LNG DAILY

Volume 18 / Issue 223 / November 12, 2021

JKM ends week above $30/MMBtu as trading moves to January

KEY DRIVERS / MARKET HIGHLIGHTS

- APAC LNG: Uniper reports offer for Jan. 4-6 DES JKTC
- Panama canal transit wait times remain elevated
- JKM-TTF swap spread for January heard at $5.50/MMBtu
- Norwegian gas fields hit with unplanned outages

SHIPPING MARKET HIGHLIGHTS

- Day rates remain at $260,000/day in Pacific basin
- Qatar Petroleum heard with Ras Laffan vessel requirement

NEWS HEADLINES

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SHIPPING RATES, NOV 12

		$/day		Ballast rate
Asia Pacific day rate	AARXT00	260,000	AAXTN00	100%
Atlantic day rate	AASYC00	205,000	AAXTM00	100%
TCR Australia-Japan	ATCRA00	260,000.00		
TCR USG-NWE	ATCRB00	205,000.00		
TCR USG-Japan	ATCRC00	205,000.00		

DAILY CUMULATIVE AVERAGES AND MONTHLY AVERAGES

Nov 12 ($/MMBtu)		Cumulative monthly average		Previous month average		
JKM	AAOVS00	31.606	Dec	AAOVS03	33.254	Nov
DES West India	AALIC00	29.435	Dec	AAWIC03	31.934	Nov
DES Mediterranean	AADCU00	27.310	Dec	AASWC03	29.207	Nov
DES Northwest Europe	AASDF00	27.358	Dec	AASDE03	29.202	Nov
FOB GCM Loading Month	LGCSM00	24.580	Dec	LGCSM31	27.329	Nov
JKM Yen	AAOVT00	3598.034	Dec	AAOVT03	3707.118	Nov
JKM Yuan	LJCWM00	202.351	Dec	LJCWM03	189.189	Nov

JKM ™	AAOVQ00	30.785	+1.520 ▲
Cumulative monthly average (Dec)	AAOVS00	31.606	
Previous month average (Nov)	AAOVS03	33.254	
CNL WTW JKTC	ACNLF00	0.889	

PLATTS DAILY LNG MARKERS ($/MMBtu)

Nov 12			Change	
DES Japan/Korea Marker (JKM)				
JKM (Dec)	AAOVQ00	30.785	1.520	▲
H1 Dec	AAPSU00	30.425	1.541	▲
H2 Dec	AAPSV00	31.145	1.500	▲
H1 Jan	AAPSW00	31.634	1.489	▲
H2 Jan	AAPXA00	31.825	1.500	▲
JKM (Dec) Japanese Yen	AAOVR00	3511.029	172.331	▲
JKM (Dec) Chinese Yuan (CNY/mt)	LJCMS00	10255.653	494.195	▲
DES Japan/Korea (JKM) derivatives Singapore close*				
Balmo-ND	LJKMB00	NA	NA	NA
Dec	LJKMO00	31.550	0.125	▲
Jan	LJKMO01	31.350	1.810	▲
Feb	LJKMO02	30.400	1.800	▲
DES Japan/Korea (JKM) derivatives London close*				
Dec	JKLMO00	30.820	-0.670	▼
Jan	JKLMO01	30.620	-0.080	▼
Feb	JKLMO02	29.291	-0.159	▼
DES Mediterranean Marker (MED)				
MED (Dec)	AASXY00	25.229	-0.148	▼
H1 Dec	AASXZ00	25.129	-0.148	▼
H2 Dec	AASYA00	25.329	-0.148	▼
H1 Jan	AASYB00	25.479	-0.071	▼
DES Northwest Europe Marker (NWE)				
NWE (Dec)	AASXU00	25.229	-0.148	▼
H1 Dec	AASXV00	25.129	-0.148	▼
H2 Dec	AASXW00	25.329	-0.148	▼
H1 Jan	AASXX00	25.479	-0.121	▼
Middle East Marker (MEM)				
MEM (Dec)	LMEMA00	28.188	1.525	▲
H1 Dec	LMEMB00	28.000	1.550	▲
H2 Dec	LMEMC00	28.375	1.500	▲
H1 Jan	LMEMD00	28.800	1.505	▲
H2 Jan	LMEME00	28.975	1.500	▲
DES West India Marker (WIM)				
WIM (Dec)	AARXS00	28.188	1.525	▲
H2 Nov	LMEAA00	27.900	1.550	▲
H1 Dec	LMEAB00	28.000	1.550	▲
H2 Dec	LMEAC00	28.375	1.500	▲
H1 Jan	LMEAD00	28.800	1.505	▲
H2 Jan	LMEAE00	28.975	1.500	▲
DES West India Marker (WIM) derivatives Singapore close*				
Dec	AWIMB00	29.650	0.275	▲
Jan	AWIMM01	29.525	1.775	▲
Feb	AWIMM02	28.775	1.825	▲
FOB Gulf Coast Marker (GCM)				
GCM	LGCSM01	23.300	0.050	▲

*For full forward curve, see page 4

LNG NETBACK PRICES ($/MMBtu)

Nov 12			Change	
FOB Australia	AARXR00	28.380	1.480	▲
FOB Middle East	AARXQ00	27.400	1.550	▲
DES Brazil Netforward	LEBMH01	25.940	0.090	▲
FOB Singapore	AARXU00	28.915	1.490	▲
FOB Murmansk	AARXV00	24.239	-0.178	▼

