

NGI's LNG INSIGHT



Bringing a North American Focus to International LNG

WEDNESDAY, JULY 8, 2020 - VOL. 1, NO. 185

Daily Rundown

- New Fortress Energy has agreed to pay Centrica \$105 million to cancel 2020 LNG cargoes
- The company contracted 2020 volumes at \$7/ MMBtu, but plans to make more spot buys
- Rising associated natural gas production is expected to keep pressure on Henry Hub in the months ahead

CARGO CANCELLATIONS

New Fortress Cancels Contracted LNG Cargoes in Favor of Cheaper Spot Volumes

New Fortress Energy LLC (NFE) has canceled liquefied natural gas (LNG) cargoes it contracted to receive for the remainder of the year in exchange for a payment of \$105 million to supplier Centrica LNG Co. Ltd.

The move comes as LNG prices have fallen precipitously, or by 85% over the last year and a half, according to NFE's estimates, due to a supply glut and global demand destruction caused by the Covid-19 pandemic.

The company said its 2020 cargoes were contracted at \$7.00/ MMBtu. That's compared to spot prices that are around \$2.00/ MMBtu, of which NFE wants to buy more.

"Our flexibility to opportunistically purchase LNG at market prices completes our transition from a development company to an operating company that we expect will generate significant operating margin and cash flow," CEO Wes Edens said. "We continue to advance a number of compelling new business opportunities and expect significant growth in 2020 and beyond."

Management said during NFE's **first quarter earnings call** in May that the company had more contracted volumes than it needed, particularly in the Caribbean, where the bulk of its small-scale LNG operations are located. The company's first quarter margins were also squeezed by higher gas prices as it worked through legacy cargoes that were purchased before the sharp declines in spot LNG prices that have characterized the market amid a steep supply and demand imbalance.

NFE said this week that it expects to net \$15-25 million by purchasing cheaper spot cargoes. The company estimated that the global gas market was 6% oversupplied at the beginning of 2020 and said volumes are expected to grow by another 7% this year. As a result, NFE believes spot prices will remain low through 2021 and start normalizing in 2022.

New Fortress essentially has been in a transition from a start-up to an operational company. It went public last year and is focused on introducing LNG in markets that lack access to the fuel for power generation and other needs. The company

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Prompt Month Statistics - Previous 5 Trading Days					
	1-Jul	2-Jul	6-Jul	7-Jul	8-Jul
Max GOM Netback (\$US/MMBtu)	1.537	1.518	1.583	1.586	1.533
L48 LNG Feedstock Deliveries (dth/d)	3.26	3.04	3.21	3.10	3.06
Futures (\$US/MMBtu)					
Henry Hub	1.671	1.734	1.830	1.876	1.824
JPN/KOR	2.200	2.200	2.195	2.195	2.190
NBP	1.961	1.916	1.904	1.950	1.902
TTF	1.934	1.958	2.024	2.027	1.974
Shipping (\$US/MMBtu)*					
Sabine Pass to Tokyo	0.918	0.918	0.918	0.919	0.919
Sabine Pass to Milford Haven (U.K.)	0.425	0.424	0.424	0.426	0.425
Sabine Pass to Gate (NW Europe)	0.439	0.439	0.441	0.442	0.441
Landed Price Arbitrage (\$US/MMBtu)**					
Sabine to Tokyo	-0.639	-0.712	-0.828	-0.882	-0.827
Sabine to Gate	-0.426	-0.476	-0.522	-0.572	-0.565
Europe Fundamentals					
Gas in Storage (TWh)***	883.3	887.0	898.4	902.3	908.6
% Full	79.8%	80.2%	81.2%	81.6%	82.1%
Difference to Last Year (TWh)	93.9	92.6	89.8	90.1	91.5
Gas in LNG Storage (10 ³ m ³)***	4901.5	4893.5	5375.6	5322.9	5164.7
% Full	52.3%	52.2%	57.3%	56.8%	55.1%
Spark Spread (Eur/MWh)	22.34	22.10	23.19	23.61	23.34
Clean Spark Spread (Eur/MWh)	10.18	10.09	10.22	10.86	10.47
Dark Spread (Eur/MWh)	16.57	16.09	17.33	18.09	17.91
Clean Dark Spread (Eur/MWh)	-12.45	-12.55	-13.62	-12.34	-12.81
PVB/TTF Premium (%)	27.9%	28.8%	27.7%	28.2%	28.5%
NW Europe Mean Temp (°F)	66	68	62	61	TBD
% Diff From 30-Yr Normal	3.4%	5.6%	-2.6%	-5.0%	N/A
Asia Fundamentals					
JKM/KOR Oil Parity Slope	5.2%	5.1%	5.1%	5.1%	5.1%
Brent Oil Price Parity (\$US/MMBtu)	7.23	7.42	7.41	7.41	7.45
JKM/KOR Futures (\$US/MMBtu)	2.20	2.20	2.20	2.20	2.19
Japan Coal Price (\$US/MMBtu)	2.89	2.94	2.98	2.99	2.97
Beijing Mean Temp (°F)	82	77	77	81	81
% Diff From Normal	2.9%	-0.5%	0.5%	-6.6%	0.8%
Seoul Mean Temp (°F)	69	73	75	73	74
% Diff From Normal	-2.7%	2.0%	3.3%	1.2%	1.6%
Tokyo Mean Temp (°F)	78	79	78	80	79
% Diff From Normal	5.9%	6.9%	4.0%	6.7%	4.6%
Latin America Fundamentals (\$US/MMBtu)					
Mexico					
East (Altamira) DES	1.70	1.68	1.75	1.75	1.70
West (Manzanillo) DES	2.11	2.09	2.16	2.16	2.11
Argentina DES	2.12	2.10	2.17	2.18	2.12
Brazil DES	1.91	1.89	1.96	1.96	1.91
Chile DES	2.20	2.18	2.25	2.25	2.20
Colombia DES	1.75	1.73	1.79	1.80	1.74
Panama DES	1.77	1.75	1.81	1.82	1.76

Current prompt month prices are for Aug, unless otherwise noted.

*Assumes full freight for both laden and ballast legs.

