natural gas production cuts have stabilized the fuel's prices by countering weak Lower 48 winter demand, turning the market's attention to the next big levers for fundamentals: the upcoming summer and added wind and solar capacity.

Prompt-month New York Mercantile Exchange futures, trading above the \$1.800 level at the start of April, had settled as low as \$1.576/MMBtu in late February before several big natural gas heavies, Chesapeake Energy Corp. and EQT Corp., said they were cutting output. ...cont' pg. 10

SEE NOTICE OF IMPORTANT NGI'S DAILY GAS PRICE INDEX SERVICE CHANGES AT END OF THIS ISSUE.

NGI CASH MARKET PRICES

Trade Date: Apr 01; Flow Date(s): Apr 02

	RANGE	AVG	CHG	VOL	DEALS
South Texas					
Agua Dulce	0.950-1.050	0.980	-0.095	89	7
Florida Gas Zone 1	1.350-1.500	1.450	--	22	2
NGPL S. TX	0.980-1.110	1.050	-0.015	280	40
Tennessee Zone 0 South	0.920-1.050	0.990	-0.075	369	64
Texas Eastern S. TX	1.340-1.460	1.410	0.065	306	52
Transco Zone 1	1.050-1.100	1.095	0.095	78	10
Tres Palacios	0.950-1.200	1.115	0.065	256	53
S. TX Regional Avg.	0.920-1.500	1.160	0.060	1,398	228
East Texas					
Atmos Zone 3	1.080-1.200	1.115	-0.020	198	26
Carthage	1.270-1.450	1.320	0.185	97	12
Golden Triangle Storage	1.570-1.570	1.570	0.070	50	1
Gulf South Pool 16	1.150-1.260	1.230	0.110	202	34
Houston Ship Channel	1.100-1.150	1.130	0.120	55	8
Katy	1.000-1.130	1.080	0.020	487	63
Moss Bluff	1.400-1.400	1.400	-0.090	20	2
NGPL TexOk	1.165-1.650	1.220	0.045	1,354	219
Tennessee Zone 0 North	--	--	--	--	--
Texas Eastern E. TX	1.200-1.220	1.210	0.150	54	12
Tolar Hub	1.170-1.250	1.210	0.020	220	24
Transco Zone 2	1.560-1.620	1.590	0.135	181	30
E. TX Regional Avg.	1.000-1.650	1.280	0.070	2,915	431
West Texas/SE New Mexico					
El Paso Permian	-0.200-0.650	0.135	0.040	702	129
El Paso - Keystone Pool	-0.200-0.250	0.065	0.030	304	54
El Paso - Plains Pool	0.350-0.650	0.570	-0.120	92	23
El Paso - Waha Pool	-0.050-0.250	0.070	0.000	306	52
Northern Natural Gas 1-7	--	--	--	--	--
Oneok WestTex	0.500-0.680	0.595	0.220	62	14
Transwestern	0.010-0.100	0.055	0.035	150	14
Transwestern - Central	--	--	--	--	--
Transwestern - W. TX	0.010-0.100	0.055	0.035	150	14
Waha	-0.100-0.680	0.085	0.000	1,078	152
W. TX/SE NM Regional Avg.	-0.200-0.680	0.205	0.030	1,623	243
Midwest					
Alliance	1.650-1.720	1.685	0.155	579	90
ANR ML7	--	--	--	--	--
Chicago Citygate	1.600-1.680	1.650	0.170	768	110
Chicago - Nicor Gas	1.630-1.660	1.645	0.175	316	42
Chicago - NIPSCO	1.640-1.680	1.650	0.160	364	54
Chicago - North Shore	--	--	--	--	--
Chicago - Peoples	1.600-1.670	1.645	0.155	88	14
Consumers Energy	1.680-1.720	1.695	0.085	434	67
Dawn	1.590-1.710	1.670	0.090	1,765	252
Defiance	1.565-1.600	1.580	0.155	80	15
Rover-ANR	1.580-1.600	1.595	0.185	30	5
Rover-Panhandle	1.565-1.580	1.575	0.145	50	10
Emerson	1.370-1.440	1.405	-0.010	119	37
Joliet	1.650-1.720	1.680	0.150	634	102
Lebanon	1.540-1.555	1.550	0.170	97	18
Michigan Consolidated	1.665-1.700	1.675	0.065	534	70
NGPL Amarillo Mainline	1.240-1.360	1.330	0.080	197	32
NGPL Iowa-Illinois	--	--	--	--	--
NGPL MidAmerican	1.640-1.670	1.660	0.165	59	8
Parkway/Union	1.605-1.720	1.665	0.070	244	42
REX Zone 3 Delivered	1.500-1.570	1.550	0.165	1,200	178
REX into ANR - Shelby	1.540-1.560	1.550	0.145	127	22
REX into MGT - Edgar	1.540-1.570	1.550	0.180	248	48
REX into NGPL - Moultrie	1.500-1.560	1.550	0.170	825	108
REX into PEPL - Putnam	--	--	--	--	--
REX into Trunk - Douglas	--	--	--	--	--

Trade Date: Apr 01; Flow Date(s): Apr 02

	RANGE	AVG	CHG	VOL	DEALS
Midwest Regional Avg.					
	1.240-1.720	1.600	0.135	6,129	931
Midcontinent					
ANR SW	1.360-1.400	1.370	0.190	49	8
El Paso Anadarko	--	--	--	--	--
Enable East	1.270-1.300	1.290	0.085	70	10
NGPL Midcontinent	1.240-1.280	1.255	0.065	338	63
Northern Natural Demarc	1.520-1.545	1.540	0.130	232	33
OGT	1.335-1.350	1.345	0.155	108	20
Panhandle Eastern	1.290-1.330	1.310	0.110	201	44
Southern Star	1.300-1.350	1.340	0.200	90	14
Ventura	1.480-1.570	1.540	0.120	439	61
Northern Border Ventura	1.480-1.560	1.535	0.120	48	14
Northern Natural Ventura	1.540-1.570	1.540	0.120	391	47
Midcontinent Regional Avg.	1.240-1.570	1.410	0.175	1,524	253
North Louisiana/Arkansas					
Enable South	--	--	--	--	--
NGPL Gulf Coast Mainline	--	--	--	--	--
Perryville	1.550-1.550	1.550	0.095	10	2
Texas Eastern, M1, 24	1.500-1.500	1.500	0.250	25	7
Texas Gas Zone 1	1.530-1.575	1.540	0.155	447	85
Trunkline Zone 1A	1.520-1.550	1.530	0.160	149	38
N. LA Regional Avg.	1.500-1.575	1.530	0.165	630	132
South Louisiana					
ANR SE	1.585-1.685	1.670	0.095	449	78
Bobcat Storage	--	--	--	--	--
Columbia Gulf Mainline	1.520-1.550	1.535	0.120	383	61
Columbia Gulf onshore	1.580-1.600	1.590	0.105	82	16
Egan Hub	--	--	--	--	--
Florida Gas Zone 2	--	--	--	--	--
Henry Hub	1.600-1.700	1.655	0.095	766	78
Pine Prairie	1.580-1.620	1.590	0.080	323	50
Southern Natural	1.615-1.655	1.635	0.135	282	50
Tennessee Line 500	1.570-1.660	1.615	0.125	220	46
Tennessee Line 800	1.500-1.600	1.550	0.090	48	12
Texas Eastern E. LA	1.525-1.550	1.545	0.155	163	22
Texas Eastern W. LA	1.530-1.570	1.550	0.105	468	86
Transco Zone 3 non-St. 65	--	--	--	--	--
Transco Zone 3 St. 65	1.610-1.650	1.635	0.145	252	57
Trunkline E. LA	--	--	--	--	--
Trunkline W. LA	--	--	--	--	--
S. LA Regional Avg.	1.500-1.700	1.600	0.115	3,431	556
Southeast					
Cove Point	1.770-1.770	1.770	0.120	153	10
FGT Citygate	1.830-1.890	1.865*	--	--	--
Florida Gas Zone 3	1.735-1.830	1.745	0.110	311	60
Southern Pines	1.780-1.780	1.780	--	10	1
Tenn Zone 1 100L	1.535-1.635	1.570	0.130	162	30
Tenn Zone 1 non-St. 87	--	--	--	--	--
Tenn Zone 1 St. 87	1.535-1.635	1.570	0.130	162	30
Texas Eastern M-1, 30	1.540-1.560	1.545	0.105	70	12
Transco Zone 4	1.630-1.680	1.650	0.160	1,100	212
Transco Zone 5	1.685-1.780	1.730	0.165	554	104
Transco Zone 5 North	1.700-1.700	1.700	0.200	5	2
Transco Zone 5 South	1.685-1.780	1.730	0.160	550	102
Southeast Regional Avg.	1.535-1.890	1.700	0.140	2,358	429
Appalachia					
Columbia Gas	1.490-1.530	1.515	0.135	398	85
Eastern Gas North	--	--	--	--	--
Eastern Gas South	1.470-1.500	1.485	0.130	565	87
Millennium East Pool	1.500-1.550	1.515	0.100	10	4
Tenn Zone 4 200L	1.525-1.580	1.560	0.130	247	53
Tennessee Zn 4 313 Pool	1.530-1.560	1.550	0.110	120	24

...cont' pg. 3

NGI CASH MARKET PRICES

Trade Date: Apr 01; Flow Date(s): Apr 02

	RANGE	AVG	CHG	VOL	DEALS
Tennessee Zn 4 Marcellus	1.445-1.500	1.480	0.110	51	15
Texas Eastern M-2, 30 Receipt	1.470-1.540	1.500	0.150	658	124
Texas Eastern M-3, Delivery	1.610-1.675	1.635	0.135	480	80
Transco-Leidy Line	1.520-1.590	1.555	0.110	335	80
Appalachia Regional Avg.	1.445-1.675	1.535	0.125	2,861	552
Northeast					
Algonquin Citygate	1.820-1.910	1.880	0.285	211	28
Algonquin Citygate (non-G)	1.820-1.910	1.880	0.280	211	28
Algonquin Receipts	1.550-1.550	1.550	0.030	9	2
Dracut	--	--	--	--	--
Iroquois Zone 1	--	--	--	--	--
Iroquois Zone 2	1.815-1.900	1.860	0.220	101	25
Iroquois, Waddington	1.740-1.755	1.750	0.125	62	14
Maritimes & Northeast	2.250-2.250	2.250	0.200	28	2
Niagara	1.600-1.600	1.600	0.125	6	2
PNGTS	2.100-2.200	2.190	0.420	9	6
E Hereford/Pittsburg	--	--	--	--	--
PNGTS Non-Border	2.100-2.200	2.190	0.420	9	6
Tenn Zone 5 200L	1.850-1.850	1.850	--	25	1
Tenn Zone 5 200L East	--	--	--	--	--
Tenn Zone 5 200L West	1.850-1.850	1.850	--	25	1
Tenn Zone 6 200L	1.800-2.150	1.845	0.240	71	17
Tenn Zone 6 200L North	2.150-2.150	2.150	0.350	1	2
Tenn Zone 6 200L South	1.800-1.900	1.845	0.240	71	15
Transco Zone 6 non-NY	1.645-1.680	1.665	0.180	494	105
Transco Zone 6 NY	1.700-1.765	1.735	0.220	184	42
Northeast Regional Avg.	1.550-2.250	1.885	0.235	1,197	244
Rocky Mountains					
Cheyenne Hub	1.280-1.360	1.330	0.095	503	101
Cheyenne Hub - Other	1.280-1.340	1.305	0.080	251	60
REX Cheyenne Compression Pool	1.350-1.360	1.360	0.120	253	41
CIG	1.330-1.380	1.360	0.130	99	22
CIG DJ Basin	1.270-1.285	1.280	0.115	13	4
El Paso Bondad	1.300-1.400	1.365	0.210	143	30
El Paso San Juan	1.285-1.420	1.350	0.215	344	80

Trade Date: Apr 01; Flow Date(s): Apr 02

	RANGE	AVG	CHG	VOL	DEALS
Kingsgate	1.300-1.300	1.300	0.030	9	4
KRGT Rec Pool	1.350-1.450	1.385	0.105	391	88
MountainWest	--	--	--	--	--
Northwest S. of Green River	--	--	--	--	--
Northwest Sumas	1.340-1.375	1.350	0.135	50	18
Northwest Wyoming Pool	1.340-1.450	1.395	0.120	132	28
Opal	1.350-1.450	1.405	0.125	53	14
Ruby - Receipts	1.380-1.400	1.395	0.115	73	18
Stanfield	1.350-1.390	1.380	0.090	65	14
Transwestern San Juan	1.300-1.400	1.355	0.205	98	18
White River Hub	1.360-1.380	1.365	0.100	126	22
Rocky Mtns. Regional Avg.	1.270-1.450	1.355	0.120	1,989	433
Arizona/Nevada					
El Paso S. Mainline/N. Baja	1.300-1.500	1.410	0.310	283	68
KRGT Del Pool	1.410-1.500	1.450	0.140	374	92
California					
Malin	1.385-1.470	1.410	0.090	379	82
PG&E Citygate	2.310-2.400	2.330	0.085	811	91
SoCal Citygate	1.885-1.975	1.930	0.250	370	74
Southern Border, PG&E	1.300-1.450	1.385	0.260	237	52
SoCal Border Avg.	1.300-1.500	1.420	0.145	413	119
SoCal Border - Blythe	--	--	--	--	--
SoCal Border - Ehrenberg	1.300-1.450	1.375	0.270	100	31
SoCal Border - Kern River Station	1.420-1.500	1.450	0.200	109	30
SoCal Border - Kramer	1.400-1.400	1.400	0.055	7	4
SoCal Border - Needles	1.350-1.450	1.425	0.080	142	36
SoCal Border - Topock	--	--	--	--	--
SoCal Border - Wheeler Ridge	1.400-1.440	1.410	0.130	56	18
California Regional Avg.	1.300-2.400	1.555	0.155	2,208	418
National Avg.	-0.200-2.400	1.455	0.140	28,916	5,010
Canada					
Alliance (APC) - ATP	1.500-1.500	1.500	0.100	22	6
Empress	1.580-1.610	1.590	0.010	747	84
NOVA/AECO C	1.575-1.610	1.595	0.000	2,375	334
Westcoast Station 2	1.230-1.250	1.240	-0.070	77	24

Prices are in U.S.\$/MMBtu except locations in the Canada section which are in Cdn\$/GJ. The deals column represents the number of transactions used by NGI in the calculation of the price. The volume column is the sum of the volume of those deals, in thousand MMBtus/day. Volumes may not total because of rounding. The data upon which we derive our indexes include both data provided to NGI from the ICE trading platform as well as submitted directly from companies who are principals to the trade. For more information, please see [NGI's Price Methodology](#).