PLATTS LNG ASIA JKM RATIONALE & EXCLUSIONS

The Platts JKM for December was assessed at $30.785/MMBtu Nov. 12.
The first half of December was assessed at $30.425/MMBtu and H2 December at $31.145/MMBtu, with a narrower day-on-day intramonth contango structure of 72 cents/ MMBtu Nov. 12, compared to a contango of 76.1 cents/MMBtu Nov. 11.
Uniper reported an offer for a Jan. 4-6 DES JKTC cargo, with volume of 3.1-3.4 TBtu and total sulfur limit of 30 mg/Nm3. The offer was normalized 37 cents/MMBtu higher on a wider and lower quantity range, higher sulfur limit and larger vessel size, and equated to a fixed price of $31.83/MMBtu.
S&P Global Platts assessed January JKM derivatives at $31.35/MMBtu, above the most competitive bid at $31.30/MMBtu from Dare, and below the most competitive offer at $31.55/MMBtu from PetroChina.
This rationale applies to symbol(s) <AAOVQ00>
Exclusions: No data was excluded from the Nov. 12 assessment.

PLATTS LNG ASIA WIM RATIONALE & EXCLUSIONS

The S&P Global Platts WIM for December was assessed at $28.188/MMBtu Nov. 12.
Platts assessed first-half and second-half December at $28.000/MMBtu and $28.375/MMBtu, respectively, with a narrower intramonth contango structure of 37.5 cents/MMBtu on Nov. 12, compared with 42.5 cents/MMBtu Nov 11.
Platts assessed the December JKM/WIM spread at $2.597/MMBtu Nov. 12.
This rationale applies to symbol(s) <AARXS00>.
Exclusions: No data was excluded from the assessment.

PLATTS LNG US FOB GULF COAST DAILY RATIONALE & EXCLUSIONS

The FOB Gulf Coast Marker (GCM) was assessed at $23.30/MMBtu Nov. 12.
The assessment was based on tradable values reported by market participants at $23.20/MMBtu by the middle of the day for FOB USGC cargoes loading 30 to 60 days forward, in conjunction with sustained strength in shipping rates for deliveries through the Atlantic and Pacific spurred in part by extended maximum wait times for unreserved LNG tankers transiting the Panama Canal.
This rationale applies to symbol(s) <LGCSM01>.
Exclusions: None.

PLATTS LNG EUROPEAN ASSESSMENT RATIONALE & EXCLUSIONS

The Northwest Europe Marker (NWE) for December was assessed Nov. 12 at $25.229/MMBtu.
H1 NWE for December was assessed at $25.129/MMBtu.
H2 NWE for December was assessed at $25.329/MMBtu.
The NWE prices were assessed lower day on day reflecting falling flat prices for December TTF. The TTF December contract fell from market open at Eur 78.750/MWh to Eur 74.590/MWh at market close. NBP/TTF premiums fell by 14 cents/MMBtu day on day, to 59 cents/MMBtu at 4:30 pm London time Nov. 12. Three unplanned Norwegian gas outages supported Eurogas markets Nov. 12. Outages in Sleipner, Oseberg and Karsto totaling 76 mcm/d was caused by external power supply disruptions, according to data from Gassco. Market sources pegged tradable values for H2 December NWE and MED at TTF plus 35 cents/MMBtu, and H1 December NWE and MED at TTF plus 15 cents/MMBtu Nov. 12.
The Mediterranean Marker (MED) for December was assessed at $25.229/MMBtu.
H1 MED for December was assessed at $25.129/MMBtu.
H2 MED for December was assessed at $25.329/MMBtu.
The MED price was assessed lower day on day. MED prices were assessed flat to NWE, with comparable premiums into both UK and Spanish gas hubs.
The assessments were based on pricing information from market sources for cargoes delivering within the region for December delivery.
This rationale applies to symbol(s) <AASXU00, AASXY00>.
Exclusions: None.

MARKET COMMENTARIES

JKM ends week above $30/MMBtu as trading moves to January

Spot LNG Asia-Pacific prices rose for a second day to return to the $30/MMBtu mark as market participants continued to value winter cargoes at a high premium over Atlantic prices.

Trading liquidity has also shifted to January on expectations that Asia-pacific end-users would need to manage forward stock levels despite ample inventory levels now.

The Platts JKM for December was assessed at $30.785/MMBtu Nov. 12.

The first half of December was assessed at $30.425/MMBtu and H2 December at $31.145/MMBtu, with a narrower day-on-day intramonth contango structure of 72 cents/ MMBtu.

Tradable values for JKTC deliveries were still at $4.00-$5.00/ MMBtu above Atlantic LNG prices as freight rates remain elevated and Asian buyers compete with their counterparts in Latin America and Europe, according to market participants.

"[Asia] requires cross-basin cargoes during winter," an international LNG supplier said.

He added that "buyers are being very discreet and there is underlying market tightness," suggesting that end-users were still keen on spot trades despite a slowdown in December trading this week.

The substantial cross-basin price spread continued to be supported by an ease in wait times at the Panama Canal.

The maximum waiting time at the Panama Canal for unreserved LNG had risen to 18 days northbound and 18 days southbound Nov. 9, according to the Panama Canal Authority.

Northbound and Southbound waiting times fell to 15 days and 9 days, respectively, Nov. 11.