**Excludes regas fees.

***Most recent data available. Typically delayed by two calendar days.

NGI's LNG INSIGHT

U.S. Gulf Coast LNG Netback Prices (12-Month Strip) 8-Jul-2020

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)
Aug-20	\$2.190	\$1.902	\$1.974	\$0.919	\$0.425	\$0.441	\$1.271	\$1.477	\$1.533	\$1.533	(\$0.053)	\$1.824	(\$0.291)
Rest of Curve (shipping based on 1-Yr vessel rate, adjusted for seasonality)													
Sep-20	\$2.640	\$2.256	\$2.251	\$1.205	\$0.575	\$0.601	\$1.435	\$1.680	\$1.650	\$1.680	(\$0.055)	\$1.876	(\$0.196)
Oct-20	\$3.275	\$2.801	\$2.854	\$1.478	\$0.720	\$0.756	\$1.797	\$2.082	\$2.097	\$2.097	(\$0.030)	\$1.970	\$0.127
Nov-20	\$4.040	\$4.095	\$3.947	\$1.595	\$0.789	\$0.828	\$2.445	\$3.306	\$3.119	\$3.306	(\$0.014)	\$2.355	\$0.951
Dec-20	\$4.650	\$4.748	\$4.321	\$1.520	\$0.750	\$0.781	\$3.130	\$3.998	\$3.540	\$3.998	(\$0.018)	\$2.767	\$1.231
Jan-21	\$5.040	\$5.031	\$4.409	\$1.343	\$0.653	\$0.674	\$3.697	\$4.378	\$3.735	\$4.378	\$0.005	\$2.895	\$1.483
Feb-21	\$5.240	\$5.054	\$4.419	\$1.216	\$0.582	\$0.598	\$4.024	\$4.471	\$3.821	\$4.471	(\$0.006)	\$2.863	\$1.608
Mar-21	\$4.850	\$4.716	\$4.356	\$1.081	\$0.512	\$0.527	\$3.769	\$4.204	\$3.829	\$4.204	(\$0.020)	\$2.760	\$1.444
Apr-21	\$4.350	\$4.298	\$4.183	\$1.015	\$0.478	\$0.495	\$3.335	\$3.820	\$3.688	\$3.820	\$0.006	\$2.497	\$1.323
May-21	\$4.355	\$4.089	\$4.119	\$1.034	\$0.485	\$0.505	\$3.321	\$3.604	\$3.614	\$3.614	\$0.002	\$2.465	\$1.149
Jun-21	\$4.280	\$3.917	\$4.007	\$1.097	\$0.517	\$0.540	\$3.183	\$3.400	\$3.467	\$3.467	\$0.008	\$2.508	\$0.959
Jul-21	\$4.245	\$3.933	\$4.026	\$1.114	\$0.527	\$0.551	\$3.131	\$3.406	\$3.476	\$3.476	\$0.025	\$2.559	\$0.917
NTM Avg	\$4.096	\$3.903	\$3.739				\$2.878	\$3.319	\$3.131	\$3.337	(\$0.012)	\$2.445	\$0.892

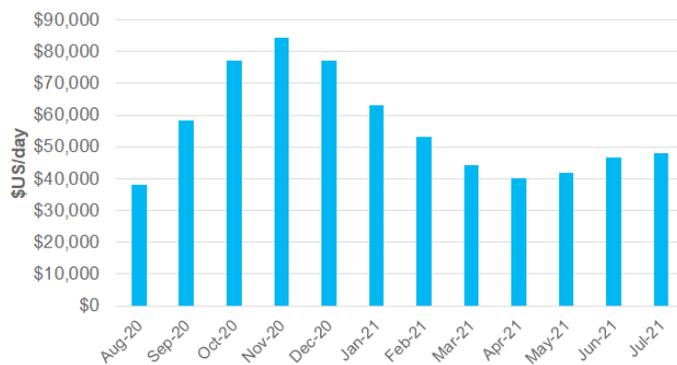
West of Suez Spot 174K XDF/MEGI Day Rate: \$38,000

West of Suez 1-Yr TC 174K XDF/MEGI Vessel Rate: \$56,000

Spot Month Sabine Pass Export Landed Price Arbitrage Continuation Chart



West of Suez LNG Vessel Rate Curve



Note: 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 rate.

Source: NGI calculations, CSI, Fearnleys

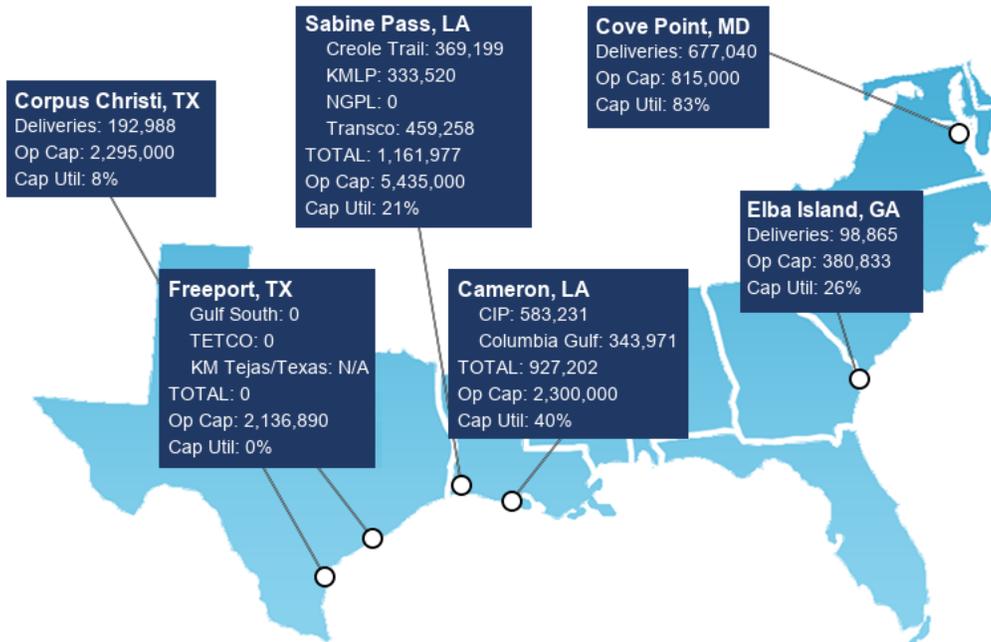
Other North America LNG Netback Prices 8-Jul-2020