*FGT Citygate assessed using next-day basis to Florida Gas Zone 3. Other points with asterisks assessed using ICE bid/offer spreads and historical price differentials to highly correlated locations.

... from [MARKETS REPORT - Natural Gas Futures Maintain Momentum, pg. 1 and Chicago Citygate prices? Check out NGI's daily natural gas price snapshot now.](#)

Production hovered around 97 Bcf/d to start the week, according to both Bloomberg and Wood Mackenzie estimates. That was down from about 100 Bcf/d last week.

EBW Analytics Group's Eli Rubin, senior analyst, noted that output estimates at the start of any given month often are relatively light. This time around, producers also were coming off the three-day holiday weekend.

"Today's losses appear to be phantom first-of-month declines and should be subsequently revised higher, although noise in daily production figures may take a few days to clear up," Rubin said.

That noted, production had declined by more than 6 Bcf/d from early February to late March, pulling back from record levels that had helped to depress prices through a mild winter. Major exploration and production companies, including [Chesapeake Energy Corp.](#) and [EQT Corp.](#), slowed output to balance the market. Rubin said that should production remain weaker further into April, it could prove further positive for prices.

On the weather-driven demand front, meanwhile, forecasts were mixed, but conditions were favorable for gas bulls to start the week. Portions of the Rockies, Plains and Midwest started the new trading week with highs in the 30s, chilly rains and snow showers. Forecasts showed these conditions pushing to the East as the week wears on.

"This week's cold push may provide a degree of physical market support for spot prices, particularly if pipeline scrapes continue to indicate a slow start for supply in April," Rubin said. "Still, the coming sharp decline in weather-driven demand poses concerns that any strength may quickly prove fleeting into mid-month."

Indeed, as NatGasWeather noted, while heating demand was expected to prove seasonally solid in northern markets this week, "the pattern for April 7-15 is still expected to be exceptionally comfortable over much of the U.S. for very light national demand."

Farther out, weather maps maintain a mild U.S. pattern for April 15-20 "as very light national demand continues due to any truly chilly air being bottled up over the higher latitudes," the forecaster added. "At this point, there's not much to suggest a much colder-than normal-pattern will set up over the U.S. in mid-April."

...cont' pg. 5

CME HENRY HUB FUTURES PRICES

Trade Date: Apr 01

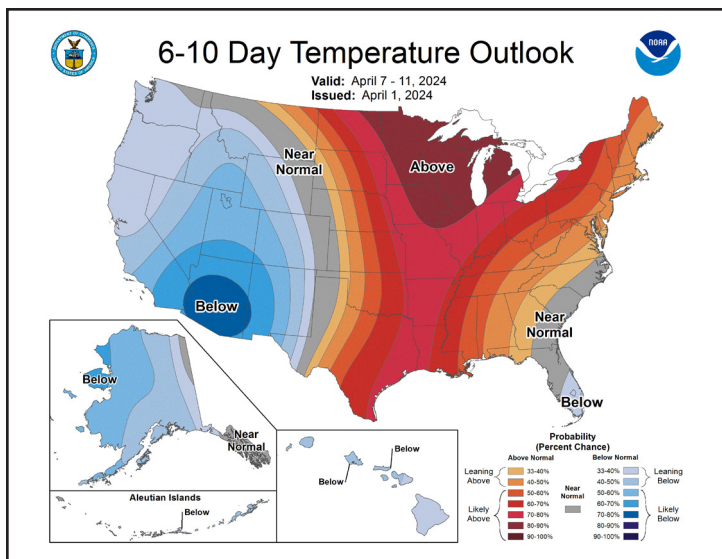
CONTRACT	OPEN	HIGH	LOW	SETTLE	CHANGE
May-24	1.7550	1.8530	1.7060	1.8370	0.0740
Jun-24	1.9990	2.0880	1.9580	2.0740	0.0770
Jul-24	2.3470	2.4190	2.3040	2.4050	0.0650
Aug-24	2.4460	2.5250	2.4070	2.5110	0.0690
Sep-24	2.4480	2.5210	2.4010	2.5070	0.0700
Oct-24	2.5140	2.6110	2.5000	2.5990	0.0690
Nov-24	2.9150	3.0060	2.9130	2.9970	0.0670
Dec-24	3.4400	3.5110	3.4160	3.5060	0.0640
Jan-25	3.7300	3.7960	3.7040	3.7900	0.0630
Feb-25	3.5270	3.6120	3.5270	3.6110	0.0600
Mar-25	3.1760	3.2500	3.1720	3.2500	0.0500
Apr-25	3.0070	3.0550	2.9800	3.0540	0.0460
May-25	3.0640	3.1130	3.0620	3.1130	0.0430
Jun-25	3.2450	3.2760	3.2440	3.2760	0.0350
Jul-25	3.4200	3.4510	3.4190	3.4440	0.0270
Aug-25	3.4640	3.4920	3.4630	3.4860	0.0270
Sep-25	3.4030	3.4460	3.4030	3.4460	0.0280
Oct-25	3.4520	3.5000	3.4520	3.4940	0.0270
Nov-25	3.7890	3.8130	3.7870	3.8130	0.0260
Dec-25	4.2080	4.2280	4.2080	4.2280	0.0260
Jan-26	4.4450	4.4650	4.4340	4.4650	0.0260
Feb-26	4.2390	4.2560	4.2220	4.2560	0.0300
Mar-26	3.6960	3.7210	3.6950	3.7200	0.0240
Apr-26	3.3310	3.3410	3.3200	3.3410	0.0260
May-26	3.3150	3.3390	3.3150	3.3390	0.0250
Jun-26	3.4560	3.4940	3.4560	3.4940	0.0170
Jul-26	3.6310	3.6640	3.6310	3.6640	0.0150
Aug-26	3.6540	3.6970	3.6540	3.6970	0.0120
Sep-26	3.6150	3.6560	3.6150	3.6560	0.0100
Oct-26	3.6750	3.7110	3.6750	3.7110	0.0070
Nov-26	3.9600	4.0040	3.9600	4.0040	0.0100
Dec-26	4.3750	4.4220	4.3750	4.4220	0.0140
Jan-27	4.6710	4.6710	4.6710	4.6710	0.0010
Feb-27	4.4650	4.4650	4.4650	4.4650	0.0020
Mar-27	3.8240	3.8240	3.8240	3.8240	0.0040
Apr-27	3.3410	3.3410	3.3410	3.3410	0.0110
May-27	3.3250	3.3250	3.3250	3.3250	0.0050
Jun-27	3.4750	3.4750	3.4750	3.4750	-0.0030
Jul-27	3.6350	3.6350	3.6350	3.6350	-0.0100
Aug-27	3.6620	3.6620	3.6620	3.6620	-0.0060
Sep-27	3.6100	3.6100	3.6100	3.6100	-0.0030
Oct-27	3.6700	3.6700	3.6700	3.6700	0.0120
Nov-27	3.9800	3.9850	3.9740	3.9740	-0.0010
Dec-27	4.3910	4.3910	4.3910	4.3910	-0.0030
Jan-28	4.6300	4.6300	4.6300	4.6300	-0.0040
Feb-28	4.4120	4.4120	4.4120	4.4120	-0.0060
Mar-28	3.7610	3.7610	3.7610	3.7610	-0.0130
Apr-28	3.2630	3.2630	3.2630	3.2630	-0.0130
May-28	3.2630	3.2630	3.2630	3.2630	-0.0080
Jun-28	3.4130	3.4130	3.4130	3.4130	0.0020
Jul-28	3.5730	3.5730	3.5730	3.5730	0.0170
Aug-28	3.6030	3.6030	3.6030	3.6030	0.0290
Sep-28	3.5630	3.5630	3.5630	3.5630	0.0390
Oct-28	3.6170	3.6170	3.6170	3.6170	0.0390
Nov-28	3.8890	3.9320	3.8890	3.9320	0.0390
Dec-28	4.3100	4.3650	4.3100	4.3650	0.0390
Jan-29	4.5800	4.5800	4.5800	4.5800	0.0390
Feb-29	4.3790	4.3790	4.3790	4.3790	0.0390
Mar-29	3.7090	3.7090	3.7090	3.7090	0.0390
Apr-29	3.1580	3.1580	3.1580	3.1580	0.0390
May-29	3.1520	3.1520	3.1520	3.1520	0.0390
Jun-29	3.3010	3.3010	3.3010	3.3010	0.0390
Jul-29	3.4590	3.4590	3.4590	3.4590	0.0390
Aug-29	3.5070	3.5070	3.5070	3.5070	0.0390
Sep-29	3.4730	3.4730	3.4730	3.4730	0.0390

CME HENRY HUB FUTURES PRICES

Trade Date: Apr 01

CONTRACT	OPEN	HIGH	LOW	SETTLE	CHANGE
Oct-29	3.5370	3.5370	3.5370	3.5370	0.0390
Nov-29	3.8840	3.8840	3.8840	3.8840	0.0390
Dec-29	4.3260	4.3260	4.3260	4.3260	0.0390
Jan-30	4.5710	4.5710	4.5710	4.5710	0.0390
Feb-30	4.3780	4.3780	4.3780	4.3780	0.0390
Mar-30	3.6970	3.6970	3.6970	3.6970	0.0390
Apr-30	3.1160	3.1160	3.1160	3.1160	0.0390
May-30	3.1020	3.1020	3.1020	3.1020	0.0390
Jun-30	3.2570	3.2570	3.2570	3.2570	0.0390
Jul-30	3.4120	3.4120	3.4120	3.4120	0.0390
Aug-30	3.4570	3.4570	3.4570	3.4570	0.0390
Sep-30	3.4330	3.4330	3.4330	3.4330	0.0390
Oct-30	3.5560	3.5560	3.5560	3.5560	0.0390
Nov-30	3.9050	3.9050	3.9050	3.9050	0.0390
Dec-30	4.3540	4.3540	4.3540	4.3540	0.0390
Jan-31	4.6270	4.6270	4.6270	4.6270	0.0390
Feb-31	4.4370	4.4370	4.4370	4.4370	0.0390
Mar-31	3.8070	3.8070	3.8070	3.8070	0.0390
Apr-31	3.2190	3.2190	3.2190	3.2190	0.0390
May-31	3.1950	3.1950	3.1950	3.1950	0.0390
Jun-31	3.3240	3.3240	3.3240	3.3240	0.0390
Jul-31	3.4420	3.4420	3.4420	3.4420	0.0390
Aug-31	3.4780	3.4780	3.4780	3.4780	0.0390
Sep-31	3.4910	3.4910	3.4910	3.4910	0.0390
Oct-31	3.5580	3.5580	3.5580	3.5580	0.0390
Nov-31	3.8980	3.8980	3.8980	3.8980	0.0390
Dec-31	4.3480	4.3480	4.3480	4.3480	0.0390
Jan-32	4.5880	4.5880	4.5880	4.5880	0.0390
Feb-32	4.3780	4.3780	4.3780	4.3780	0.0390
Mar-32	3.7380	3.7380	3.7380	3.7380	0.0390
Apr-32	3.1680	3.1680	3.1680	3.1680	0.0390
May-32	3.1460	3.1460	3.1460	3.1460	0.0390
Jun-32	3.2960	3.2960	3.2960	3.2960	0.0390
Jul-32	3.4560	3.4560	3.4560	3.4560	0.0390
Aug-32	3.4960	3.4960	3.4960	3.4960	0.0390
Sep-32	3.5110	3.5110	3.5110	3.5110	0.0390
Oct-32	3.5570	3.5570	3.5570	3.5570	0.0390
Nov-32	3.7620	3.7620	3.7620	3.7620	0.0390
Dec-32	4.1920	4.1920	4.1920	4.1920	0.0390
Jan-33	4.4400	4.4400	4.4400	4.4400	0.0390
Feb-33	4.2600	4.2600	4.2600	4.2600	0.0390
Mar-33	3.8350	3.8350	3.8350	3.8350	0.0390
Apr-33	3.4100	3.4100	3.4100	3.4100	0.0390
May-33	3.3880	3.3880	3.3880	3.3880	0.0390
Jun-33	3.4230	3.4230	3.4230	3.4230	0.0390
Jul-33	3.4630	3.4630	3.4630	3.4630	0.0390
Aug-33	3.5030	3.5030	3.5030	3.5030	0.0390
Sep-33	3.5180	3.5180	3.5180	3.5180	0.0390
Oct-33	3.5640	3.5640	3.5640	3.5640	0.0390
Nov-33	3.7390	3.7390	3.7390	3.7390	0.0390
Dec-33	4.1390	4.1390	4.1390	4.1390	0.0390
Jan-34	4.3640	4.3640	4.3640	4.3640	0.0390
Feb-34	4.2040	4.2040	4.2040	4.2040	0.0390
Mar-34	3.9290	3.9290	3.9290	3.9290	0.0390
Apr-34	3.5290	3.5290	3.5290	3.5290	0.0390
May-34	3.5070	3.5070	3.5070	3.5070	0.0390
Jun-34	3.5420	3.5420	3.5420	3.5420	0.0390
Jul-34	3.5820	3.5820	3.5820	3.5820	0.0390
Aug-34	3.6220	3.6220	3.6220	3.6220	0.0390
Sep-34	3.6370	3.6370	3.6370	3.6370	0.0390
Oct-34	3.6830	3.6830	3.6830	3.6830	0.0390
Nov-34	3.8330	3.8330	3.8330	3.8330	0.0390
Dec-34	4.0830	4.0830	4.0830	4.0830	0.0390
Jan-35	4.2830	4.2830	4.2830	4.2830	0.0390

Data are as of 5:30 p.m. Eastern.
Source: CME Group, Inc. Updates provided by Bloomberg.



sector demand would help to explain a solid storage draw with the next report. The sector is capitalizing on sub-\$2 gas.

“With current gas prices and storage inventory we see gas-to-coal switching remaining unlikely and gas power generation averaging 35 Bcf/d” for the latest EIA report period, Portillo said. That is up from an estimated five-year average of 31 Bcf/d.

He noted that, in bears’ favor, LNG demand toward the end of March hovered below 13 Bcf/d. That was down about 1 Bcf/d from late-winter highs in large part because of soft liquefied natural gas utilization at the Freeport LNG export facility.

The plant in Texas recently brought back online its Train 3 after months of repairs, but it then took offline Trains 1 and 2 for more inspections in March.