Meanwhile, a few traders expected lower winter temperatures to deplete inventory levels in November, sparking buying interest to replenish January stocks.

"Buying for January will be healthy. There are few buying in December because inventory is okay. But some buying needs to happen in January as winter gets really cold towards the end," a Chinese end-user said.

During the MOC process, Uniper reported an offer for a Jan. 4-6 DES JKTC cargo, with volume of 3.1-3.4 TBtu and total sulfur limit of 30 mg/Nm3 at the average of January JKM prices plus $0.11/MMBtu.

S&P Global Platts assessed January JKM derivatives at $31.35/ MMBtu, above the most competitive bid at $31.30/MMBtu from Dare, and below the most competitive offer at $31.55/MMBtu from PetroChina.

An ADNOC LNG tender to sell April-to-September-loading cargoes for 2022 was heard awarded at an average of 16%-17% percentage to the Brent crude monthly average price. The suppliers could not be fully verified. — *Kenneth Foo*

REPORTED ATLANTIC BIDS, OFFERS AND TRADES ($/MMBtu)

Date	Seller	Loading	Buyer	Basis	Loading window	Offer/Bid	Notes
Best bids/offers							
Nov 12							

REPORTED APAC BIDS, OFFERS AND TRADES ($/MMBtu)

Date	Buyer	Destination	Seller	Source	Basis	Delivery period	Bid/Offer	Notes
Best bids/offers								
Nov 12		JKTC	Uniper		DES	Jan 4-6	Jan JKM+0.11 offer	MOC
Last 5 trades		**APAC**						
Nov 11	Trafigura	JKTC	Shell		DES	Dec 13-15	Jan TTF plus 5.05 traded bid	MOC
Nov 09	Unverified	JKTC	ADNOC		FOB	April 7-13, May 15-21, June 12-18, July 20-26, Aug 20-26, Sep 17-23	16-17% Brent	Tender
Nov 09	Trafigura	JKTC	Shell		DES	Jan 5-7	32.30	MOC
Oct 26	PTT	Thailand		Qatar	DES	Nov 27-29, Dec 3-5	low-33	Tender
Oct 26	Shell, Total		EGAS	Egypt	FOB	Nov 14-15, Nov 24-25	28.25, 28.70	Tender
Oct 22	Vitol	JKTC	PetroChina		DES	Dec 6-8	Dec TTF plus 3.05 traded offer	MOC

European LNG prices end week lower amid consistent Russian pipeline flows

European LNG prices finished a back-and-forth week lower Nov. 12 as consistently strong Russian pipeline flows to Germany and a lack of buyer appetite for cargoes outweighed market support provided by unplanned outages that reduced capacity at three Norwegian gas fields and processing plants.

S&P Global Platts assessed DES Northwest Europe for December at $25.229/MMBtu, down 14.8 cents/MMBtu from the previous day. The first half of December was assessed at $25.129/MMBtu and the second half of December was assessed at $25.329/MMBtu, maintaining the intramonth contango of 20 cents/MMBtu seen all week.

Dutch TTF December futures fell from the market open at Eur78.750/MWh to Eur74.590/MWh at market close. Platts assessed TTF December at $25.032/MMBtu, down 9.8 cents/MMBtu day over day.

Spreads were thinly traded in the JKM derivatives market during European hours, with the January JKM/TFU (TTF traded in $/MMBtu) reaching $5.90/MMBtu, as participants look to hedge the changing spreads between the two basins. An Atlantic-based trader heard the JKM-TTF swap spread for January at $5.50/MMBtu.

Strengthened spreads are helping incentivize delivery of Atlantic cargoes to Asia over Europe, even with higher shipping costs through the Pacific. Russian gas flows via the Mallnow compressor that serves Western Germany stayed consistent to end the week, with nominations for gas day Nov. 12 above 300 MMcf/d.

Those dynamics outweighed the situation in Norway, where some 84 mcm/day of production capacity was unavailable at the Sleipner, Oseberg and Karsto gas fields and processing plants Nov. 12 due to external power supply disruptions and unspecified process problems, according to data from Gassco.

Shipping day rates remained at $260,000/day for the Pacific basin and increased by $10,000 to $205,000/day in the Atlantic.

Qatar Petroleum was reported with tonnage requirement for a Dec. 3 loading, ex Ras Laffan, with delivery in India.

South Korea's Kogas International was heard to have received offers in the range of $250,000/day for its Dec. 12-14 requirement from Australia's Darwin to the East Asia JKTC region.

The maximum wait for unreserved tankers at the Panama Canal rose slightly day over day to 16 days northbound and 10 days southbound, according to the Panama Canal Authority.

The NYMEX Henry Hub prompt-month contract lost its prior-day gains in Nov. 12 trading, falling 29 cents to trade at $4.85/MMBtu as of early afternoon US local time. — *Harry Weber, Zack Smith*

NEWS

Russia says to fulfill contractual gas supply obligations amid Belarus threat

- **Lukashenko hints at gas transit block amid EU standoff**
- **Kremlin says Belarus move 'not coordinated' with Russia**
- **Gazprom chief says European injection program ongoing**

Russia will continue to meet its contractual gas supply obligations with its European customers, the Kremlin said Nov. 12, after Belarusian President Alexander Lukashenko hinted Nov. 11 that Minsk could consider blocking the transit of Russian gas to Europe.

Cited by the Prime news agency, Kremlin spokesperson Dmitry Peksov also said the Belarus stance was not discussed ahead of time with Moscow.