	Netback to Western Canada				Netback to Costa Azul				Netback to Cove Point				Netback to Zn 5			
	NGI's AECO Forwards	Diff	Diff %	NGI's SoCal Border Forwards	Diff	Diff %	NGI's Transco Zn 5 Forwards	Diff	Diff %	NGI's Waha Forwards	Diff	Diff %	NGI's Waha Forwards			
	\$US/MMBtu	\$US/MMBtu	\$US/MMBtu	\$US/MMBtu	\$US/MMBtu	\$US/MMBtu	\$US/MMBtu	\$US/MMBtu	\$US/MMBtu	\$US/MMBtu	\$US/MMBtu	\$US/MMBtu	\$US/MMBtu			
Aug-20	\$1.812	\$1.473	\$0.339	23%	\$1.744	\$2.071	-\$0.327	-16%	\$1.621	\$1.900	-\$0.279	-15%	\$1.514			
Sep-20	\$2.163	\$1.496	\$0.667	45%	\$2.073	\$1.990	\$0.083	4%	\$1.835	\$1.901	-\$0.066	-3%	\$1.447			
Oct-20	\$2.758	\$1.527	\$1.231	81%	\$2.659	\$1.929	\$0.730	38%	\$2.374	\$1.990	\$0.384	19%	\$1.373			
Nov-20	\$3.394	\$1.833	\$1.561	85%	\$3.267	\$2.324	\$0.943	41%	\$3.529	\$2.447	\$1.082	44%	\$1.746			
Dec-20	\$3.953	\$1.873	\$2.080	111%	\$3.814	\$3.354	\$0.460	14%	\$4.138	\$3.487	\$0.651	19%	\$2.195			
Jan-21	\$4.381	\$1.927	\$2.454	127%	\$4.250	\$3.387	\$0.863	25%	\$4.454	\$4.781	-\$0.327	-7%	\$2.375			
Feb-21	\$4.666	\$1.913	\$2.753	144%	\$4.555	\$3.228	\$1.327	41%	\$4.551	\$4.660	-\$0.109	-2%	\$2.368			
Mar-21	\$4.343	\$1.843	\$2.500	136%	\$4.247	\$2.459	\$1.788	73%	\$4.269	\$3.072	\$1.197	39%	\$2.092			
Apr-21	\$3.907	\$1.620	\$2.287	141%	\$3.825	\$1.968	\$1.857	94%	\$3.904	\$2.652	\$1.252	47%	\$1.802			
May-21	\$3.936	\$1.566	\$2.370	151%	\$3.859	\$1.949	\$1.910	98%	\$3.728	\$2.490	\$1.238	50%	\$1.728			
Jun-21	\$3.853	\$1.564	\$2.289	146%	\$3.774	\$2.145	\$1.629	76%	\$3.608	\$2.547	\$1.061	42%	\$1.856			
Jul-21	\$3.788	\$1.621	\$2.167	134%	\$3.703	\$2.698	\$1.005	37%	\$3.600	\$2.358	\$1.242	53%	\$2.047			
NTM Avg	\$3.580	\$1.688	\$1.892	112%	\$3.481	\$2.459	\$1.022	42%	\$3.468	\$2.857	\$0.610	21%	\$1.879			

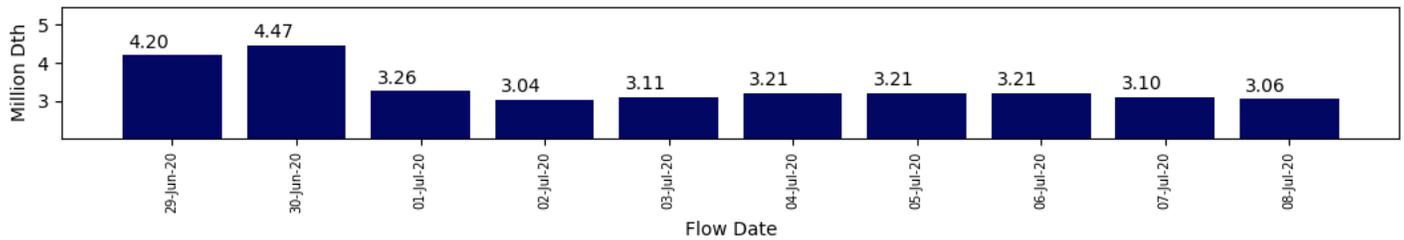
Note: Netbacks are based on deliveries to Asia & Europe. LNG Canada and Costa Azul liquefaction facilities are not expected to be in-service until 2025 and 2023, respectively. But the above calculations give an indication of how LNG may be priced on an FOB basis if those locations were operational. NGI's 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

NGI's LNG INSIGHT U.S. LNG EXPORT TRACKER 08-Jul-2020



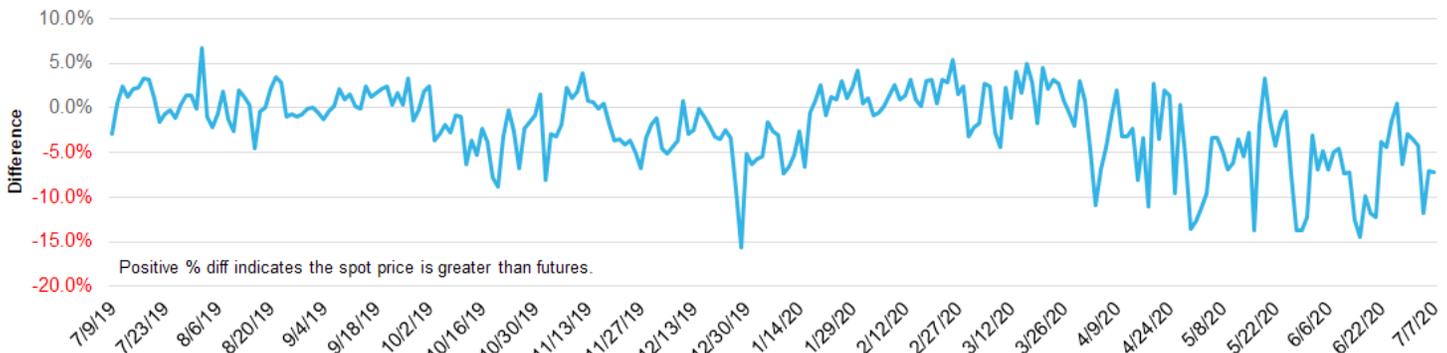
Daily Summary (Volumes Listed in Dekatherms)	
Total Deliveries to U.S. LNG Export Facilities:	3,058,072
Previous Day:	3,105,000
Change:	-46,928



Note: Figures are NGI's estimates of gas delivered to each respective LNG liquefaction facility, listed in dekatherms, and based on best available cycle as of the morning of each listed gas day.

Source: Pipeline EBBs, NGI calculations

NGI's Daily Henry Hub Spot Index vs. Prompt (CME) Futures Contract 8-Jul-2020



Interested in the data behind this chart? NGI publishes daily and monthly spot market prices for Henry Hub and more than 140 other locations in North America. Please go to natgasintel.com/product/daily-gpi for more details.