Wood Mackenzie analyst Ina Heming said Monday that recent flyover imagery confirmed the two trains were offline, “leaving only Train 3 liquefying at the facility.”

EIA most recently printed a **36 Bcf withdrawal from storage**. The five-year average for the week ended March 22 was a 27 Bcf pull.

Still, working gas in storage remained more than 40% above the five-year average. The latest withdrawal left inventories at 2,296 Bcf.

The late March trend toward bullish prints marked a stark reversal from a winter that proved one of the mildest on record.

“Our review of heating degree day data show winter 2023-2024 was the warmest since winter 2015-2016 in our sample group of major global cities,” analysts at ClearView Energy Partners LLC said.

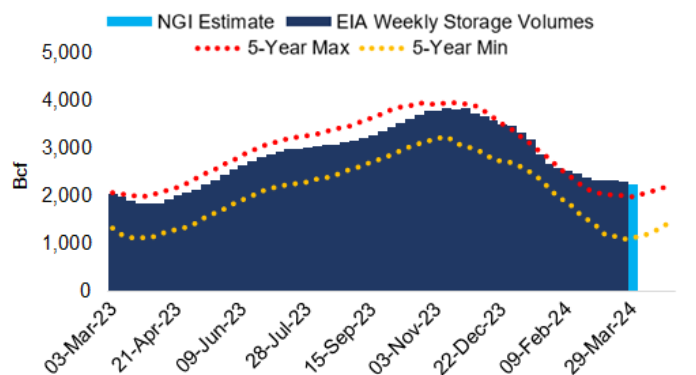
“The fallout from warmer winter temperatures includes seasonally high working gas storage levels in Europe and the U.S., downward pressure on many major global gas and LNG price markers and some U.S. producers reducing 2024 gas supply forecasts,” they added. “That said, it seems too early to us to assume gas/LNG price concerns will persist until winter 2025-2026, given factors including our expectations of minimal global liquefaction capacity additions this year, rising Chinese LNG imports and Russian pipeline gas to Europe supply uncertainties.”

Storage Snapshot



For Week Ending: 29-Mar-2024

NGI Weekly Storage Estimate: **-41 Bcf**



Indicator	Bcf
Range of Expectations	-53 to -20
Last Year Weekly Change	-29
5-Year Average Weekly Change	-1

Note: NGI calculates its weekly storage estimate using a proprietary predictive algorithm. Range of Expectations represents estimates from a number of different sources, including NGI. These expectations are subject to change based on when data are collected.

Previous 4 Weeks (Bcf)

Week Ended	Gas in Storage	Weekly Chg	Y/Y Diff	Diff-to-5 Yr Avg
1-Mar	2,334	-40	280	551
8-Mar	2,325	-9	336	629
15-Mar	2,332	7	411	678
22-Mar	2,296	-36	430	669

Source: NGI modeling, EIA historical data

Storage Snapshot

A potentially seasonally steep storage withdrawal on Thursday with the U.S. Energy Information Administration’s (EIA) data for the week ended March 29 added another bullish undercurrent.

NGI modeled a pull of 41 Bcf. Early draw estimates submitted to Reuters spanned 20 Bcf to 53 Bcf, with an average of 31 Bcf. The predictions compare with a decrease of 29 Bcf a year earlier and a five-year average draw of 1 Bcf.

Tudor, Pickering, Holt & Co. analyst Matt Portillo said power

Spot Strength

Next-day cash prices advanced across much of the Lower 48, powered by the production pullback and swaths of colder weather.

Chicago Citygate climbed 17.0 cents from last week’s close to average \$1.650, while **Opal** in the Rockies gained 12.5 cents to \$1.405.

Southern Star in the Midcontinent gained 20.0 cents to \$1.340, and **Columbia Gas** in the East rose 13.5 cents to \$1.515.

In a Monday forecast, Maxar’s Weather Desk said it expected some chilly air in the eastern half of the Lower 48 early in the six- to 10-day period, which runs from Saturday through April 10.

“But this cooling will only be short-lived in a Pacific flow pattern,” Maxar said. “Above normal temperatures return to the region during the mid- to late period, including much aboves in the Midwest.”

Farther out, in the 11- to 15-day time frame – from April 11-15 – the firm looked for above normal temperatures across the eastern two-thirds of the country.

“The models are in good agreement for a warmer than normal pattern, and this lends moderate confidence in the forecast,” Maxar said. “The forecast leans warmer versus the models in the East in accounting for recent biases amid warmer pattern indicators.”

Waha prices, meanwhile, remained exceptionally weak. The West Texas benchmark hub on Monday averaged 8.5 cents, on par with the level of last week’s finish.

RBN Energy LLC analyst Lindsay Schneider ...cont' pg. 6

MEXICO NATURAL GAS PRICES

MEXICO BORDER LOCATIONS	BIDWEEK PRICES APRIL 2024		DAILY PRICES APR. 02 - APR. 02				FORWARD PRICES APRIL 2024	
	\$/US/MMBTU	MXP/GJ	\$/US/MMBTU	D/D CHG	MXP/GJ	D/D CHG	\$/US/MMBTU	MXP/GJ
Camargo	1.653	26.084	1.453	0.120	22.938	2.058	1.649	26.105
Colombia	1.570	24.769	1.370	0.120	21.631	2.044	1.566	24.786
El Hueco	-0.103	-1.632	0.096	0.000	1.511	0.011	-0.118	-1.864
Los Algodones	1.358	21.431	1.389	0.273	21.925	4.433	1.357	21.484
Matamoros	1.617	25.506	1.413	0.122	22.313	2.081	1.613	25.524
Mier	1.541	24.310	1.339	0.121	21.140	2.059	1.537	24.325
Ojinaga	0.106	1.669	0.301	0.000	4.749	0.036	0.092	1.453
Reynosa	1.533	24.188	1.332	0.121	21.033	2.050	1.529	24.203
San Isidro	0.362	5.719	0.557	0.000	8.802	0.066	0.348	5.516
Sásabe	-0.104	-1.637	0.103	0.000	1.633	0.012	-0.119	-1.878
LOCATIONS IN MEXICO								
Aguascalientes	1.813	28.602	1.808	0.055	28.539	1.075	1.801	28.508
Aguascalientes via Cenagas	2.653	41.859	2.448	0.114	38.650	2.084	2.646	41.874
Aguascalientes via Esentia	0.973	15.344	1.167	-0.005	18.428	0.067	0.957	15.141
Bajío	2.653	41.859	2.448	0.114	38.650	2.084	2.646	41.874
Cactus	2.801	44.195	2.596	0.113	40.986	2.084	2.793	44.210
El Encino	0.964	15.209	1.026	0.039	16.194	0.729	0.952	15.075
El Encino via Cenagas	2.116	33.388	1.911	0.118	30.179	2.084	2.110	33.403
El Encino via Ojinaga-El Encino	0.150	2.361	0.345	0.000	5.441	0.036	0.136	2.145
El Encino via Tarahumara	0.626	9.878	0.821	-0.002	12.962	0.067	0.611	9.675
Guadalajara	1.901	29.983	1.895	0.054	29.920	1.075	1.888	29.889
Guadalajara via Cenagas	2.653	41.859	2.448	0.114	38.650	2.084	2.646	41.874
Guadalajara via Esentia	1.148	18.107	1.342	-0.006	21.191	0.067	1.131	17.904
La Laguna	0.791	12.477	0.986	-0.003	15.560	0.067	0.775	12.274
Los Ramones	1.794	28.304	1.589	0.120	25.095	2.084	1.789	28.319
Mérida	3.293	51.949	3.087	0.109	48.740	2.084	3.283	51.964
Monterrey	1.730	27.288	1.527	0.120	24.115	2.062	1.725	27.304
Monterrey via Cenagas	1.794	28.304	1.589	0.120	25.095	2.084	1.789	28.319
Monterrey via Mier-Monterrey	1.599	25.227	1.397	0.121	22.056	2.059	1.595	25.242
Monterrey via Nueva Era	1.796	28.333	1.596	0.119	25.195	2.044	1.791	28.350
Puebla	2.574	40.606	2.369	0.115	37.397	2.084	2.566	40.621
Salina Cruz	3.685	58.130	3.479	0.107	54.921	2.084	3.674	58.145
Saltillo	1.852	29.211	1.647	0.121	26.002	2.084	1.847	29.226
Tampico	2.018	31.841	1.813	0.119	28.632	2.084	2.013	31.856
Topolobampo	1.055	16.645	1.249	-0.008	19.725	0.036	1.038	16.429
Torreón	2.116	33.388	1.911	0.118	30.179	2.084	2.110	33.403
Tula	2.437	38.451	2.232	0.116	35.242	2.084	2.430	38.466
Tuxpan	2.318	36.562	2.113	0.117	33.362	2.083	2.311	36.579
Tuxpan via Cenagas	2.437	38.451	2.232	0.116	35.242	2.084	2.430	38.466
Tuxpan via Sur de Texas - Tuxpan	2.198	34.674	1.994	0.118	31.481	2.081	2.192	34.692
Villa de Reyes	2.549	40.209	2.345	0.115	37.017	2.073	2.541	40.224
Villa de Reyes via Cenagas	2.437	38.451	2.232	0.116	35.242	2.084	2.430	38.466
Villa de Reyes via Los Ramones	2.262	35.692	2.061	0.116	32.535	2.051	2.256	35.707
Villa de Reyes via Tula - Villa de Reyes	2.946	46.484	2.741	0.112	43.275	2.084	2.938	46.499

Note: Prices are calculated from transportation rates added to U.S. natural gas prices. See [NGI's Mexico Gas Price Index Methodology](#) for location-by-location specifics. US\$/MXP exchange rate from Banco de México and Bloomberg. Bidweek Prices do not change once established each month. Daily and Forward Prompt prices are updated daily. All prices within Mexico assume transport on Cenagas unless otherwise noted.

Source: Natural Gas Intelligence

noted that, for much of March, Waha prices traded in negative territory amid maintenance events and weak demand that left supplies stranded in the Permian Basin of West Texas.

That “means Permian producers are literally paying to have their gas taken away,” Schneider said.

“As we head into the shoulder months and gas demand — both within the Permian and the markets it supplies — continues to sag, the pressure on Waha prices will continue,” Schneider said. “Other maintenance events, planned and unplanned, will also continue to cause problems for the basin, as overall exit capacity is so tight right now. The summer will see some modest relief, as demand increases both within the Permian and without, particularly in Mexico.” ■

Kevin Dobbs

LNG+ | ASIA

Asian LNG Imports on the Rise as Restocking Season Gets Underway – LNG Recap

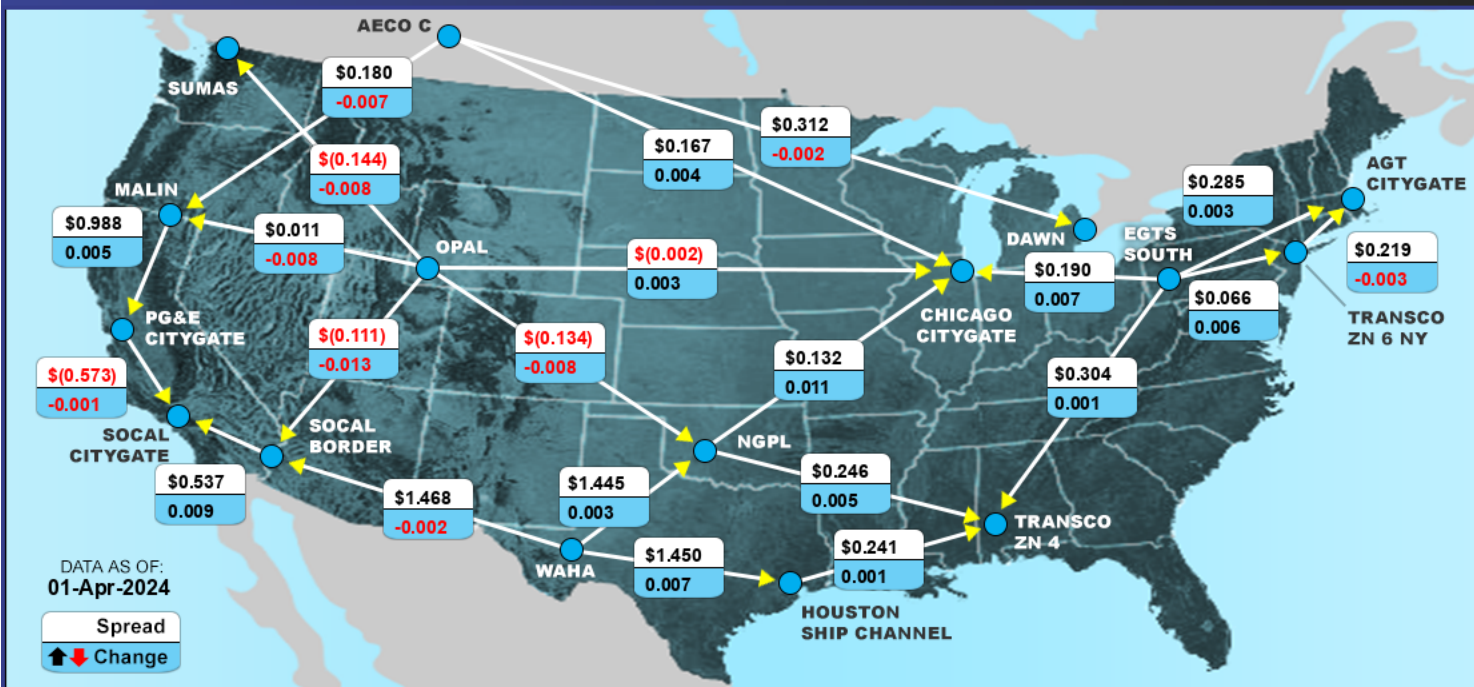
Asia is attracting more LNG cargoes as spot prices remain low and Europe enters the injection season with a plump storage cushion.

While Europe’s liquefied natural gas imports dropped 20% to 9.05 million tons (Mt) last month, Asia’s jumped 12% to 24.3 Mt, according to Kpler data. China, Japan and South Korea led the region’s imports during March.

Strong storage inventories, lackluster demand and mild weather have held global natural gas prices down most of the year.

...cont' pg. 7

NGI NATGAS FORWARD SPREADS, APRIL 2024



Note: The Forward Spreads in this chart are calculated from NGI's Forward Look data service and are listed in \$US/MMBtu. The "Spread" represents the differential between the two locations, and the "Change" represents the day/day change of this Spread. The yellow arrows indicate traditional flow direction. For example, gas at Waha can flow to the SoCal Border, and the Spread between the two represents the forward price at SoCal Border (the point of the arrow) less the forward price at Waha (the start of the arrow). NGI offers a total of more than 70 forward curves out 120 months in the U.S. and Canada. For more information, please go to naturalgasintel.com/forwards

The European market was closed Friday and Monday for the Easter holiday, but Dutch Title Transfer Facility prices have held near \$9/MMBtu amid competition with Asia for supplies.