"This was not coordinated in any way. [Belarus] is our ally but it is a sovereign state," Peskov said.

"This is a statement by the president of Belarus. I'd like to remind you of President [Vladimir] Putin's statement that Russia has always fulfilled its obligations under contracts," he said.

"Russia was, is, and will be a country that fulfills all obligations to provide European consumers with gas and to fulfil contractual obligations," he said in response to questions over the implications for Russia of Lukashenko's comments.

Lukashenko, speaking at a meeting of Belarus' council of ministers on Nov. 11, said Minsk was ready to take "retaliatory" measures against

ASIA/MIDDLE EAST ($/MMBtu), NOV 12*

DES Japan/Korea Marker (JKM)		
JKM (Dec)	AAOVQ00	30.785
JKM (H1 Dec)	AAPSU00	30.425
JKM (H2 Dec)	AAPSV00	31.145
JKM (H1 Jan)	AAPSW00	31.634
JKM (H2 Jan)	AAPXA00	31.825
Asian Dated Brent (16:30 Singapore)	ADBAA00	14.30
JKM vs Henry Hub futures	AAPRZ00	25.700
JKM vs NBP futures	AAPSA00	4.294
JKM vs TTF	LNTFJ00	5.753
JKM vs Asian Dated Brent (16:30 Singapore)	AAPSB00	16.482
JKM vs MED (16:30 London)	ALNGB00	5.556
JKM vs NWE (16:30 London)	ALNGA00	5.556

DES Japan/Korea (JKM) derivatives Singapore close		
Balmo-ND	LJKMB00	NA
Dec	LJKMO00	31.550
Jan	LJKMO01	31.350
Feb	LJKMO02	30.400
Mar	LJKMO03	26.875
Q1 2022	LJKQR01	29.542
Q2 2022	LJKQR02	17.425
Summer 2022	LJKSN01	16.650
Winter 2022	LJKSN02	16.850
2022	LJKYR01	19.575
2023	LJKYR02	12.925
2024	LJKYR03	10.400

DES Japan/Korea (JKM) derivatives London close		
Dec	JKLMO00	30.820
Jan	JKLMO01	30.620
Feb	JKLMO02	29.291
Mar	JKLMO03	25.010
Q1 2022	JKLQR01	28.307
Q2 2022	JKLQR02	16.190
Summer 2022	JKLSN01	14.816
Winter 2022	JKLSN02	15.241
2022	JKLYR01	18.339
2023	JKLYR02	11.608
2024	JKLYR03	9.044

DES West India Marker (WIM)		
WIM (Dec)	AARXS00	28.188

DES West India Marker (WIM) derivatives Singapore close		
Dec	AWIMB00	29.650
Jan	AWIMM01	29.525
Feb	AWIMM02	28.775
Mar	AWIMM03	25.375
Q1 2022	AWIMQ01	27.892
Q2 2022	AWIMQ02	15.850
Summer 2022	AWISN01	15.100
Winter 2022	AWISN02	15.275
2022	AWIMY01	18.025
2023	AWIMY02	11.425
2024	AWIMY03	8.925

Carbon Neutral LNG		
CNL WTW JKTC Differential (ex-Australia)	ACNLF00	0.889
CNL WTT JKTC Differential (ex-Australia)	ACNLB00	0.196
CNL DES JKTC Differential (ex-Australia)	ACNLG00	0.189
CNL Combustion JKTC	ACNLJ00	0.693

FOB Middle East		
FOB Middle East	AARXQ00	27.400

FOB Australia (netback)		
JKM (Dec)	AAOVQ00	30.785
(-) Freight	AAUSA00	2.41
FOB Australia	AARXR00	28.38

Key gas price benchmarks			
Japan Customs Cleared LNG (Aug)	LAKPN00	10.15	Final
Japan Customs Cleared LNG (Sep)	LAKPM00	10.78	Estimated

Platts Dutch TTF		
Dec	GTFWM10	25.032
Jan	GTFWM20	25.133

Competing fuel prices			
Japan Customs Cleared crude oil (Aug) ($/b)	AAKOP00	73.78	Final
Japan Customs Cleared crude oil (Sep) ($/b)	AAKOM00	73.81	Estimated
HSFO 3.5% sulfur 180 CST FOB Singapore	LUAXZ00	11.32	
NEAT Coal Index	JKTCB00	5.929	
Minas crude oil	LCABO00	13.550	
Naphtha CFR Japan	LNPHJ00	16.643	

EUROPE ($/MMBtu), NOV 12

	$/MMBtu		Eur/MWh		Eur/MMBtu
DES Mediterranean Marker (MED)					
MED (Dec)	AASXY00	25.229	LNMTA00	75.132	LNMXA00 22.036
MED (H1 Dec)	AASXZ00	25.129			
MED (H2 Dec)	AASYA00	25.329			
MED (H1 Jan)	AASYB00	25.479			
Dated Brent (16:30 London)	ADBAB00	14.25			
MED vs Henry Hub futures	AASYF00	20.338			
MED vs TTF	LNTFS00	0.197			
MED vs NBP futures	AASYH00	-0.452			
MED vs Dated Brent (16:30 London)	AASYJ00	10.979			
MED vs NWE	ALNSA00	0.000			
MED vs JKM	AASYM00	-5.556			
DES Northwest Europe Marker (NWE)					
NWE (Dec)	AASXU00	25.229	LNNTA00	75.132	LNNXA00 22.036
NWE (H1 Dec)	AASXV00	25.129			
NWE (H2 Dec)	AASXW00	25.329			
NWE (H1 Jan)	AASXX00	25.479			
Dated Brent (16:30 London)	ADBAB00	14.25			
NWE vs Henry Hub futures	AASYE00	20.338			
NWE vs TTF	LNTFN00	0.197			
NWE vs NBP futures	AASYG00	-0.452			
NWE vs Dated Brent (16:30 London)	AASYI00	10.979			
NWE vs MED	AASYK00	0.000			
NWE vs JKM	AASYL00	-5.556			
NWE as a % of NBP	AASYD00	98.24			