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





LNG Freight Costs for Selected Routes

8-Jul-2020

Trade Route (\$ / MMBtu)	174k MEGI			160k TFDE			145k ST		
Bonny / Montoir	0.393	0.000	↔	0.408	0.000	↔	0.448	-0.001	▼
Bonny / Tokyo	0.807	-0.001	▼	0.896	-0.002	▼	1.023	-0.004	▼
Ras Laffan / Montoir	0.428	0.000	↔	0.441	0.000	↔	0.468	-0.001	▼
Ras Laffan / Tokyo	0.322	0.000	↔	0.348	-0.001	▼	0.395	-0.001	▼
Dampier / Tokyo	0.277	-0.001	▼	0.298	-0.002	▼	0.347	-0.003	▼
Zeebrugge / Bahia Blanca	0.475	-0.001	▼	0.551	-0.001	▼	0.636	-0.002	▼
Zeebrugge / Dahej	0.513	-0.001	▼	0.578	-0.001	▼	0.711	-0.003	▼
Zeebrugge / Tokyo	0.804	-0.001	▼	0.943	-0.002	▼	1.068	-0.004	▼
Sabine / Bahia Blanca	0.471	-0.001	▼	0.555	-0.001	▼	0.632	-0.003	▼
Sabine / Dahej	0.709	-0.001	▼	0.840	-0.002	▼	0.936	-0.004	▼
Sabine / Tokyo	0.695	-0.001	▼	0.821	-0.002	▼	0.925	-0.004	▼
Sabine / Zeebrugge	0.397	-0.001	▼	0.506	-0.002	▼	0.612	-0.003	▼
Port Moresby / Tokyo	0.275	0.000	↔	0.297	-0.001	▼	0.343	-0.001	▼

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



Spot LNG Vessel Rates (\$USD/day)

8-Jul-2020

Vessel Rates		
Vessel Type / Region	WEST	EAST
174k XDF / MEGI	38,000	38,000
155k - 165k TFDE	33,000	30,000
138k - 145k ST	23,000	21,000

Pacific Voyage Parameters

Fuel and 50% Hire on Ballast Bonus to Singapore

Middle East Voyage Parameters

Fuel and 50% Hire on Ballast Bonus to Fujairah

Atlantic Voyage Parameters

Fuel and 50% Hire on Ballast Bonus to Load Port; or to Gibraltar for voyages staying within the Atlantic basin

Source: Fearnleys (www.fearnleys.com)

West of Suez LNG Vessel Rate Curve 8-Jul-2020

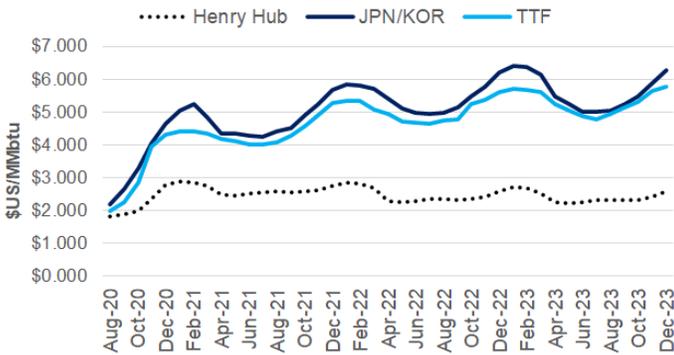
Month	8-Jul	7-Jul	Chg
Aug-20	38,000	38,000	0
Sep-20	58,266	57,163	1,103
Oct-20	77,271	75,809	1,463
Nov-20	84,219	82,625	1,594
Dec-20	77,308	75,845	1,463
Jan-21	63,173	61,977	1,196
Feb-21	53,257	52,249	1,008
Mar-21	44,095	43,261	835
Apr-21	40,270	39,508	762
May-21	41,699	40,909	789
Jun-21	46,553	45,672	881
Jul-21	47,888	46,982	906
Average	56,000	55,000	1,000

Note: Based on 174,000 m³XDF/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 rate.



Source: NGI estimates based on Fearnleys data

Global Futures Settles Through 2023 8-Jul-2020



Contract	Date	12-Month Strip*	CY2021	CY2022	CY2023
Henry Hub	8-Jul-20	\$2.445	\$2.636	\$2.463	\$2.409
	7-Jul-20	\$2.468	\$2.639	\$2.451	\$2.396
	Chg	(\$0.023)	(\$0.002)	\$0.012	\$0.013
JPN/KOR	8-Jul-20	\$4.096	\$4.760	\$5.450	\$5.635
	7-Jul-20	\$4.068	\$4.717	\$5.400	\$5.600
	Chg	\$0.028	\$0.043	\$0.050	\$0.036
TTF	8-Jul-20	\$3.738	\$4.386	\$5.039	\$5.310
	7-Jul-20	\$3.740	\$4.367	\$5.027	\$5.310
	Chg	(\$0.002)	\$0.019	\$0.012	(\$0.000)

*Aug 2020 through Jul 2021

Source: Bloomberg, CSI, NGI calculations



Global LNG & NatGas Futures Prices (Aug 2020) 8-Jul-2020

Contract	Cur/Unit	Settle	Chg	% Chg	Settle (\$US/MMBtu)
JPN/KOR	\$US/MMBtu	\$2.190	-\$0.005	-0.2%	\$2.190
NBP	pence/therm	15.07p	-0.46p	-3.0%	\$1.902
TTF	Eur/MWh	€ 5.937	-€ 0.187	-3.1%	\$1.973
Henry Hub	\$US/MMBtu	\$1.824	-\$0.052	-2.8%	\$1.824

NBP & TTF converted to \$US/MMBtu using same month forex futures contracts.

Source: NGI calculations, CSI



... from CARGO CANCELLATIONS - New Fortress Cancels LNG Cargoes, pg. 1 operates or is developing small-scale LNG assets across the world, including import terminals, fuel management facilities, regasification infrastructure, gas-fired power plants and mid-stream facilities in the Caribbean, Europe, Latin America and the United States.

Despite the decision to cancel longer-term cargoes from Centrica, NFE also said earlier this year that it would need to secure more LNG supply as its operations grow.

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Estimated Sabine Pass / Asia 12-Month Forward LNG Arbitrage Curves 8-Jul-2020



Note: Assumes title changes hands at sea, so no regas fees. Negative GOM/Asia spreads may not increase the risk of GOM LNG shut-ins as much as those between GOM and Europe, since Europe has much more storage capacity than Asia. As such, Europe often serves as the market of "last resort." Variable costs assume vessels have been chartered, and include fuel, boiloff, Panama Canal and port fees only. Total costs includes variable expenses and fixed vessel chartering fees.