However, more LNG is expected to land in Asia in the coming weeks given European storage capacity that is 59% full, or well above the five-year average of 42%.

What's more, Japan-Korea Marker spot and futures prices continue to trade near \$10/MMBtu, incentivizing price-sensitive buyers to wade into the spot market in recent weeks. Thailand recently awarded a spot tender for four cargoes, while the Philippines has another buy tender open for a cargo until April 15, according to Kpler

Japan took nearly 6 Mt of LNG last month, second to China which took nearly 7 Mt, and ahead of South Korea, which took nearly 4 Mt.

Japan's LNG inventories have hit the lowest level in years. Stocks fell 5% week-over-week on March 24 to 1.52 Mt, according to the Ministry of Economy, Trade and Industry. Capacity is below the five-year average of 2.14 Mt heading into the restocking season.

Oil prices have also climbed by about 10% this year. Brent crude was again trading above \$87/bbl on Monday. NGI data showed maximum Brent-linked LNG prices near \$15/MMBtu. If crude keeps rising, spot LNG cargoes would be more economic. Oil-indexed LNG contracts are typically sold based on an average crude price over the previous three to six months.

In the United States, lower domestic natural gas production pushed prices higher on Monday after the prompt Henry Hub contract rallied 4.5 cents last week ahead of the Good Friday holiday. The May Henry Hub contract gained another 7.4 cents to finish at \$1.837/MMBtu on Monday.

Bloomberg's estimated Lower 48 natural gas production for Monday totaled around 96.7 Bcf/d, a roughly 4.6 Bcf/d decline day/day. Wood Mackenzie similarly estimated production at 97.3 Bcf/d,

Freeport LNG



Source: Freeport LNG Development LP

down around 3 Bcf/d from day-earlier volumes.

"Today's losses appear to be phantom first-of-month declines and should be subsequently revised higher, although noise in daily production figures may take a few days to clear up," said EBW Analytics Group LLC analyst Eli Rubin.

The U.S. market appears undersupplied when adjusting for weather, Tudor, Pickering, Holt & Co. (TPH) analyst Matt Portillo said in a recent note.

Among recent balance items, power generation demand has outperformed the five-year average, according to the analyst.

"With current gas prices and storage inventory, we see gas-to-coal switching remaining unlikely and have power ...cont' pg. 8

generation averaging 35 Bcf/d (forecasted 72% share of the thermal stack) for the year, versus the five-year average around 31 Bcf/d,” Portillo said.

Meanwhile, feed gas deliveries to U.S. LNG plants continued to fall Monday. Flows were nominated at 12.5 Bcf, down from levels above 13 Bcf late last month. Freeport LNG volumes were cut by more than half to below 1 Bcf.

While Freeport restarted its third liquefaction train last month after repairing electrical issues caused by a winter storm in January, inspections and anticipated work on the other two trains at the upper Texas coast facility have cut U.S. LNG output.

In other news as the week got underway, QatarEnergy said Sunday it would charter another 19 LNG carriers as it prepares to significantly ramp up output.

The country plans to boost liquefaction capacity to 142 Mt by the end of the decade from current levels of 77 Mt. It has now signed deals to lease or build 104 LNG tankers in the largest program of its kind in history.

Elsewhere, officials in Moldova said the country would import U.S. LNG for the first time. The country’s energy ministry said 2.6 million cubic meters of U.S. gas would arrive via a Greek import terminal to help meet domestic needs on Monday and Tuesday.

The country, like others across Europe, is working to reduce its dependence on Russian natural gas imports. ■

Jamison Cocklin

LNG+ | NEWS

Gazprom Tightens Grip on Sakhalin 2 LNG Project by Purchasing Shell’s Stake

Russia’s Gazprom PJSC will reportedly increase its ownership of Sakhalin 2 LNG project, placing more of the country’s export capacity under state-owned company’s control as sanctions continue to pressure its oil and pipeline gas revenues.

According to the Russian government, a 27.5% stake valued at \$1.6 billion is to be sold to Gazprom, increasing its interest in the liquefied natural gas project to 78%. The share, previously owned by Shell plc, was expected to go to Russia’s largest LNG producer, privately held Novatek PJSC.

A Shell spokesperson told Reuters that the producer “reserves all its legal rights” from the stake. However, Shell had no comment about Russia’s actions. Shell last year wrote down its investment in the 11.5 million metric tons/year facility on Sakhalin Island north of Japan. It also has exited other projects in Russia since 2022’s invasion of Ukraine.

[What’s Coming? NGI’s North American LNG Project Tracker allows clients to quickly see developments across the U.S., Canada and Mexico. Download the data sheet now.]

U.S. sanctions against Russian energy assets like Novatek’s Arctic LNG 2 project have made the country’s pathway to meeting its target of boosting LNG exports by 2030 unclear. Allies of Ukraine eschewing Russian oil and recent attacks at refining facilities have also threatened the outlook of Gazprom’s long-term energy earnings.

Meanwhile, Japan’s trade ministry has also been working to preserve the ownership stakes of Mitsui & Co. and Mitsubishi Corp. Sakhalin 2. Japan imported around 9% of its LNG supply from Russia last year. Japanese buyers have been reluctant to leave Russian projects as prospects for soaring power demand and increased volatility in the global spot market compound.

Kpler’s Viktor Katona, head of oil analysis, said projects like Sakhalin could also be the key for Russia to sustain its gas production as Gazprom attempts an “Asia pivot” to send more of its gas east.

“The counterbalancing of shrinking Europe-bound flows and higher Asia-bound volumes will determine the medium-term future of Russia’s gas sector,” Katona wrote in a recent note.

Despite throttling gas exports to Europe before the war, and later losing a route through the destruction of Nord Stream 1, a limited amount of Russian gas has made its way to Europe through Ukraine. Those transport agreements are expected to end in December without an extension agreement.

At the same time, Europe’s search for LNG volumes has meant a surge of Russian cargoes to the continent. In 2023, the No. 1 destination for Russian LNG flipped from Asia to Europe. European buyers imported 16.5 million metric tons (mmt) last year, compared with 15.7 mmt that landed in Asia, according to data from Kpler.

However, Katona said there is “very limited upside for Russian gas exports to the European continent. That also applies for LNG supplies.”

For the past two years, almost 75% of all Russian LNG that has landed in Europe has come from Yamal LNG. Earlier in the year, TotalEnergies disclosed it didn’t expect to receive any cargoes from Arctic LNG 2 this year, further limiting a potential increase in Russian volumes to Europe.

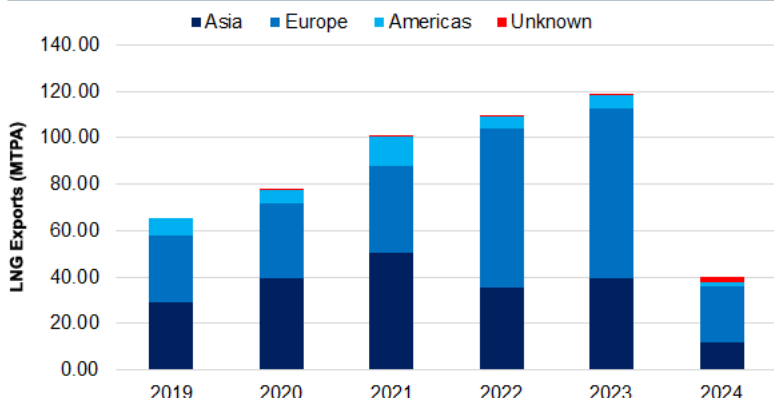
The European Union has also been progressing plans to allow individual members to ban imports of Russian LNG, which could cut off major routes through Belgium and France. Novatek, which operates Yamal LNG, uses Belgium as a regasification and storage hub for a large portion of its LNG to Europe.

While the EU has resisted instituting a bloc-wide ban on Russian natural gas, some members and associated countries like Germany, Lithuania and the UK have already ended imports after the invasion of Ukraine last year.

The loss of dedicated customers for Russian gas in Europe has already impacted production, Katona said. The cuts to production could deepen without more outlets for gas exports.

“Comparing Russia’s natural gas export ...cont’ pg. 9

Russian LNG Exports by Destination Continent



Source: Compiled by NGI from Kpler data

infrastructure to its oil pipelines and export terminals, it stands out that Gazprom's long-term strategy of focusing on giant midstream projects all running into Europe has backfired," Katona said. This has led to a 110 billion cubic meter drop in production since 2022. ■

Jacob Dick

... from *ANALYSIS - Natural Gas Futures Enter Technical 'No-Man's Land', pg. 1 NGI's daily natural gas price snapshot now.*

"The contract is in short-term technical 'no-man's land,' as May sits in the middle of the 20-day Bollinger Band, RSI and slow stochastics readings, all of which are measures of overbought/oversold conditions," Rau said.

Above the May contract price are strong resistance levels in the \$1.94-\$2.05 area: the top of the Bollinger Band at 1.94, psychological resistance at \$2.00, actual resistance marked by the \$2.009 reactionary high set on March 5, and a 31.8% Fibonacci retracement at \$2.05, according to Rau.

"It'll be tough to break through those levels until we start to see some meaningful reductions in production and/or an early start to summer," Rau said.

Price support exists at the gap support of \$1.647, followed by the bottom of the Bollinger Band at \$1.545 and the post-Covid low trade of \$1.481, Rau noted.

EBW Analytics Group analyst Eli Rubin in a Sunday note predicted the May contract would "probe higher and retreat" over the next 7-10 days across a potential range of \$1.66-\$1.87. On Thursday, the May contract rebounded after the government storage report showed a higher-than-expected **36 Bcf withdrawal** for the week ended March 22.

That recovery, along with supportive weather updates over the weekend, warrant "short-term technical optimism," according to Rubin.

Professional speculators slightly added to natural gas net short positioning in the week ending Tuesday, March 26.

Professional speculators reduced long contracts (-8,525) while adding more short contracts (6,645) in the week, to increase their net short position by 15,170 contracts to 119,051 contracts, according to CFTC and Nymex data cited by StoneX Financial Inc. senior vice president of energy Thomas Saal.

Speculators' net short positioning this year peaked at a net short of 145,703 contracts in late February, Saal said. ■

Chris Newman

... from *REGULATORY - DC Circuit Sides with FERC, pg. 1 a trial now.*

NGOs had filed petitions claiming that the Federal Energy Regulatory Commission (FERC) had been too permissive in finding "good cause" to grant permitting extensions in both cases.

"Because FERC acted well within its discretion in both cases, we deny the petitions for review," the court said.

National Fuel Gas Supply Co. is developing the **99-mile Northern Access Pipeline** across Pennsylvania and New York. The pipeline would connect gas producers to markets in Canada and throughout the northeastern United States.

Corpus Christi LNG Stage 3 Expansion

NGI



Source: Cheniere Energy Inc.

FERC first approved the pipeline in 2017. A failure to proceed on time due to litigation against the proposed project saw National Fuel file an extension request. FERC then granted the company a 35-month extension of its deadline until end-2024.

The regulator determined that there was good cause for the extension because "the Commission has previously found that providing more time for a project applicant to obtain necessary permits can be an appropriate basis for granting an extension of time."

Corpus Christi Liquefaction Stage 3 sought FERC's approval to build upgrades to its LNG terminal in Texas. The initial authorization required the project to be completed by Nov. 22, 2024. In 2021, Cheniere filed a request to extend the deadline for its project by 31 months. Cheniere cited Covid-19 as the reason for its delay.

FERC provided an extension, finding that Cheniere had established good cause for an extension because "the unforeseeable impacts of the Covid-19 pandemic combined with the companies' continued interest in the project satisfy the Commission's good cause inquiry."

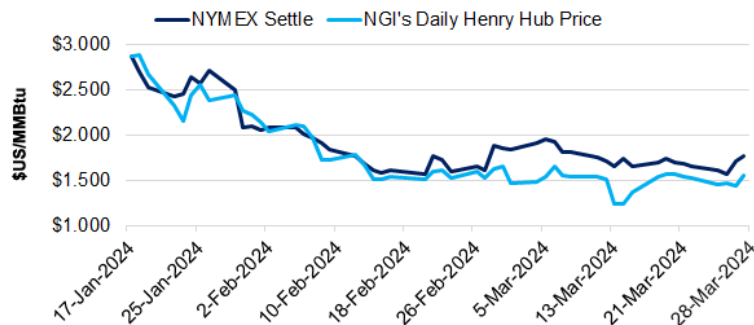
In both cases, FERC had previously conducted lengthy review processes before approving the projects, the appeals court found.

"We hold that FERC reasonably granted each company an extension of time and adequately explained its decisions," the court ruled. ■

Christopher Lenton

NGI's Daily Henry Hub Spot Price vs Prompt Futures

NGI



Source: NGI's Daily Gas Price Index, CSI, NGI calculations

... from **OUTLOOK - Will Summer Temps Move U.S. Natural Gas Demand?**, pg. 1

“We saw really big gains, not only at Henry Hub, but at a lot of the pricing locations throughout the United States,” said NGI’s Leticia Gonzales, price and markets editor, at a recent Intercontinental Exchange Inc. (ICE) event in Calgary.

[Want to visualize Henry Hub, Houston Ship Channel and Chicago Citygate prices? Check out NGI’s daily natural gas price snapshot now.]

Criterion Research LLC’s James Bevan, vice president of research, also spoke at the event. “Production seems like it’s fixed itself for the most part, and power demand is just the biggest risk by far going into the summer months,” he said.

On Feb. 21, the day of Chesapeake’s news, NGI’s **Henry Hub** spot price jumped 9.5 cents to \$1.600. That strength rolled through the forward curve, with **NGI’s Forward Look** showing Henry Hub gained 20-30 cents for summer months, Gonzales noted.

When **CNX Resources Corp.** joined the other gas producers by announcing it too would cut output, prices were more muted. “Part of that is that the near-term outlook is so incredibly bearish,” Gonzales said. “We’re in the final stages of what was a record warm winter, which has had a devastating impact on cash prices.”

Weak near-term fundamentals like slower U.S. liquefied natural gas exports have also weighed, as has a massive storage surplus, according to Gonzales. Lower 48 gas inventories stood at a 41% surplus to the five-year average after a storage **withdrawal of 36 Bcf** was reported for the week ended March 22.