Competing fuel prices		
Northwest Europe fuel oil	LAEGR00	12.78
CIF ARA 15-60 day thermal coal	CSAAB00	5.98

NORTH AMERICA ($/MMBtu), NOV 12

FOB Gulf Coast Marker (GCM)		
GCM	LGCSM01	23.300
Dated Brent (16:30 London)	ADBAB00	14.25
GCM vs JKM	LGMJM01	-7.485
GCM vs Henry Hub futures	LGMHM01	18.509
GCM vs TTF	LNTFG00	-1.732
GCM vs NWE	LGEUR00	-1.929
GCM vs MED	LGMET00	-1.929
GCM vs NBP futures	LGMNM01	-2.381
GCM vs Dated Brent (16:30 London)	LGMDB00	9.050
GCM vs USGC HSFO	LGMFO00	12.560

Competing fuel prices		
US Gulf Coast high sulfur fuel oil	LUAXJ00	10.62
New York Harbor 1%S fuel oil	LUAXD00	12.58

*Japan Customs Cleared value shows latest available CIF price published by the Ministry of Finance, converted to US dollars per MMBtu. All other values reflect Platts most recent one-month forward assessments for each product in each region, converted to US dollars per MMBtu. JKM Marker, SWE LNG and NWE LNG average the assessments of the two half-months comprising the first full month of forward delivery. Asian LNG assessments assessed at Singapore market close 0830 GMT, European LNG assessment assessed at London market close 1630 UK time. NYMEX Henry Hub futures and ICE NBP futures values taken at Singapore market close and London market close. ICE NBP futures converted from Pence/Therm to $/MMBtu. Asian Dated Brent crude oil assessed at Asian market close 0830 GMT and converted from $/barrel to $/MMBtu. Detailed assessment methodology is found on www.platts.com.

RECENT TENDERS AND STRIPS

Tender/ strip November 12	Issuer/location	Tender type	(Loading) or delivery period	Slots/ cargoes	Opening	Closing date	Validity	Notes	Results
Tender	Petronas - PFLNG Dua	Sell	05-Dec-21 - 06-Dec-21	1 DES		10-Nov-21			
Tender	Kansai Electric - Japan	Buy	05-Jan-22 - 10-Jan-22	1 DES or FOB	10-Nov-21	10-Nov-21	10-Nov-21	Closed on 6:30 PM Japan standard time, 1-hour validity until 7:30 PM JST	
Tender	Angola LNG - Angola LNG	Sell	16-Nov-21 - 15-Dec-21	1 DES		10-Nov-21		furthest delivery to Arun	
Tender	Sonatrach - Algeria	Sell	(01-Nov-21 - 15-Nov-21)	3 FOB					
Tender	APLNG - Australia Pacific LNG	Sell	(28-Dec-21 - 28-Dec-21)	1 DES or FOB	08-Nov-21				
Tender	Adnoc - ADNOC Das Island	Sell	(07-Apr-22 - 23-Sep-22)	6 FOB		09-Nov-21		loading dates: April 7-13, May 15-21, June 12-18, July 20-26, Aug 20-26, Sep 17-23 Brent-linked basis	
Tender	BOTAS - Turkey	Buy	01-Dec-21 - 28-Feb-22	9 DES		04-Nov-21		9 cargo tender, closing Nov.4	
Tender	EGAT - Map Ta Phut	Buy	10-Dec-21 - 18-Dec-21	1 DES		03-Nov-21		One cargo buy tender for Dec. 10-12 or Dec. 16-18 delivery	
Tender	Pakistan LNG - Port Qasim	Buy	19-Nov-21 - 27-Nov-21	2 DES	02-Nov-21	05-Nov-21	05-Nov-21	Two cargo buy tender for Nov. 19-20 and Nov. 26-27 delivery. Closes on Nov. 5, 1200 hours PST. Validity until 2300 hours PST.	
Tender	Oman LNG - Oman LNG	Sell	(01-Dec-21 - 03-Dec-21)	1 DES or FOB		21-Oct-21		Closing 1pm Oman time	heard awarded to Gunvor around $30/MMBtu FOB
Tender	Ichthys LNG - Ichthys LNG	Sell	(13-Nov-21 - 17-Nov-21)	1 DES or FOB	25-Oct-21	27-Oct-21	27-Oct-21	FOB or DES cargo, 13-17 November loading. The tender closes on Oct. 27, noon Tokyo time. Validity until 7 PM Tokyo time (7 hour validity).	heard awarded at approximately $31/MMBtu FOB
Tender	Darwin LNG - Darwin	Sell	(01-Dec-21 - 03-Dec-21)	1 DES or FOB		28-Oct-21		Dec 1-3 load or Dec 14-17 DES JKTC	heard awarded at approximately $31/MMBtu FOB
Tender	Petronet - Dahej	Buy	16-Nov-21 - 30-Nov-21	1 DES	21-Oct-21	27-Oct-21	28-Oct-21	Seller to nominate delivery window for H2 Nov, fixed price only, DES Dahej or Kochi, 3.2 Tbtu	heard not awarded
Tender	Egas - Egypt	Sell	(13-Nov-21 - 25-Nov-21)	2 DES or FOB		26-Oct-21	26-Oct-21		Heard awarded approximately $28s/MMBtu
Tender	PTT - Map Ta Phut	Buy	27-Nov-21 - 05-Dec-21	2 DES	25-Oct-21	26-Oct-21	26-Oct-21	Seeking two cargoes for Nov. 27-29 delivery and Dec. 3-5 delivery. Closes on 4 PM Thailand time on Oct. 26, and has a 3 hour validity until 7 PM Thailand time.	Heard awarded around $33-$34/MMBtu
Tender	IEASA - Escobar	Buy	19-Nov-21 - 19-Dec-21			26-Oct-21		Two cargo buy tender for Nov. 19 & Dec. 19 delivery	
Tender	Novatek - Yamal	Sell	05-Dec-21 - 31-Mar-22	3 DES		21-Oct-21		Dec. 5-23, Jan. 3-21, and March 25-31 delivery	Heard partially awarded
Tender	Sakhalin Energy - Sakhalin	Sell	(01-Dec-21 - 01-Dec-21)	1 DES or FOB		21-Oct-21	22-Oct-21		heard awarded at approximately $34/MMBtu
Tender	Angola LNG - Angola LNG	Sell	05-Nov-21 - 19-Nov-21	1 DES		25-Oct-21	26-Oct-21	Furthest to India, onboard Seri Balqis	
Tender	BOTAS - Turkey	Buy	01-Nov-21 - 31-Mar-22	19 DES		18-Oct-21		DW: Nov.1-7, Nov.8-14, Nov.15-21, Nov.22-28, Nov.29-Dec.5, Dec.6-12, Dec.13-19, Dec.20-26, Dec.27-Jan.2, Jan.3-9, Jan.10-16, Jan.17-23, Jan.24-30, Jan.31-Feb.6, Feb.7-13, Feb.14-20, Feb.21-27, Feb.28-Mar.6, Mar.7-13	Heard partially awarded at TTF+$0.40/MMBtu to +$0.70/MMBtu