Month	115% HH Futures	Shipping Costs Variable	Shipping Costs Fixed	Variable Only Landed Cost	Total Landed Cost	JPN/KOR Futures	Variable Arbitrage Spread	Total Arbitrage Spread
Aug-20	\$2.098	\$0.410	\$0.509	\$2.508	\$3.017	\$2.190	(\$0.318)	(\$0.827)
Sep-20	\$2.157	\$0.424	\$0.781	\$2.581	\$3.362	\$2.640	\$0.059	(\$0.722)
Oct-20	\$2.266	\$0.443	\$1.036	\$2.708	\$3.744	\$3.275	\$0.567	(\$0.469)
Nov-20	\$2.708	\$0.466	\$1.129	\$3.174	\$4.303	\$4.040	\$0.866	(\$0.263)
Dec-20	\$3.182	\$0.484	\$1.036	\$3.666	\$4.702	\$4.650	\$0.984	(\$0.052)
Jan-21	\$3.329	\$0.496	\$0.847	\$3.825	\$4.672	\$5.040	\$1.215	\$0.368
Feb-21	\$3.292	\$0.502	\$0.714	\$3.794	\$4.508	\$5.240	\$1.446	\$0.732
Mar-21	\$3.174	\$0.490	\$0.591	\$3.664	\$4.255	\$4.850	\$1.186	\$0.595
Apr-21	\$2.872	\$0.475	\$0.540	\$3.347	\$3.886	\$4.350	\$1.003	\$0.464
May-21	\$2.835	\$0.475	\$0.559	\$3.310	\$3.869	\$4.355	\$1.045	\$0.486
Jun-21	\$2.884	\$0.473	\$0.624	\$3.357	\$3.981	\$4.280	\$0.923	\$0.299
Jul-21	\$2.943	\$0.472	\$0.642	\$3.415	\$4.057	\$4.245	\$0.830	\$0.188

Source: NGI calculations, CSI, Fearnleys

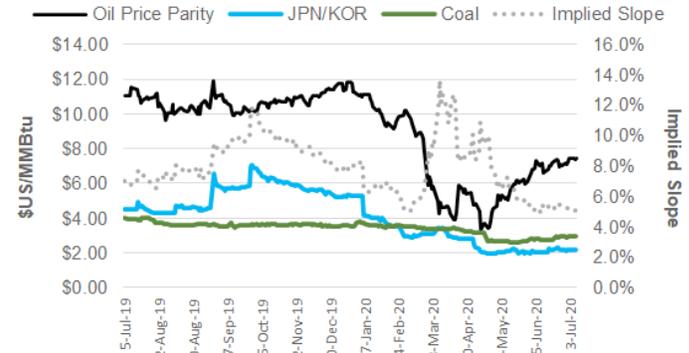


Daily Prompt Oil Linked Asia Parity Prices 8-Jul-2020

Current Spot Month Japan/Korea Futures Contract Price (Aug): **\$2.190**
 Current Spot Month Brent Crude Oil Futures Price (Sep): **\$43.29**
 Current Spot Month Japan Coal Price (Jul): **\$2.97**
 Implied Current Japan/Korea Slope to Brent: **5.1%**

Crude Mo.	3 Mo Avg JCC	Brent	3 Mo Avg JCC	Brent
Sep-20	\$58.23	\$43.29	\$10.02	\$7.45

Trailing 12M Daily Prompt Japan/Korea Futures



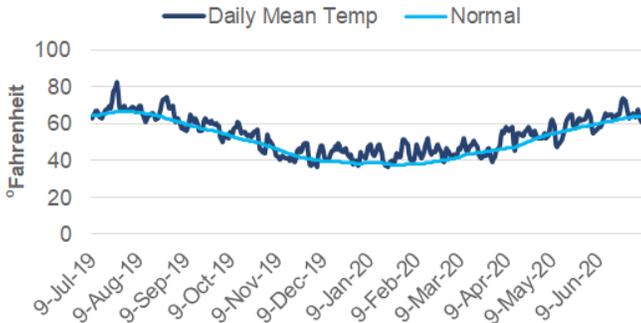
Note: Oil linked parity figures tend to serve as a cap on Asian LNG market prices, while coal prices can help act as a floor.

Source: NGI calculations, ICE, CSI, METI

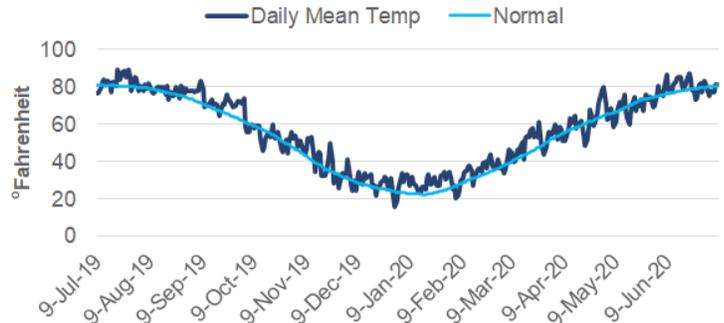


Europe & Asia Weather Data 8-Jul-2020

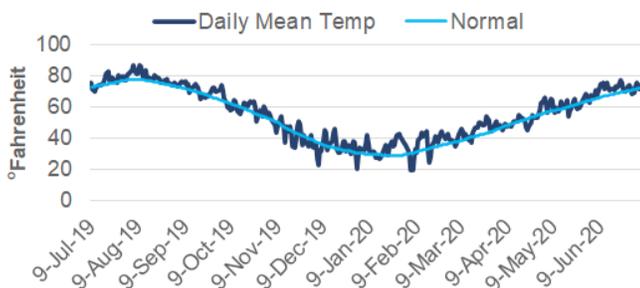
Trailing 365 Day Mean Temperatures - Northwest Europe



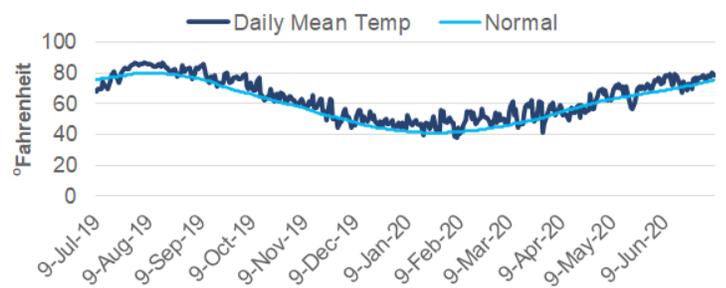
Trailing 365 Day Mean Temperatures - Beijing



Trailing 365 Day Mean Temperatures - Seoul



Trailing 365 Day Mean Temperatures - Tokyo



Source: NGI calculations, Bloomberg



**U.S. Landed vs. European Prices Aug 2020
8-Jul-2020**

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

Source	Pricing Point	HH Price	Gate Landed Price (GLP)
GOM	Henry Hub	\$1.824	\$2.247

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	€ 5.77	\$1.918	-\$0.329
Czech Rep	CZ VTP	€ 6.36	\$2.115	-\$0.132
France	PEG	€ 5.81	\$1.932	-\$0.316
Germany	NCG	€ 5.97	\$1.983	-\$0.264
Italy	PSV	€ 6.90	\$2.295	\$0.047
Netherlands	TTF	€ 5.94	\$1.973	-\$0.274
Slovakia	CEGH VTP	€ 6.56	\$2.180	-\$0.068
Spain	PVB	€ 7.63	\$2.535	\$0.288
UK	NBP	15.07p	\$1.902	-\$0.345

Euro Exchange Rate: **1.1341**
 Pound Exchange Rate: **1.26230**



Note: U.S. landed price is to the Gate Terminal in the Netherlands, and exclude any regas or European pipeline grid access fees. We estimate the variable portion of such charges range between \$0.10-\$0.50 per MMBtu. All local European prices are Eur/MWh, except UK, which is pence/therm.