Cuts Tally

Appalachian Basin gas production dropped from around 36 Bcf/d to between 33.5-34 Bcf/d in February and has held within that lower bound into late March, according to Bevan. EQT cut about 1 Bcf/d of production, while other companies in Appalachia have

accounted for around 1-1.5 Bcf/d of the region’s curtailments, according to Bevan.

“Whether you want to call that maintenance or production curtailments, or just seasonal drops, it did help balance things a little bit as far as production goes,” Bevan said. EQT said it would reevaluate market conditions at the end of March, so one question is whether the company would extend its 1 Bcf/d of curtailments into April, according to Bevan.

Haynesville Shale output has come down from 16.5 Bcf/d in mid-February to just over 15 Bcf/d through March 25, according to Bevan. One concern that Criterion analysts had going into 2024 was the possibility of additional volumes flowing on DT Midstream Inc.’s Louisiana Energy Access Project, or LEAP, after it completed a **Phase 2 expansion** in January.

LEAP’s deliveries to the Gillis Hub “never went up as soon as that phase came online,” Bevan said. “So that presented a little bit more comfort that production is actually starting to drop off in the Haynesville Shale.”

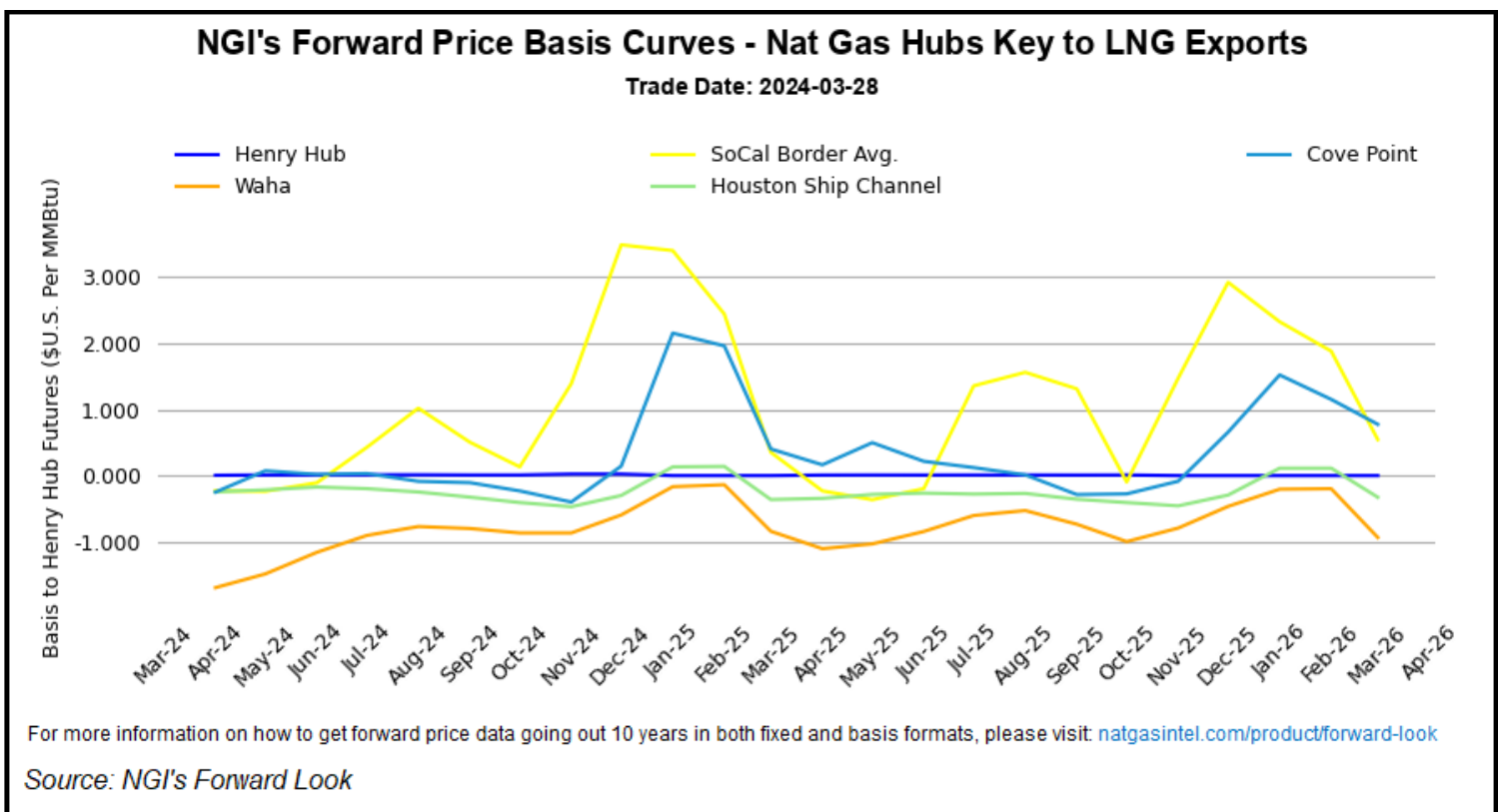
Meanwhile, Permian Basin outtake pipeline capacity is capped until more pipeline capacity is back online, Bevan said. Permian output recently has been pinched by pipeline maintenance. **Matterhorn Express Pipeline** would add 2.5 Bcf/d of capacity when it ramps up later this year, he said.

Volatility Ripples

If U.S. LNG export capacity **doubles as expected from today’s 14 Bcf/d nameplate capacity by 2028**, the price ramifications could go well beyond the Gulf Coast, according to Gonzales.

Basis pricing for the Permian’s benchmark hub Waha showed April 2024 pricing at minus \$1.691, a discount that narrows to minus 17.1 cents for January 2025 pricing, according to **Forward Look** as of March 27.

California’s SoCal Citygate also showed an ...cont' pg. 11



impact, according to Gonzales. The hub supplies a region with growing demand supplied in part by the Permian. "Anytime you have all this gas demand that is coming in the form of LNG making its way to the Gulf Coast, then you're obviously taking away gas that can move to other markets," she said.

SoCal forward basis prices at 29.4 cents for April 2024 jump to a \$3.979 premium for January 2025 against the Henry Hub benchmark, according to *Forward Look*.

"SoCal and the entire western region is where we've been seeing a lot of increased volatility as these LNG exports have come online," Gonzales said. "Growing LNG demand doesn't have just ramifications for Gulf Coast markets, but for a lot of other markets as well."

Risky Summer Outlook

While production "seems like it's figuring itself out...the next concern is power demand throughout the summer months," Bevan said.

"It's great to assume that we're going to have another extremely hot summer, just like we did last year, and power burns go through the roof. There is a risk to that, though, with all the wind and solar coming online," he noted.

The U.S. Energy Information Administration estimated that roughly 6 GW of wind and 35 GW of wind generation are due to come online this year, Bevan said. Those estimates may be overestimated but are a rough starting point to model, he said. New wind and solar capacity would equate to about 1.3 Bcf/d of gas-generated power if

the additions were to run at capacity, he added.

Criterion has a base case of about a 37.7 Bcf/d power burn through the injection season. In that case, Lower 48 gas inventories could end at around 3.8 to 3.9 Tcf, "which is a pretty reasonable place to end up," Bevan said. However, a higher amount of wind and solar generation could push end-of-season gas storage levels to 4.1 Tcf or higher.

"There's a lot of bearish risk. That just seems to be the gist of what is happening right now," Bevan said. "There's not a lot of things where you look at the news and you're like, 'Oh, that's a really bullish thing.' It seems like the market keeps getting pummeled," as when the Freeport LNG outages happened.

NGI's Henry Hub forward prices do not point to sustained pricing above the \$3 level until summer 2025. Even with the new LNG capacity coming online, the forward curve does not show a tremendous difference in variation, Gonzales said. Henry Hub forward prices rise above \$3.000 in late 2024, according to the NGI forward prices.

"Prices are generally in the \$3 to \$4 range in 2025, and it's not until you get way further out on the curve that you start flirting with that \$5 threshold, and that's really just in the peak winter season," Gonzales said.

The U.S. Energy Information Administration (EIA) in its latest [Short-Term Energy Outlook](#) modeled an average Henry Hub price of \$2.27/MMBtu for 2024 and an average of \$2.94 for 2025. ■

Chris Newman

NGI

Intelligence Press, Inc

DAILY GAS PRICE INDEX

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Contact us: **EDITORIAL:** editorial@natgasintel.com; **MARKETS/PRICE INDEX QUESTIONS:** priceteam@natgasintel.com; **SUPPORT/SALES:** info@natgasintel.com; **ADVERTISE:** adv@natgasintel.com.

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Prompt Month Statistics - Previous 5 Trading Days

NGI

U.S. Fundamentals						Europe Fundamentals					
	25-Mar	26-Mar	27-Mar	28-Mar	1-Apr		25-Mar	26-Mar	27-Mar	28-Mar	1-Apr
Max GOM Netback (\$US/MMBtu)	8.472	8.162	8.177	8.224	8.225	NBP Futures (\$US/MMBtu)	9.147	8.691	8.789	8.591	8.536
L48 LNG Feedgas Del (Million Dth/d)	12.620	12.600	12.260	13.040	12.500	TTF Futures (\$US/MMBtu)	9.066	8.662	8.821	8.658	8.617
Henry Hub Futures	1.789	1.788	1.718	1.763	1.837	Gas in Storage (TWh)***	675.7	675.4	673.7	672.1	670.3
Shipping (\$US/MMBtu)*						% Full	59.2%	59.2%	59.0%	58.9%	58.8%
Sabine Pass to Tokyo	1.417	1.413	1.307	1.311	1.310	Difference to Last Year (TWh)	48.2	46.3	44.0	43.9	44.2
Sabine Pass to Milford Haven (U.K.)	0.675	0.668	0.616	0.613	0.611	Gas in LNG Storage (10 ³ m ³)***	4778.7	4808.5	4904.5	4433.9	4301.5
Sabine Pass to Gate (NW Europe)	0.705	0.699	0.644	0.641	0.640	% Full	55.9%	57.0%	51.5%	51.5%	50.0%
Landed Price Arbitrage (\$US/MMBtu)**						Spark Spread (Eur/MWh)	-5.94	-6.45	-7.09	-6.03	-5.91
Sabine to Tokyo	6.241	6.106	6.118	6.197	6.112	Clean Spark Spread (Eur/MWh)	-33.34	-32.74	-33.45	-32.46	-32.35
Sabine to Gate	6.304	5.907	6.201	5.990	5.865	Dark Spread (Eur/MWh)	11.21	7.65	5.64	5.72	5.94
Boston Mean Temp (°F)	47	44	46	49	TBD	Clean Dark Spread (Eur/MWh)	-54.16	-55.09	-57.25	-57.34	-57.12
% Diff From 30-Yr Normal	19.1%	7.0%	11.3%	13.4%		PVB/TTF Premium (%) (Mar)	-0.3%	-0.6%	-0.6%	-0.6%	-0.2%
Chicago Mean Temp (°F)	40	42	48	42	TBD	NW Europe Mean Temp (°F)	43	45	48	51	TBD
% Diff From 30-Yr Normal	-1.6%	-1.2%	13.8%	-4.1%		% Diff From 30-Yr Normal	-4.4%	0.4%	6.1%	12.4%	
Los Angeles Mean Temp (°F)	56	56	53	55	TBD	Asia Fundamentals					
% Diff From 30-Yr Normal	-4.6%	-4.8%	-10.9%	-7.9%		JPN/KOR Futures (\$US/MMBtu)	9.715	9.575	9.400	9.535	9.535
Latin America Fundamentals						JPN/KOR Oil Parity Slope	11.2%	11.1%	10.9%	10.9%	10.9%
Mexico						Brent Oil Price Parity (\$US/MMBtu)	14.92	14.84	14.81	15.05	15.04
East (Altamira) DES	8.47	8.34	8.26	7.38	8.39	Japan Coal Price (\$US/MMBtu)	6.67	6.67	6.67	6.61	6.74
West (Manzanillo) DES	8.94	8.80	8.70	7.81	8.83	Beijing Mean Temp (°F)	48	49	53	53	52
Argentina DES	9.03	8.89	8.74	7.86	8.88	% Diff From Normal	0.0%	0.4%	8.4%	8.4%	0.4%
Brazil DES	8.75	8.62	8.50	7.62	8.64	Seoul Mean Temp (°F)	44	48	50	50	51
Chile DES	9.05	8.91	8.80	7.91	8.93	% Diff From Normal	1.6%	9.7%	14.3%	14.3%	11.9%
Colombia DES	8.54	8.40	8.32	7.43	8.45	Tokyo Mean Temp (°F)	49	52	52	52	58
Panama DES	8.56	8.43	8.34	7.46	8.47	% Diff From Normal	-1.6%	3.7%	3.9%	3.9%	12.1%

Current prompt month prices are for May.

*Assumes full freight for both laden and ballast legs. ** Excludes regas fees. ***Most recent data available, typically delayed by two calendar days.