the EU amid the standoff over the presence of thousands of migrants on the Belarus-Poland border.

"We provide heat to Europe, and they are threatening us with the border closure. What if we block natural gas transit?" Lukashenko was quoted as saying by the state Belta news agency.

"If [Europe] imposes additional sanctions that are indigestible and unacceptable for us, we will hit back," he said.

The EU is preparing new measures against Belarus amid accusations that Minsk is shuttling the migrants to the Polish border in an attempt to hit back at the EU for previously imposed sanctions.

2021 volumes

Belarus transits Russian gas via the Yamal-Europe pipeline into Poland and on to Germany, and is a key route for Russian deliveries to Europe.

Flows into Poland from Belarus have averaged 76 million cu m/d so far in 2021, according to data from S&P Global Platts Analytics, though deliveries began to be curtailed in August and have remained volatile ever since.

The veiled threat from Lukashenko comes as European gas prices remain at sustained highs, due in part to lower-than-expected imports from Russia and low storage stocks.

According to Platts price assessments, the TTF day-ahead contract hit an all-time high on Oct. 5 of Eur116.10/MWh and has remained volatile through the remainder of October and into November.

The TTF day-ahead price was assessed at Eur72.73/MWh on Nov. 11, up by 420% compared with the same assessment a year ago.

Gazprom injections

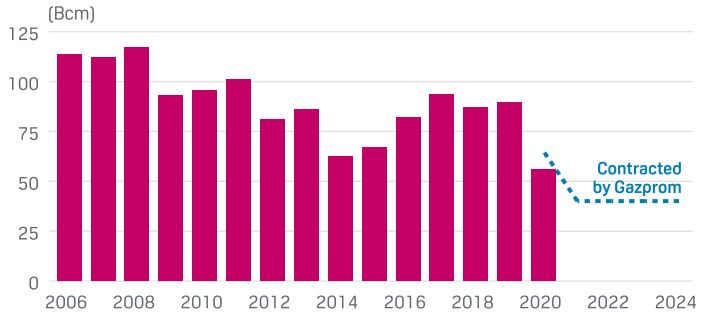
Prices had fallen earlier in the week after Gazprom said Nov. 9 it would implement a plan to inject gas into five of its European gas storage sites.

In a new statement Nov. 12, Gazprom CEO Alexei Miller said the company was "currently implementing" the plan. "Various routes of gas transportation are used including through the territory of Ukraine," Miller said.

"Our obligations under the transit agreement with Ukraine will be exceeded this year. No sooner said than done," he said.

Gazprom in late 2019 agreed to transit 65 Bcm of gas via Ukraine in 2020 and 40 Bcm/year in the 2021-2024 period, well down on a recent transit peak of 94 Bcm in 2017. The contract is due to expire at the end of 2024.