**Negative numbers indicate imported U.S. LNG is more expensive than the local price.

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

CFO Christopher Guinta said in May that more than 60% of the company's current LNG needs are uncontracted.

NFE said this week that it expects to finish an onshore LNG import terminal and merchant power plant in Baja California Sur, Mexico, and a natural-gas fired power plant in Nicaragua by the end of this year. The Nicaragua project also would be supplied by an offshore storage and regasification terminal.

Ultimately, NFE said its strategy is to contract for 80% of the LNG volumes it needs once its projects hit "run rate."

...cont' pg. 7

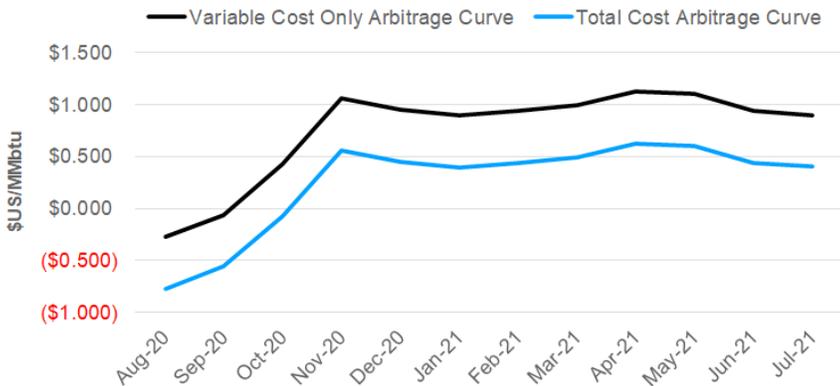
Spanish PVB vs. Dutch TTF Futures 8-Jul-2020

Period	PVB \$US/MMBtu	Chg	TTF \$US/MMBtu	Chg	PVB/TTF Premium (\$)	PVB/TTF Premium %
Aug-20	\$2.535	-\$0.064	\$1.973	-\$0.054	\$0.562	28.5%
Sep-20	\$2.787	-\$0.054	\$2.252	-\$0.044	\$0.535	23.8%
Oct-20	\$3.170	-\$0.023	\$2.854	-\$0.014	\$0.316	11.1%
4Q20	\$3.885	-\$0.001	\$3.706	-\$0.003	\$0.179	4.8%
1Q21	\$4.643	\$0.030	\$4.394	\$0.003	\$0.250	5.7%
2Q21	\$4.303	\$0.025	\$4.104	\$0.017	\$0.199	4.8%

Source: NGI calculations, CSI



Estimated Sabine Pass / Europe (Gate) 12-Month Forward LNG Arbitrage Curves 8-Jul-2020



Note: Negative spreads increase the odds of U.S. Gulf of Mexico sourced LNG cargoes being shut-in. 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. Both exclude regas fees, which we estimate would add another \$0.10-\$0.50 in additional costs to each arbitrage curve calculation.



Month	115% Henry Hub Futures	Shipping Costs Variable	Shipping Costs Fixed	Variable Only Landed Cost	Total Landed Cost	TTF Futures	Variable Arbitrage Spread	Total Arbitrage Spread
Aug-20	\$2.098	\$0.150	\$0.291	\$2.247	\$2.747	\$1.974	(\$0.273)	(\$0.773)
Sep-20	\$2.157	\$0.154	\$0.447	\$2.312	\$2.812	\$2.251	(\$0.061)	(\$0.561)
Oct-20	\$2.266	\$0.164	\$0.592	\$2.430	\$2.930	\$2.854	\$0.424	(\$0.076)
Nov-20	\$2.708	\$0.182	\$0.645	\$2.891	\$3.391	\$3.947	\$1.056	\$0.556
Dec-20	\$3.182	\$0.189	\$0.593	\$3.371	\$3.871	\$4.321	\$0.950	\$0.450
Jan-21	\$3.329	\$0.190	\$0.484	\$3.519	\$4.019	\$4.409	\$0.890	\$0.390
Feb-21	\$3.292	\$0.190	\$0.408	\$3.483	\$3.983	\$4.419	\$0.937	\$0.437
Mar-21	\$3.174	\$0.189	\$0.338	\$3.363	\$3.863	\$4.356	\$0.993	\$0.493
Apr-21	\$2.872	\$0.186	\$0.309	\$3.058	\$3.558	\$4.183	\$1.125	\$0.625
May-21	\$2.835	\$0.185	\$0.320	\$3.020	\$3.520	\$4.119	\$1.099	\$0.599
Jun-21	\$2.884	\$0.184	\$0.357	\$3.068	\$3.568	\$4.007	\$0.939	\$0.439
Jul-21	\$2.943	\$0.184	\$0.367	\$3.127	\$3.627	\$4.026	\$0.900	\$0.400

Source: NGI calculations, CSI, Fearnleys

**European Spark/Dark Spreads (Aug 2020)
8-Jul-2020**

EUA Carbon Price (Eur/mt): **29.41**

Nation	Eur/MWh	Spark Spread		Clean Spark Spread		
		EFFCY	49%	45%	49%	45%
Power Futures						
BE	34.05	5.770	22.31	21.23	10.34	8.02
CZ	37.16	6.364	24.21	23.02	12.24	9.81
FR	36.19	5.812	24.36	23.27	12.39	10.07
DE	34.95	5.967	22.80	21.69	10.83	8.48
IT	38.14	6.904	24.09	22.80	12.12	9.59
NL	32.95	5.937	20.87	19.76	8.90	6.55
SK	38.16	6.558	24.81	23.59	12.84	10.38
ES	37.05	7.628	21.52	20.10	9.55	6.89
UK*	36.77	5.723	25.13	24.06	5.00	1.86
Average			23.34	22.17	10.47	7.96

Nation	Eur/MWh	Coal Futures \$US/Mt	Dark Spread		Clean Dark Spread	
			EFFCY	35%	35%	
Power Futures						
BE	34.05	50.70	15.80		-12.75	
CZ	37.16	50.70	18.91		-9.64	
FR	36.19	50.70	17.94		-10.61	
DE	34.95	50.70	16.70		-11.85	
IT	38.14	50.70	19.89		-8.66	
NL	32.95	50.70	14.70		-13.85	
SK	38.16	50.70	19.91		-8.64	
ES	37.05	50.70	18.80		-9.75	
UK*	36.77	50.70	18.53		-29.48	
Average			17.91		-12.81	

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



NFE reported record LNG sales volumes of 1.65 million gallons/day in April. Average daily volumes sold in the first quarter were about 750,000 gallons/day, or an increase of 200,000 gallons/day from 4Q2019.