U.S. Gulf Coast LNG Netback Prices (12-Month Strip)

NGI

Data as of 01-Apr-2024

Futures Settle
(\$US/MMBtu)Est Shipping Cost from
Gulf Coast (\$US/MMBtu)

Gulf Coast Netback (\$US/MMBtu)

Netback Less Henry
Hub Futures
(\$US/MMBtu)

Spot Month (shipping based on spot market vessel rate)

Month	JPN/KOR	NBP	TTF	JPN/KOR	NBP	TTF	JPN/KOR	NBP	TTF	Max	Chg	HH	Diff (Margin)
May-24	\$9.535	\$8.536	\$8.617	\$1.310	\$0.611	\$0.640	\$8.225	\$7.925	\$7.977	\$8.225	\$0.000	\$1.837	\$6.388

Rest of Curve (shipping based on 1-Yr vessel rate, adjusted for seasonality)

Jun-24	\$9.475	\$8.487	\$8.671	\$1.519	\$0.723	\$0.761	\$7.956	\$7.765	\$7.910	\$7.956	\$0.000	\$2.074	\$5.882
Jul-24	\$9.720	\$8.455	\$8.732	\$1.550	\$0.735	\$0.776	\$8.170	\$7.720	\$7.956	\$8.170	\$0.000	\$2.405	\$5.765
Aug-24	\$9.945	\$8.533	\$8.793	\$1.655	\$0.789	\$0.833	\$8.290	\$7.744	\$7.960	\$8.290	\$0.000	\$2.511	\$5.779
Sep-24	\$10.065	\$8.886	\$8.945	\$1.749	\$0.842	\$0.888	\$8.316	\$8.044	\$8.057	\$8.316	\$0.000	\$2.507	\$5.809
Oct-24	\$10.350	\$8.995	\$9.185	\$2.104	\$1.028	\$1.089	\$8.246	\$7.966	\$8.095	\$8.246	\$0.000	\$2.599	\$5.647
Nov-24	\$11.115	\$10.170	\$9.993	\$2.253	\$1.114	\$1.175	\$8.862	\$9.057	\$8.818	\$9.057	(\$0.062)	\$2.997	\$6.060
Dec-24	\$11.900	\$10.782	\$10.365	\$2.151	\$1.056	\$1.109	\$9.749	\$9.726	\$9.256	\$9.749	(\$0.042)	\$3.506	\$6.243
Jan-25	\$12.160	\$10.948	\$10.506	\$1.901	\$0.922	\$0.965	\$10.259	\$10.027	\$9.542	\$10.259	\$0.000	\$3.790	\$6.469
Feb-25	\$12.050	\$10.939	\$10.543	\$1.717	\$0.825	\$0.862	\$10.333	\$10.114	\$9.680	\$10.333	\$0.000	\$3.611	\$6.722
Mar-25	\$11.000	\$10.546	\$10.378	\$1.519	\$0.730	\$0.764	\$9.481	\$9.815	\$9.614	\$9.815	(\$0.062)	\$3.250	\$6.565
Apr-25	\$11.000	\$10.107	\$9.870	\$1.449	\$0.687	\$0.716	\$9.551	\$9.421	\$9.154	\$9.551	\$0.000	\$3.054	\$6.497
NTM Avg	\$10.693	\$9.615	\$9.550				\$8.953	\$8.777	\$8.668	\$8.997	(\$0.014)	\$2.845	\$6.152

West of Suez Spot 174K XDF/MEGI Vessel Day Rate: \$47,500

West of Suez 1-Yr TC 174K XDF/MEGI Vessel Rate: \$77,000

Source: CSI, Fearnleys, NGI calculations

See NGI's North American LNG Export Project Tracker Here

Other North America LNG Netback Prices



Data as of 01-Apr-2024

All prices are in \$US/MMBtu

	Netback to Western Canada		NGI's AECO		Netback to Costa Azul		NGI's SoCal Border		Netback to Cove Point		NGI's Transco Zn 5		NGI's Waha
	Forwards	Diff	Diff %	Forwards	Diff	Diff %	Forwards	Diff	Diff %	Forwards	Diff	Diff %	Forwards
May-24	\$8.943	\$1.232	\$7.711	626%	\$8.829	\$1.522	\$7.307	480%	\$8.133	\$2.086	\$6.047	290%	\$0.272
Jun-24	\$8.816	\$1.263	\$7.553	598%	\$8.687	\$1.886	\$6.801	361%	\$8.084	\$2.265	\$5.819	257%	\$0.833
Jul-24	\$9.046	\$1.284	\$7.762	605%	\$8.914	\$2.764	\$6.150	223%	\$8.134	\$2.621	\$5.513	210%	\$1.431
Aug-24	\$9.223	\$1.301	\$7.922	609%	\$9.080	\$3.459	\$5.621	162%	\$8.245	\$2.605	\$5.640	216%	\$1.668
Sep-24	\$9.299	\$1.343	\$7.956	592%	\$9.146	\$2.939	\$6.207	211%	\$8.267	\$2.580	\$5.687	220%	\$1.633
Oct-24	\$9.418	\$1.466	\$7.952	542%	\$9.230	\$2.659	\$6.571	247%	\$8.351	\$2.548	\$5.803	228%	\$1.659
Nov-24	\$10.114	\$2.081	\$8.033	386%	\$9.910	\$4.319	\$5.591	129%	\$9.334	\$2.736	\$6.598	241%	\$2.059
Dec-24	\$10.948	\$2.378	\$8.570	360%	\$10.754	\$6.931	\$3.823	55%	\$9.988	\$3.790	\$6.198	164%	\$2.843
Jan-25	\$11.325	\$2.478	\$8.847	357%	\$11.156	\$7.129	\$4.027	56%	\$10.253	\$6.088	\$4.165	68%	\$3.556
Feb-25	\$11.301	\$2.467	\$8.834	358%	\$11.151	\$5.993	\$5.158	86%	\$10.315	\$5.719	\$4.596	80%	\$3.410
Mar-25	\$10.343	\$2.301	\$8.042	349%	\$10.213	\$3.549	\$6.664	188%	\$9.991	\$3.808	\$6.183	162%	\$2.354
Apr-25	\$10.375	\$2.178	\$8.197	376%	\$10.253	\$2.773	\$7.480	270%	\$9.585	\$3.423	\$6.162	180%	\$1.899
NTM Avg	\$9.929	\$1.814	\$8.115	447%	\$9.777	\$3.827	\$5.950	155%	\$9.057	\$3.356	\$5.701	170%	\$1.968

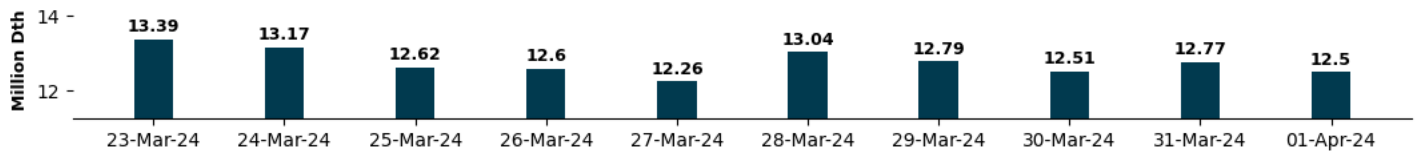
Note: Netbacks are based on deliveries to Asia & Europe. LNG Canada and Costa Azul liquefaction facilities are not expected to be in-service until 2025. But the above calculations give an indication of how LNG may be priced on an FOB basis if those locations were operational. NGI's Forward Look has 10-year forward curves for more than 60 locations in North America. For more information, please visit our Forward Look product page at natgasintel.com/product/forward-look

Source: NGI's Forward Look, CSI, Fearnleys, NGI calculations

North America LNG Export Flow Tracker

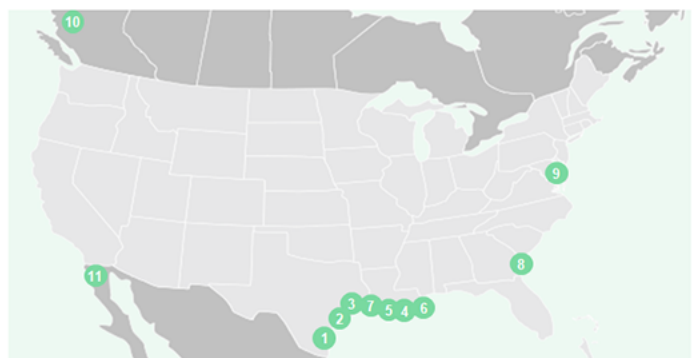


Data as of 01-Apr-2024



U.S. LNG Locations		
1. Corpus Christi, TX	2. Freeport, TX	3. Golden Pass, TX
Deliveries: 2,236,020	Deliveries: 776,431	Deliveries: 0
Op Cap: 2,750,000	Op Cap: 2,610,615	Op Cap: 2,600,910
Cap Util: 81%	Cap Util: 30%	Cap Util: 0%
4. Calcasieu Pass, LA	5. Cameron, LA	6. Plaquemines, LA
Deliveries: 1,446,270	Deliveries: 2,185,836	Deliveries: N/A
Op Cap: 2,125,000	Op Cap: 2,359,000	Op Cap: N/A
Cap Util: 68%	Cap Util: 93%	Cap Util: N/A
7. Sabine Pass, LA	8. Elba Island, GA	9. Cove Point, MD
Deliveries: 4,614,905	Deliveries: 369,050	Deliveries: 870,542
Op Cap: 5,700,000	Op Cap: 396,066	Op Cap: 900,332
Cap Util: 81%	Cap Util: 93%	Cap Util: 97%
Canada	Mexico	
10. LNG Canada	11. Energia, Costa Azul	
Deliveries: N/A	Deliveries: N/A	
Op Cap: N/A	Op Cap: N/A	
Cap Util: N/A	Cap Util: N/A	

U.S. Daily Summary (Volumes Listed in Dekatherms)	
Total Deliveries to U.S. LNG Export Facilities:	12,499,054
Previous Day:	12,773,051
Change:	-273,997



Note: Figures are in Dekatherms. Current day figures are based on the posted Evening cycle and all previous day figures are the Intraday 3 cycle.

Source: Compiled by NGI from Wood Mackenzie data, Pipeline EBBs, NGI calculations

See NGI's Glossary Index Here



Understanding These Charts

Prompt Month Statistics – Previous 5 Trading Days

This chart summarizes key data from leading LNG markets across the world over the previous five-day period. It utilizes data pulled from other charts within the LNG+ appendix.

U.S. Gulf Coast LNG Netback Prices

This chart measures the value of LNG sold on a free-on-board basis in the United States. The cost of shipping LNG from the U.S. Gulf Coast to Asia and Europe is deducted from natural gas futures prices in those respective overseas markets to determine the netbacks.

Other North America Netback Prices

This chart measures netbacks to future LNG export locations in Mexico and Canada, as well as the existing Cove Point LNG terminal in Maryland, using the same methodology as the U.S. Gulf Coast netback chart. The netbacks in this chart are compared to NGI's natural gas forward curve data at the nearest physical market index to determine the LNG production margin at each location.

North America LNG Export Flow Tracker

This chart shows the number of dekatherms (Dth) that have been nominated via pipelines serving each of the liquefaction terminals listed. Feed gas flows are an indication of gas demand and a facility's current operating status. Compiled from pipeline electronic bulletin boards, the flows are based on the best nomination cycle when the chart is compiled each morning, which tends to be the evening cycle.

LNG Freight Costs for Selected Routes

Provided by shipbroker Fearnleys AS, this chart consists of LNG freight cost calculations for key routes throughout the world. The costs are broken down for each kind of LNG tanker and propulsion class.

Spot LNG Vessel Rates

Provided by shipbroker Fearnleys AS, this chart includes spot market vessel rates, or the general cost to charter LNG tankers on a daily basis, for steam turbine (ST), tri-fuel diesel electric (TFDE) and two-stroke, dual-fuel (MEGI/XDF) vessels.

West of Suez LNG Vessel Rate Curve

The curve indicates what LNG vessel rates could potentially be over the next 12 months. It is based on current LNG vessel rates and historical seasonality. This is an NGI estimate and not a traded curve.

LNG Freight Costs for Selected Routes

01-Apr-2024

Trade Route (\$/MMBtu)	174k MEGI	160k TFDE	145k ST
Bonny / Montoir	0.694 0.000	0.718 0.000	0.869 0.000
Bonny / Tokyo	1.399 0.000	1.439 0.000	1.783 0.000
Ras Laffan / Montoir	0.906 0.000	0.973 0.000	1.179 0.000
Ras Laffan / Tokyo	0.759 0.000	0.814 0.000	1.023 0.000
Dampier / Tokyo	0.499 0.000	0.533 0.000	0.665 0.000
Zeebrugge / Bahia Blanca	0.795 0.000	0.884 0.000	1.102 0.000
Zeebrugge / Dahej	0.763 0.000	0.819 0.000	1.183 0.000
Zeebrugge / Tokyo	1.332 0.000	1.502 0.000	1.847 0.000
Sabine / Bahia Blanca	0.671 0.000	0.792 0.000	0.952 0.000
Sabine / Dahej	0.997 0.000	1.190 0.000	1.404 0.000
Sabine / Tokyo	0.979 0.000	1.167 0.000	1.390 0.000
Sabine / Zeebrugge	0.501 0.000	0.588 0.000	0.707 0.000
Port Moresby / Tokyo	0.496 0.000	0.523 0.000	0.647 0.000

Note: Assumes cold vessel. Speed is 17 kts on laden and 16 kts on ballast passage.
Source: Fearnleys (www.fearnleys.com)



Spot LNG Vessel Rates (\$USD/day)

Data as of 01-Apr-2024

Vessel Rates		
Vessel Type / Region	WEST	EAST
174k XDF / MEGI	47,500	52,000
155k - 165k TFDE	35,000	35,000
138k - 145k ST	25,000	25,000

Pacific Voyage Parameters	
100% Fuel and 100% Hire on Ballast Bonus to Hub	
Middle East Voyage Parameters	
100% Fuel and 100% Hire on Ballast Bonus to Load Port	
Atlantic Voyage Parameters	
100% Fuel and 100% Hire on Ballast Bonus to Load Port	

Source: Fearnleys (www.fearnleys.com)

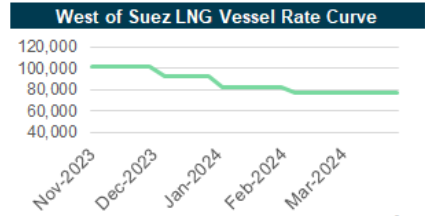


West of Suez LNG Vessel Rate Curve



Data as of 01-Apr-2024

Month	01-Apr	27-Mar	Change
May-24	47,500	47,500	-
Jun-24	63,206	63,206	-
Jul-24	65,018	65,018	-
Aug-24	72,325	72,325	-
Sep-24	79,108	79,108	-
Oct-24	104,912	104,912	-
Nov-24	114,346	114,346	-
Dec-24	104,962	104,962	-
Jan-25	85,771	85,771	-
Feb-25	72,308	72,308	-
Mar-25	59,869	59,869	-
Apr-25	54,675	54,675	-
Average	77,000	77,000	-



Note: Figures are \$US/day, Based on 174,000 m³ XDF/MEGI vessels. This is not an actual traded curve. Figures represent NGI's estimate of a laden leg forward curve based on current spot market and 1-yr charter rates, adjusted for historical seasonality. The simple average of all months equals the 1-yr charter

Source: NGI estimates based on Fearnleys data

Asia LNG Parity Prices

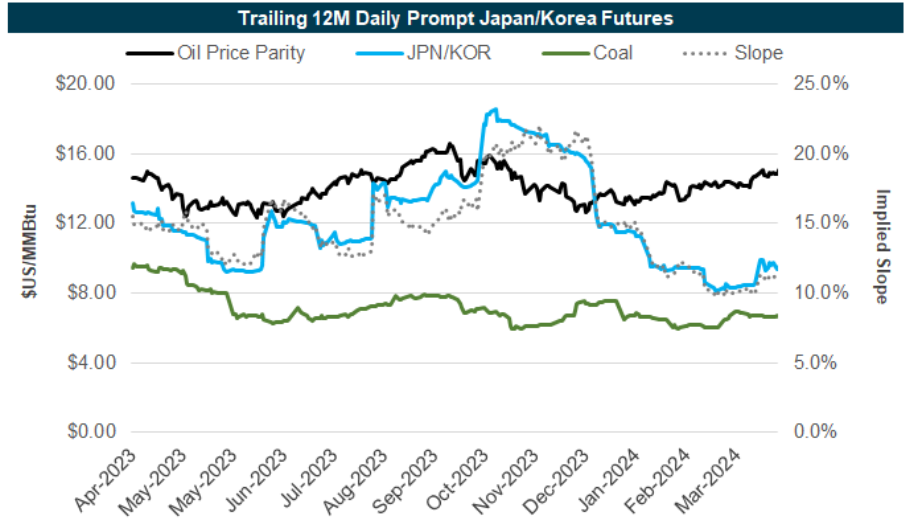


Data as of 01-Apr-2024

Current Spot Month Japan/Korea Futures Contract Price (May):	\$9.535	Trailing 3-Mo JCC	
Current Spot Month Brent Crude Oil Futures Price (Jun):	\$87.42	Month	Price
Current Spot Month Japan Coal Price (Apr):	\$6.74	Oct-23	\$92.762
Implied Current Japan/Korea Slope to Brent:	10.9%	Nov-23	\$93.898
		Dec-23	\$90.222

Oil Price		
Oil Price	3 Mo Avg JCC	Brent
Apr-24	\$92.29	\$87.42

Oil Parity Price (17.2% Slope)		
3 Mo Avg JCC	Brent	
\$15.87	\$15.04	



Note: Oil linked parity figures tend to serve as a cap on Asian LNG market prices, while coal prices can help act as a floor.