UKRAINE TRANSITS JUST 55.8 Bcm IN 2020



Source: UkrTransGaz, GTSOU

SOUTH AMERICA ($/MMBtu), NOV 12

DES Brazil Netforward		
DES Brazil (Dec)	LEBMH01	25.940
DES Brazil vs NWE Fuel Oil Derivative	LAARM01	13.160
DES Brazil vs DES MED LNG	LASWM01	0.711
DES Brazil vs Dated Brent	LADBM01	11.690
DES Brazil vs Henry Hub (16:30 London)	LAHHM01	21.049
DES Brazil vs JKM (16:30 London)	LAJKM01	-4.845
DES Brazil vs NBP (16:30 London)	LABPM01	0.259

NORTH AMERICAN FEEDGAS ($/MMBtu), NOV 11

Daily average US LNG feedgas cost	ALNFG00	4.654
30-day moving average US LNG feedgas cost	ALNUS00	5.279
Daily average USGC LNG feedgas cost	ALNFH00	4.690
30-day moving average USGC LNG feedgas cost	ALNUG00	5.313

Export facility		Estimated feedgas cost
Sabine Pass	ALNFA00	4.706
Corpus Christi	ALNFB00	4.659
Cove Point	ALNFC00	4.345
Cameron	ALNFD00	4.706
Freeport	ALNFE00	4.662
Elba Island	ALNFF00	4.810

Facility feedgas costs represent a calculation derived from S&P Global Platts' North American gas spot price indices at the hub(s) from which feedgas would be procured most economically for the export facility. The average summary costs are an average of the relevant export facilities' feedgas costs weighted by Platts Analytics' daily estimated volume delivered to each facility.

US CARGO CANCELLATIONS, NOV 12

Dec-21	0
Nov-21	0
Oct-21	0
Sep-21	0
Aug-21	0
Jul-21	0
Jun-21	0
May-21	0
Apr-21	0
Mar-21	0
Feb-21	5
Jan-21	2

The figures are collected from market sources.

NATURAL GAS FUTURES ($/MMBtu), NOV 12

NYMEX HH Singapore close	(Dec)	AAPSD00	5.085
NYMEX HH Singapore close	(Jan)	AAPSE00	5.186
ICE NBP Singapore close	(Dec)	AAPSF00	26.491
ICE NBP Singapore close	(Jan)	AAPSG00	27.139
NYMEX HH London close	(Dec 21)	AASYN00	4.891
NYMEX HH London close	(Jan 22)	AASYO00	4.988
ICE NBP London close	(Dec 21)	AASYR00	25.681
ICE NBP London close	(Jan 22)	AASYS00	26.266
NYMEX HH US close	(Dec 21)	NMNG001	4.791
NYMEX HH US close	(Jan 22)	NMNG002	4.880

MARINE FUEL LNG BUNKER, NOV 12

	$/MMBtu		$/mt (Oil)		$/mt (LNG)	
Singapore	LNBSG00	30.285	LNBSM00	1170.303	LNBSF00	1574.820
	Eur/MWh		**$/mt (Oil)**		**$/mt (LNG)**	
Rotterdam	LNBRT00	73.600	LNBRM00	954.044	LNBRF00	1285.180

MMBtu to $/mt (oil) factor: 38.643; MWh to $/mt (oil) factor: 11.322; MMBtu to $/mt (LNG) factor: 52.000.

Gazprom can also book extra Ukrainian transit capacity on a shorter-term basis for supplying its European buyers.

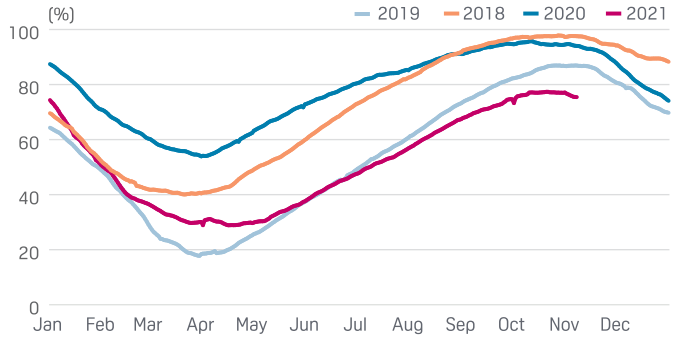
The Russian giant has access to working gas capacities at four storage sites in Germany — Rehden, Katharina, Jemgum, and Etzel — as well as at Haidach in Austria, Bergermeer in the Netherlands, Banatski Dvor in Serbia, and Damborice in the Czech Republic.

S&P Global Platts Analytics believes a restocking by Gazprom would likely bring some relief to European gas markets, but would not be enough to boost stocks back to last year's levels.

"Any refilling through November will help reassure the market ahead of the peak demand season, but is unlikely to significantly reduce the year-on-year deficit that has accumulated over 2021," it said Nov. 9.

The current 75% level of stocks compares with 94% at the same time last year.