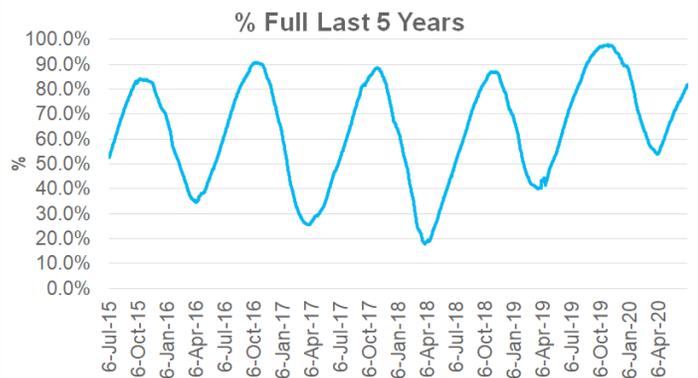
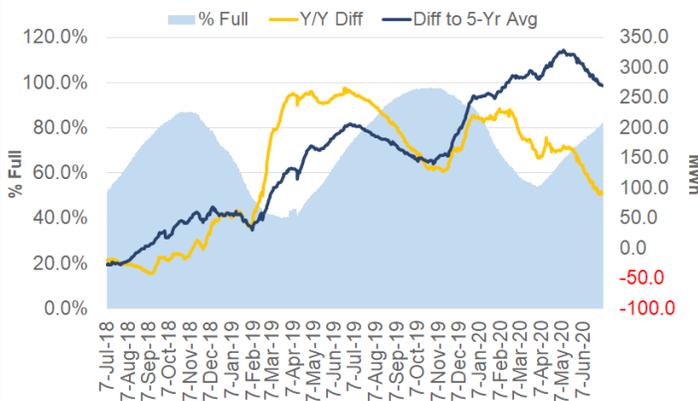
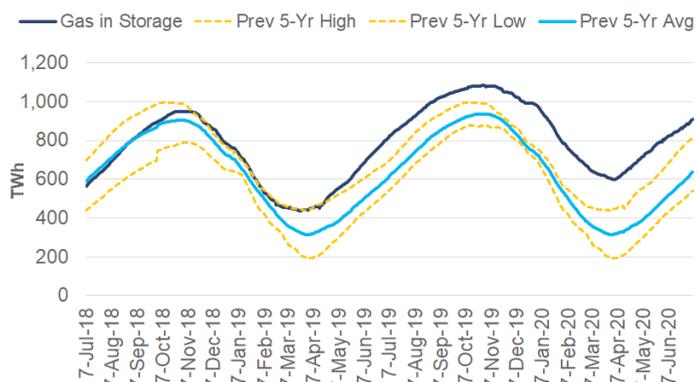
Sales volumes are expected to average between 1.5 and 2.5 million gallons/day for the remainder of 2020, but management indicated that they could slow as customer uptake and new projects could hit bumps given the pandemic.

Even still, committed volumes and “in-discussion ...cont’ pg. 8

European Union Gas Storage

Data as of 6-Jul-20 Chart Last Updated 8-Jul-20

Volumes in TWh	Gas in Storage		% Full	Working Gas		Prev 5-Yr Avg	5-Yr Avg Diff
	06-Jul-20	Volume		06-Jul-19	Y/Y Diff		
Europe	908.61	1106.33	82.1%	817.06	91.55	638.48	270.13



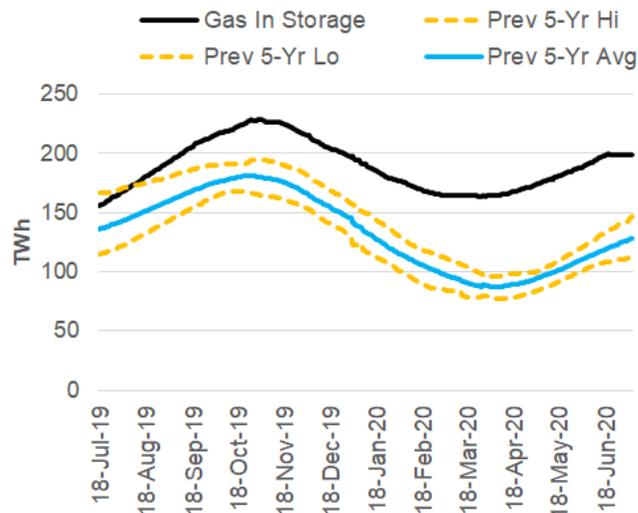
% Full As of	6-Jul-15	6-Jul-16	6-Jul-17	6-Jul-18	6-Jul-19	6-Jul-20
	52.7%	62.4%	52.9%	51.3%	74.8%	82.1%

Source: NGI calculations, GIE

Ukraine Gas Storage

Data as of 6-Jul-20 Chart Last Updated: 8-Jul-20

6/7/20	Volumes in TWh		6/7/19	Y/Y Diff	Prev 5-Yr Avg	5-Yr Avg Diff
	WG Vol	% Full				
199.19	320.17	62.2%	146.67	52.53	128.18	71.02



Source: NGI calculations, GIE

European Union LNG Regas Terminal Storage

Data as of 6-Jul-20 Chart Last Updated: 8-Jul-20

Country	Terminal	Inventory (10 ³ m ³)		Max Cap (10 ³ m ³)	% Util	
			Chg			
Belgium	Zeebrugge	351.9	-40.7	563.0	62.5%	
	France	Dunkerque	454.4	-15.1	586.1	77.5%
		Fos Tonkin	41.1	-3.6	80.0	51.4%
		Montoir	247.9	-21.9	360.0	68.9%
Greece	Fas Cavaou	159.0	-34.2	330.0	48.2%	
	Revythoussa	116.5	-8.8	225.0	51.8%	
Italy	Porto Levante	135.2	-43.2	250.0	54.1%	
	Panigaglia	36.3	4.8	40.0	90.7%	
	Toscana	62.7	0.0	137.2	45.7%	
Lithuania	Klaipėdos	125.5	107.1	167.1	75.1%	
Netherlands	Gate	522.3	84.2	540.0	96.7%	
Poland	Swinoujście	205.9	-21.1	320.0	64.4%	
Portugal	Sines	280.5	-19.3	390.0	71.9%	
Spain	Barcelona	0.0	0.0	0.0	0.0%	
	Bilbao	0.0	0.0	0.0	0.0%	
	Cartagena	0.0	0.0	0.0	0.0%	
	Huelva	0.0	0.0	0.0	0.0%	
	Mugaridos	160.1	-10.0	300.0	53.4%	
	Sagunto	0.0	0.0	0.0	0.0%	
	TVB (Virtual)	925.3	-115.0	3307.9	28.0%	
	UK	Grain	829.7	-4.8	1026.4	80.8%
	South Hook	510.4	-16.6	751.7	67.9%	
Total		5164.7	-158.2	9374.3	55.1%	

Source: NGI calculations, GIE

New Fortress Energy Operations



Source: New Fortress Energy LLC

volumes” are above 19 million gallons/day, management said in May. The company has 10 key target markets for growth that also include Africa, India, South America, Southeast Asia and other areas of the Asia-Pacific region. ■

OUTLOOK

Rising Supplies Seen Keeping Lid on Henry Hub Natural Gas Prices This Summer

Although a reduction in associated natural gas supply had been constructive for Henry Hub prices heading into this winter and next year, analysts expect the ongoing reversal of U.S. supply curtailments by exploration and production (E&P) companies to keep the pressure on the U.S. benchmark for the rest of summer.