Source: ICE, CSI, METI, NGI calculations

Estimated Sabine Pass / Europe (Gate) 12-Month Forward LNG Arbitrage Curves



Data as of 01-Apr-2024



Month	Shipping Costs			Variable Only Landed Cost	Total Landed Cost	TTF Futures	Variable Arbitrage Spread	Total Arbitrage Spread
	115% Henry Hub Futures	Variable	Fixed					
May-24	2.113	0.276	0.364	2.388	2.752	8.617	6.229	5.865
Jun-24	2.385	0.277	0.484	2.662	3.146	8.671	6.009	5.525
Jul-24	2.766	0.278	0.498	3.043	3.542	8.732	5.689	5.191
Aug-24	2.888	0.279	0.554	3.166	3.721	8.793	5.627	5.072
Sep-24	2.883	0.281	0.606	3.164	3.771	8.945	5.780	5.174
Oct-24	2.989	0.285	0.804	3.274	4.078	9.185	5.911	5.107
Nov-24	3.447	0.299	0.876	3.745	4.622	9.993	6.248	5.372
Dec-24	4.032	0.305	0.804	4.337	5.141	10.365	6.028	5.224
Jan-25	4.359	0.307	0.657	4.666	5.323	10.506	5.840	5.183
Feb-25	4.153	0.308	0.554	4.461	5.015	10.543	6.082	5.528
Mar-25	3.738	0.305	0.459	4.043	4.502	10.378	6.335	5.877
Apr-25	3.512	0.297	0.419	3.809	4.228	9.870	6.060	5.641

Note: Variable costs assume vessels have been chartered and include fuel, boil-off and port fees only. Total costs include both variable expenses and fixed vessel chartering fees.

Source: NGI calculations, CSI, Fearnleys

Asia LNG Parity Prices

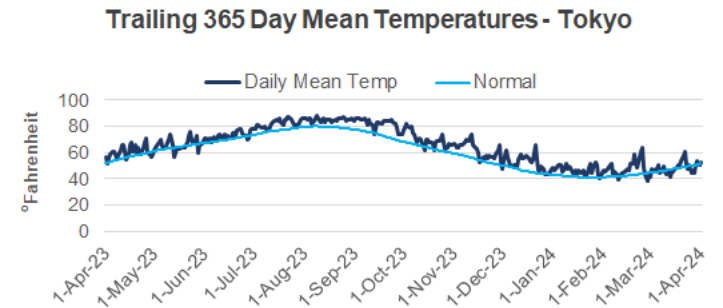
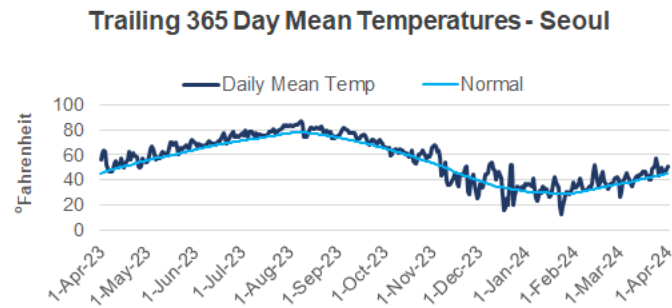
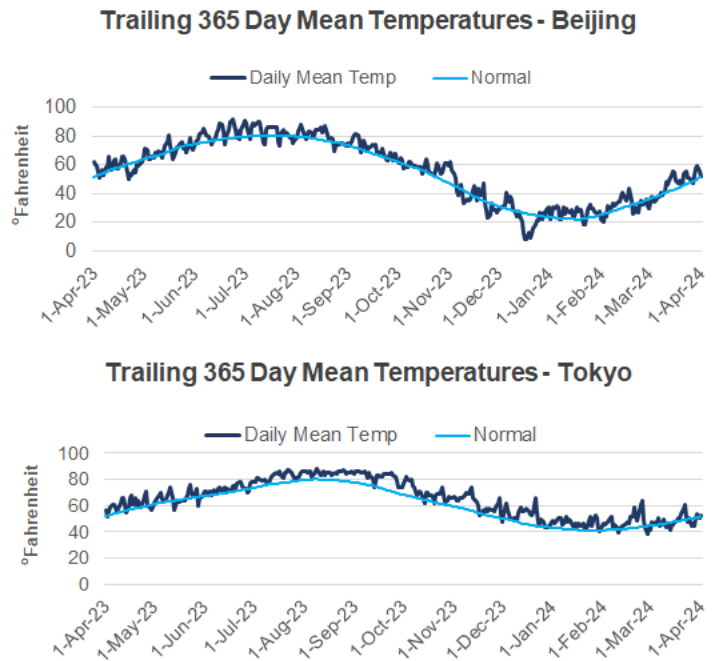
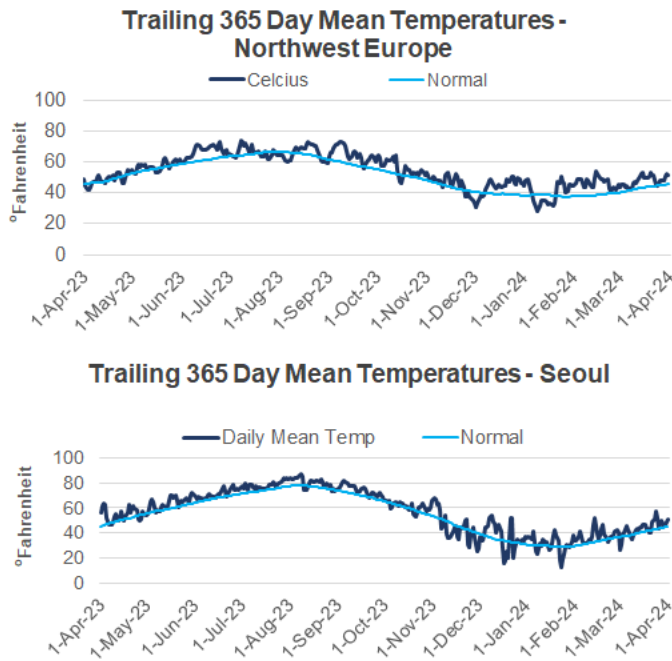
This data includes the comparative prices of Brent crude, coal, Japan/Korea LNG (JPN/KOR), the Japan Crude Cocktail (JCC) and oil-linked LNG in Asia. NGI uses a slope of 17.2% of Brent and the trailing three month average of JCC to determine oil-linked LNG prices.

Estimated Sabine Pass/Asia 12-Month Forward LNG Arbitrage Curve

This chart shows the economics of shipping LNG from the U.S. Gulf Coast to Asia over the next 12 months. The calculation starts with 115% of Henry Hub. Estimated shipping costs are added to that price. The footnote explains calculations for both variable and total costs.

Europe & Asia Weather Data

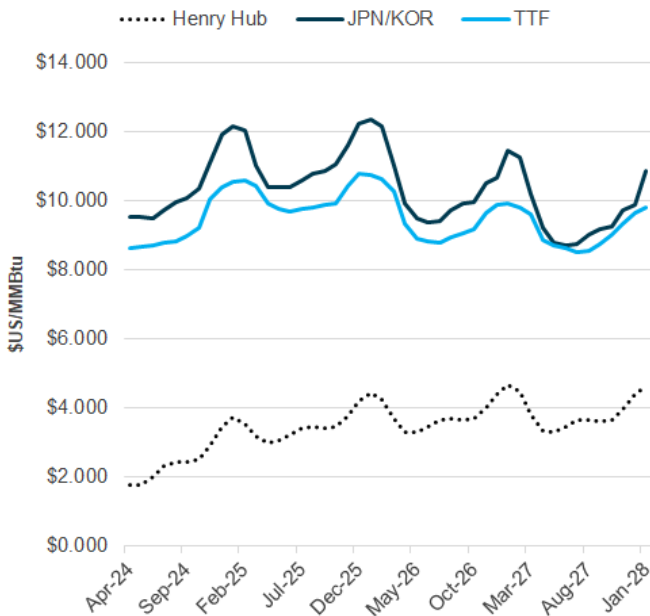
Data as of 01-Apr-2024



Source: NGI calculations, Bloomberg

Global Futures Settles Through 2027

Data as of 01-Apr-2024



*Apr 2024 through Mar 2025

Source: Bloomberg, CSI, NGI calculations

Henry Hub	Date	12-Month Strip*	CY2025	CY2026	CY2027
	1-Apr-24	\$2.845	\$3.500	\$3.814	\$3.837
	28-Mar-24	\$2.624	\$3.419	\$3.759	\$3.780
	Chg	\$0.221	\$0.082	\$0.055	\$0.057

JPN/KOR	Date	12-Month Strip*	CY2025	CY2026	CY2027
	1-Apr-24	\$10.643	\$11.128	\$10.374	\$9.621
	28-Mar-24	\$10.716	\$11.284	\$10.517	\$9.742
	Chg	(\$0.073)	(\$0.156)	(\$0.143)	(\$0.121)

TTF	Date	12-Month Strip*	CY2025	CY2026	CY2027
	1-Apr-24	\$9.550	\$10.084	\$9.490	\$9.095
	28-Mar-24	\$9.620	\$10.276	\$9.688	\$9.181
	Chg	(\$0.070)	(\$0.192)	(\$0.198)	(\$0.086)

Europe & Asia Weather Data

NGI's daily Asia and Europe weather data shows actual and normal average temperatures for the trailing 365 days in Northwest Europe, Beijing, Seoul and Tokyo. Weather is a key driver of natural gas consumption.

Global Futures Settles Through 2027

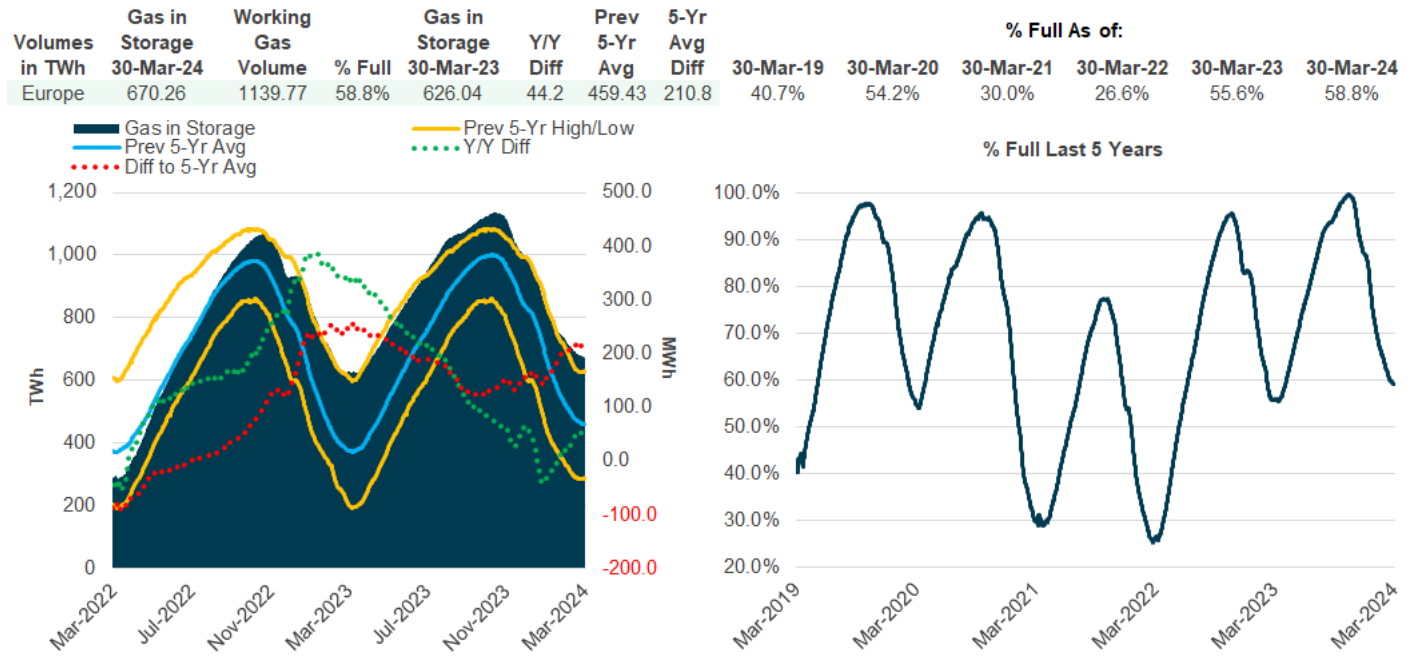
This chart provides next 12-month and next complete three-year calendar strips for Henry Hub, Japan/Korea (JPN/KOR) and Title Transfer Facility (TTF) futures contracts.