In a note to clients on Wednesday, Enverus said that after bottoming in May, natural gas pipeline data indicates that production has started to flatten, and in some areas, has shown gains. The pipeline sample, which represents 74% of the total gas produced in the United States, declined from 71 Bcf/d in January

incentivizing some producers to turn back on the taps. However, Enverus pointed out that this price level still leaves only a handful of areas with gas breakevens under \$5/MMBtu, most predominantly in the Marcellus, Utica and Haynesville shales.

Nevertheless, the risk of ending the traditional storage season at “significantly” above-average levels is high, Enverus said, due to expectations that demand destruction from Covid-19 mitigation efforts would initially outpace production shut-ins. Lower 48 inventories already are tracking well ahead of historical levels, sitting at 3.012 Tcf as of June 19, which is 466 Bcf above the five-year average, according to the Energy Information Administration (EIA).

However, by the start of the withdrawal season, and with production declines taking hold, storage inventories may decline rapidly as demand normalizes and the winter season gets underway.

“Using current forward prices as of June 24, inventories would reach a record low of -0.1 Tcf by the end of winter 2020-21,” Enverus said. The firm therefore expects a price response that would push Henry Hub to \$3.90/MMBtu for winter 2020-21.

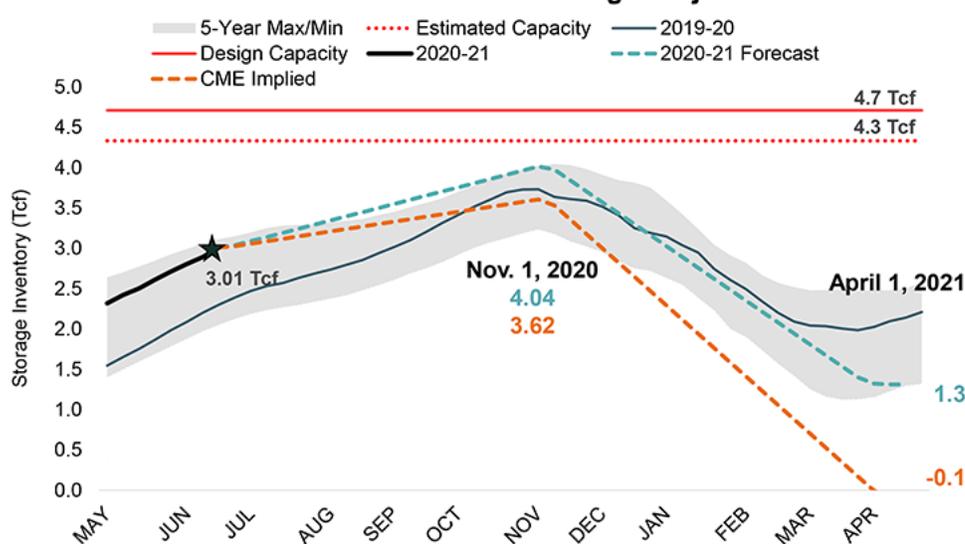
“This price response will affect forecasted production, power demand and liquefied natural gas exports in order to balance the market in summer 2021,” analysts said.

On Tuesday, the EIA updated its own price forecast, knocking down Henry Hub prices for 2020 another 11 cents from its previous outlook to \$1.93. In the latest [Short-Term Energy Outlook \(STEO\)](#), EIA said it expects the Henry Hub price to average \$3.10 in 2021 — 2 cents higher than forecast in the previous STEO — as falling production levels continue to exert upward price pressures.

Meanwhile, the road to restoring U.S. production to pre-Covid-19 levels is seen taking place over three phases, the first of which — reversal

...cont' pg. 10

End-of-Season Natural Gas Storage Projections



Source: EIA, Enverus analysis

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of curtailments — the oil and gas industry is now experiencing, according to Morgan Stanley Research. This first phase requires a WTI crude oil price of \$25-30, while the second phase of production stabilization would require a WTI price of roughly \$40 in order to hold 4Q2020 production levels flat. The final phase is the resumption of growth, which needs WTI prices to be around \$40-50, according to Morgan Stanley.

“With WTI now back around \$40/bbl, pipeline flows suggest around 1 million b/d of curtailments have been reserved over the past few weeks,” researchers said. “If current prices hold, we believe effectively all curtailed volumes will return by the end of 3Q.”

Morgan Stanley said that on average, its 2020 and 2021 WTI price outlooks remain unchanged at \$38 and \$40, respectively, while its 2022 estimate is down to \$42, versus \$44 prior. The research team, led by Equity Analysts & Commodities Strategist Devin McDermott, sees Henry Hub prices falling 10% to \$1.94/MMBtu for 2020 and declining 3% to \$2.65 in 2021. The team maintains their long-term assumptions of \$42.50 WTI and \$2.75 Henry Hub.

Looking ahead to next year, Morgan Stanley expects the market to reward an emphasis on capital discipline, free cash flow (FCF) and maximization of return on and of cash. “While we see limited investor appetite for short-cycle growth into a market that doesn’t need more barrels of oil, stabilizing production is also important, as the current lack of FCF and sharp production declines for many exploration and production companies leads to rising leverage and per unit costs — an unsustainable strategy.” ■

Latin America DES Prices 8-Jul-2020

Country	Terminal	\$/US/MMBtu					
		Aug	Chg	Sep	Chg	Oct	Chg
Argentina	Bahia Blanca	2.12	-0.06	2.27	-0.06	2.69	-0.03
Brazil	Pecem	1.91	-0.05	2.06	-0.06	2.47	-0.03
Chile	Quintero	2.20	-0.05	2.35	-0.06	2.76	-0.03
Colombia	Colombia	1.74	-0.05	1.89	-0.06	2.31	-0.03
Mexico East	Altamira	1.70	-0.05	1.84	-0.05	2.26	-0.03
Mexico West	Manzanillo	2.11	-0.05	2.26	-0.06	2.67	-0.03
Panama	Costa Norte	1.76	-0.05	1.91	-0.06	2.33	-0.03



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



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