European Union Gas Storage

NGI

Data as of 30-Mar-2024

Chart Last Updated 01-Apr-2024



Source: GIE, NGI calculations

European Union LNG Regas Terminal Storage

NGI

Data as of 30-Mar-2024

Chart Last Updated 01-Apr-2024

Country	Terminal	Inventory (10 ³ m ³)	Chg	Max Cap (10 ³ m ³)	% Util	Country	Terminal	Inventory (10 ³ m ³)	Chg	Max Cap (10 ³ m ³)	% Util
Belgium	Zeebrugge	393.5	0.0	566.0	69.5%	Lithuania	Klaipedos	52.7	-21.0	166.7	31.6%
Croatia	Krk	110.8	90.2	140.0	79.1%	Netherlands	EemsEnergy	43.4	0.0	175.4	24.7%
Finland	Inkoo	87.0	-6.0	148.8	58.5%		Gate	216.2	87.5	540.0	40.0%
France	Dunkerque	380.1	-24.9	570.0	66.7%	Poland	Swinoujscie	133.3	50.8	320.0	41.7%
	Fos Tonkin	57.5	45.4	80.0	71.9%	Portugal	Sines	71.4	-22.9	390.0	18.3%
	Montoir	151.8	-22.3	360.0	42.2%	Spain	Barcelona	341.1	-29.2	760.0	44.9%
	Fos Cavaou	109.9	-175.9	330.0	33.3%		Bilbao	285.2	-93.4	450.0	63.4%
Germany	Le Havre	224.0	31.0	145.2	154.4%		Cartagena	473.9	87.6	587.0	80.7%
	Brunsbuettel	94.8	-14.8	167.5	56.6%		Huelva	231.3	-79.2	619.5	37.3%
	Wilhelmshaven	50.6	-21.5	167.6	30.2%		Mugardos	88.8	-58.8	300.0	29.6%
Greece	Ostsee	11.4	-0.9	176.2	6.5%		Sagunto	364.6	-27.6	600.0	60.8%
	Revythoussa	166.2	0.0	225.0	73.9%	Total		4301.5	-132.5	8601.5	50.0%
Italy	Rovigo	79.6	79.6	250.0	31.8%						
	Panigaglia	64.7	14.7	75.0	86.2%						
	Piombino	17.8	-20.9	154.4	11.5%						
	Toscana	0.0	0.0	137.2	0.0%						

Source: GIE, NGI calculations

European Union Gas Storage

This data tracks natural gas storage inventories in Europe. The graphic on the left displays gas in storage relative to the high, low and average levels over the previous five years. The graphic on the right displays total gas in storage over the previous five years.

European Union LNG Regas Terminal Storage

This chart shows daily changes in on-site storage levels at key LNG import terminals across Europe.

U.S. Landed vs European Prices, May 2024

NGI

Data as of 01-Apr-2024

Estimated U.S. LNG Landed Price (\$US/MMBtu)

Source	Pricing Point	HH Price	Gate Landed Price (GLP)	Euro Exchange Rate:	Pound Exchange Rate:
GOM	Henry Hub	\$1.837	\$2.388	1.0755	1.2544

European NatGas Futures Prices (Eur/MWh & Pound/therm)

Country	Pricing Point	Local Price MWh or therm	Local Price \$US/MMBtu	Diff to GLP* \$US/MMBtu
Belgium	ZTP	€ 27.29	\$8.601	\$6.212
Czech Rep	CZ VTP	€ 29.40	\$9.265	\$6.877
France	PEG	€ 27.07	\$8.530	\$6.142
Germany	NCG	€ 27.55	\$8.682	\$6.293
Italy	PSV	€ 28.79	\$9.073	\$6.685
Netherlands	TTF	€ 27.34	\$8.617	\$6.229
Slovakia	CEGH VTP	€ 28.65	\$9.031	\$6.642
Spain	PVB	€ 27.28	\$8.598	\$6.210
UK	NBP	68.05p	\$8.536	\$6.148

Note: U.S. landed price is to Gate terminal in the Netherlands. It excludes regas or pipeline grid fees. All local European prices are Eur/MWh, except UK, which is pence/therm.

Source: NGI calculations, CME, ICE, EEX, Powernext, CSI, Fearnleys

European Spark/Dark Spreads (May 2024)

NGI

Data as of 01-Apr-2024

EUA Carbon Price (Eur/mt): 62.61

Nation	EFCY		Spark Spread		Clean Spark Spread		Power Futures Eur/MWh	Coal Futures \$US/Mt	Dark Spread	Clean Dark Spread
	Power Futures Eur/MWh	Gas Futures Eur/MWh	49%	45%	49%	45%			35%	35%
			Spark Spread Eur/MWh	Spark Spread Eur/MWh	Spark Spread Eur/MWh	Spark Spread Eur/MWh			Dark Spread Eur/MWh	Dark Spread Eur/MWh
BE	40.29	27.29	-15.25	-20.35	-40.73	-48.46	40.29	118.00	-4.49	-65.29
CZ	54.82	29.40	-5.02	-10.51	-30.50	-38.62	54.82	118.00	10.04	-50.76
FR	29.17	27.07	-25.92	-30.97	-51.40	-59.09	29.17	118.00	-15.61	-76.41
DE	51.53	27.55	-4.54	-9.68	-30.02	-37.79	51.53	118.00	6.75	-54.05
IT	78.28	28.79	19.68	14.31	-5.80	-13.81	78.28	118.00	33.50	-27.30
NL	46.29	27.34	-9.36	-14.47	-34.84	-42.58	46.29	118.00	1.51	-59.29
SK	55.27	28.65	-3.05	-8.40	-28.53	-36.51	55.27	118.00	10.49	-50.31
ES	32.28	27.28	-23.24	-28.34	-48.73	-56.45	32.28	118.00	-12.50	-73.30
UK*	68.58	27.08	13.46	8.40	-20.57	-29.14	68.58	118.00	23.80	-57.38
Average:			-5.91	-11.11	-32.35	-40.27			5.94	-57.12

Belgium (BE) / Czech Rep (CZ) / France (FR) / Germany (DE) / Italy (IT) / Holland (NL) / Slovakia (SK) / Spain (ES) / United Kingdom (UK)

*UK clean spark and dark spreads incorporate the cost of the UK Carbon Price Support levy. See methodology for all assumptions.

Source: NGI calculations, CSI

U.S. Landed vs European Prices

This chart compares the landed price of U.S. LNG at the Gate import terminal in the Netherlands to prompt futures prices across Europe. U.S. LNG competes with natural gas delivered via pipeline in Europe and still could be more expensive even if the export arbitrage window is open.

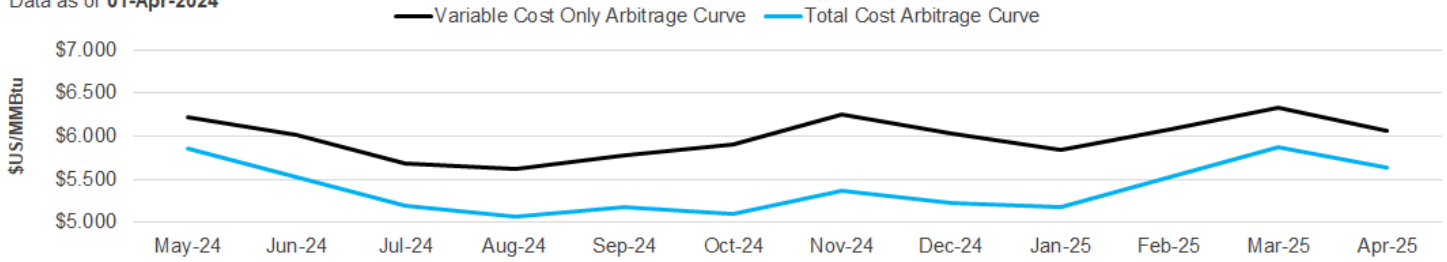
European Spark/Dark Spreads

The spark spread is the margin of gas-fired power. The margin for coal is the dark spread. Dark spreads input only fuel costs. Clean spreads input EU emissions costs. Europe burns gas for power if the clean spark spread is more economic than the clean dark spread.

Estimated Sabine Pass / Europe (Gate) 12-Month Forward LNG Arbitrage Curves



Data as of 01-Apr-2024



Month	115% Henry	Shipping Costs		Variable	Total	TTF	Variable	Total
	Hub Futures	Variable	Fixed	Only Landed Cost	Landed Cost	Futures	Arbitrage Spread	Arbitrage Spread
May-24	2.113	0.276	0.364	2.388	2.752	8.617	6.229	5.865
Jun-24	2.385	0.277	0.484	2.662	3.146	8.671	6.009	5.525
Jul-24	2.766	0.278	0.498	3.043	3.542	8.732	5.689	5.191
Aug-24	2.888	0.279	0.554	3.166	3.721	8.793	5.627	5.072
Sep-24	2.883	0.281	0.606	3.164	3.771	8.945	5.780	5.174
Oct-24	2.989	0.285	0.804	3.274	4.078	9.185	5.911	5.107
Nov-24	3.447	0.299	0.876	3.745	4.622	9.993	6.248	5.372
Dec-24	4.032	0.305	0.804	4.337	5.141	10.365	6.028	5.224
Jan-25	4.359	0.307	0.657	4.666	5.323	10.506	5.840	5.183
Feb-25	4.153	0.308	0.554	4.461	5.015	10.543	6.082	5.528
Mar-25	3.738	0.305	0.459	4.043	4.502	10.378	6.335	5.877
Apr-25	3.512	0.297	0.419	3.809	4.228	9.870	6.060	5.641

Note: Variable costs assume vessels have been chartered and include fuel, boil-off and port fees only. Total costs include both variable expenses and fixed vessel chartering fees.

Source: NGI calculations, CSI, Fearnleys

Spanish PVB vs Dutch TTF Futures



Data as of 01-Apr-2024

Period	PVB		TTF		PVB/TTF	
	MMBtu	Chg	MMBtu	Chg	Premium (\$)	Premium %
May-2024	\$8.598	-\$0.190	\$8.617	-\$0.204	-\$0.019	-0.2%
Jun-2024	\$8.731	-\$0.172	\$8.671	-\$0.195	\$0.060	0.7%
Jul-2024	\$8.543	\$8.543	\$8.732	\$8.732	-\$0.190	-2.2%
3Q24	\$8.686	\$0.028	\$8.974	\$0.312	-\$0.288	-3.2%
4Q24	\$9.578	\$0.776	\$10.288	\$1.591	-\$0.710	-6.9%
1Q25	\$9.585	\$9.585	\$10.244	\$1.547	-\$0.659	-6.4%

Source: CSI, NGI calculations

Estimated Sabine Pass/Europe (Gate) 12-Month Forward LNG Arbitrage Curve

This chart shows the economics of shipping LNG from the U.S. Gulf Coast to Europe over the next 12 months. The calculation starts with 115% of Henry Hub. Estimated shipping costs are added to that price. Variable and total costs are both calculated. Variable costs assume vessels have been chartered and include expenses for fuel, boil-off, and port fees only. Total costs include variable expenses and fixed vessel chartering fees.

Spanish PVB vs Dutch TTF Futures

This chart compares the Punto Virtual de Balance (PVB) and Title Transfer Facility (TTF) futures prices. TTF is a virtual pipeline trading point. It is one of the world's most liquid natural gas trading points. It is used as a proxy for LNG prices. However, PVB in Spain can serve as a more representative price for European LNG because the Iberian peninsula receives a greater percentage of its total gas supply from LNG cargoes.

Latin America DES Prices



Data as of 01-Apr-2024

Country	Terminal	May	Chg	Jun	Chg	Jul	Chg
Argentina	Bahia Blanca	8.88	0.11	8.58	-0.18	8.63	N/A
Brazil	Pecem	8.64	0.11	8.34	-0.19	8.39	N/A
Chile	Quintero	8.93	0.11	8.63	-0.19	8.69	N/A
Colombia	Colombia	8.45	0.10	8.15	-0.19	8.20	N/A
Mexico East	Altamira	8.39	0.10	8.09	-0.19	8.15	N/A
Mexico West	Manzanillo	8.83	0.10	8.53	-0.19	8.59	N/A
Panama	Costa Norte	8.47	0.10	8.17	-0.19	8.22	N/A

For more regional coverage of Latin America, please see NGI's Mexico Gas Price Index at natgasintel.com/news/mexico-gas-price-index

Source: NGI calculations, CME Group, CSI, Fearnleys

Latin America DES Prices

This chart measures the price of LNG over the next three months delivered ex-ship (DES) to various points in Latin America. These prices are essentially cost-plus, or net forward prices, that start with the price of LNG from a source country on a free-on-board basis and include estimated shipping costs to transport LNG from the source to the destination country.

NGI's Daily Gas Price Index Service Upgrades: Access More NGI-Trusted News & Data Earlier

- **NGI's LNG news and data service has merged with *NGI's Daily Gas Price Index***
- **NGI's *Daily Gas Price Index* subscribers will receive far more LNG news and data**
- **The first expanded issue will be published the evening of April 1, 2024**
- **NGI's *Daily Gas Price Index* will now be published at the end of each business day**

April 1, 2024

Dear Subscribers,

We're pleased to announce that, effective April 1, 2024, *NGI's Daily Gas Price Index* has been significantly expanded to bring you far more coverage of the global natural gas market. NGI's LNG news and data service has merged with our flagship publication. As a subscriber to *NGI's Daily Gas Price Index*, you will receive full access to the new and improved product, including the e-newsletter, web and PDF versions.

You do not need to take any action.

Going forward, subscribers will now receive *NGI's Daily Gas Price Index* sooner – at the end of each business day instead of the following morning.

Subscribers will continue to receive the news and data they trust from *NGI's Daily Gas Price Index*, but it will now include a wider array of information published in an LNG+ appendix included with the publication each day. Additionally, LNG news content will be expanded in a variety of ways, and more LNG data will be [available online](#).

Among other things, the LNG+ appendix includes North American feed gas flows, U.S. Gulf Coast netback prices, global natural gas futures prices, important shipping metrics and key fundamentals in the Asian, European and Latin American markets.

The North American natural gas market has played an outsized role in the LNG market's evolution and is closely linked with those in Asia, Europe and elsewhere more than ever before. By combining the LNG news and data service with *NGI's Daily Gas Price Index*, coverage will be more comprehensive and provide a deeper view of the North American natural gas market.

This change will not affect access to [NGI's LNG Data Suite](#), a separate product that will continue to be available via API, NGI delivery platform partners and at naturalgasintel.com.

For subscribers with questions or comments, please contact your sales representative at sales@naturalgasintel.com.

Regards,



Jamison Cocklin
Managing Editor, LNG