EU GAS STORAGE LEVELS BEGIN TO DECLINE, NOW 75% FULL



Source: GIE

PLATTS WIM RLNG DAILY PRICES, NOV 12

		$/MMBtu	Rupee/MMBtu
Ex-Terminal			
Dahej	RLEDA00	30.94	RLEIA002229.92
Hazira	RLEDB00	30.09	RLEIB002241.59
Dabhol	RLEDC00	30.03	RLEIC002236.56
Mundra	RLEDE00	30.06	RLEEI002239.29
Kochi	RLEDD00	30.56	RLEDI002276.47
Average	RLEDF00	30.14	RLEIF002244.77
Location			
Ahmedabad	RLDDJ00	30.44	RLDIJ002267.05
Morbi	RLDDK00	30.56	RLDIK002276.42
Panvel	RLDDL00	30.69	RLDIL002286.22
Dabhol	RLDDC00	30.69	RLDIC002286.22
Vijaipur	RLDDM00	30.62	RLDIM002280.75
Kota	RLDDN00	30.62	RLDIN002280.75
Chhainsa	RLDDO00	30.68	RLDIO002285.52
Jagdishpur	RLDDP00	30.68	RLDIP002285.52
New Delhi	RLDDQ00	30.68	RLDIQ002285.52
Koottanad	RLDDR00	31.21	RLDIR002324.39
Kakinada	RLDDS00	31.30	RLDIS002331.36
Average	RLDDT00	30.74	RLDIT002289.97

Prices are net-forward calculations derived from the Platts WIM and exclude VAT and CST sales taxes. Delivered prices represent the cost of delivery from the nearest connected LNG terminal via pipeline.

Platts Analytics also believes Russian gas flows into northwest Europe will rise through November.

"We currently forecast 125 million cu m/d on average to go to northwest Europe in November, but so far these flows have averaged just 111 million cu m/d," it said.

However, it said, even at 125 million cu m/d, Russian flows would still be almost 80 million cu m/d below the five-year average.

— *Stuart Elliott, Anastasia Dmitrieva*

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LNG Daily is published daily by Platts, a division of S&P Global, registered office: 55 Water Street, 37th Floor, New York, N.Y. 10038.

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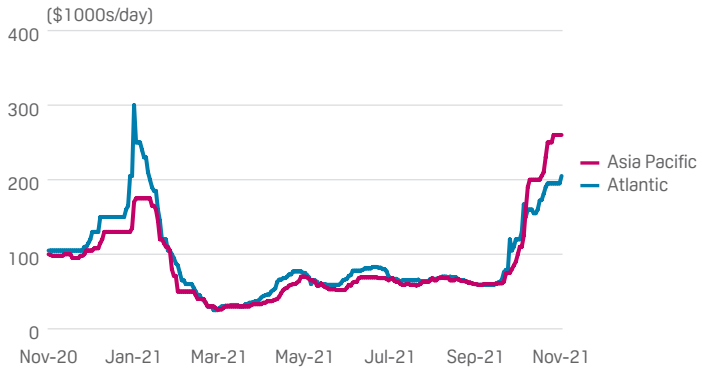
SHIPPING PRICES

SHIPPING RATES, NOV 12

		$/day
Asia Pacific day rate	AARXT00	260,000
Atlantic day rate	AASYC00	205,000
TCR Australia-Japan	ATCRA00	260,000.00
TCR USG-NWE	ATCRB00	205,000.00
TCR USG-Japan	ATCRC00	205,000.00
		$/MMBtu
PLF1 Middle East-Japan/Korea	AAUUA00	3.84
PLF2 Middle East-NWE	AAUTE00	4.06
PLF3 Trinidad-NWE	AAUUC00	1.91

SHIPPING RATES



Source: S&P Global Platts

SHIPPING CALCULATOR, NOV 12

	Australia-Japan/Korea	Middle East-India
Ship size (mt)	72980.77	72980.77
Trip length (days)	9	3
Carrier day rate ($/day)	260000	260000
Day rate cost ($/MMBtu)	1.50	0.63
Boil-off cost	0.63	0.20
Supplementary boil-off cost ($/MMBtu)	0.20	0.06
Cost of voyage* ($/MMBtu)	2.41	0.94

*Includes port cost.

FREIGHT ROUTE COSTS, NOV 12 ($/MMBtu)

Asian discharge ports

		Japan/Korea		South China/Taiwan		West India
Middle East	AAUUA00	3.84	AAUSH00	3.35	AAUSP00	0.94
Australia (Dampier)	AAUSA00	2.41	AAUSI00	1.94	AAUSQ00	2.32
Australia (Gladstone)	ACABA00	2.42	ACABB00	2.66	ACABC00	3.74
Bontang	AOJKA00	1.67	AOCTA00	1.21	AOWIA00	2.29
Bintulu	ABJKA00	1.70	ABCTA00	1.01	ABWIA00	2.09
Singapore	ASJKA00	1.91	ASCTA00	1.21	ASWIA00	1.60
Tangguh	ATJKA00	1.66	ATCTA00	1.43	ATWIA00	2.74
Trinidad via Suez	AAUSB00	7.61	AAUSJ00	7.14	AAUSR00	4.89
Trinidad via Panama	AAUXB00	5.28	AAUZB00	6.42		
Trinidad*	AAUZC00	5.28	AAUZD00	6.42		
Nigeria	AAUSC00	5.99	AAUSK00	5.31	AAUSS00	3.83
Algeria	AAUSD00	5.56	AAUSL00	5.11	AAUST00	3.04
Belgium	AAUSE00	6.46	AAUSM00	5.78	AAUSU00	3.64
Peru	AAUSF00	5.36	AAUSN00	6.14	AAUSV00	6.68
Russia	AAUSG00	0.97	AAUSO00	1.44	AAUSW00	3.69
Spain	ACAAA00	5.81	ACAAB00	5.14	ACAAC00	3.26
Norway	ACAAH00	7.42	ACAAI00	6.48	ACAAJ00	4.50
USGC*	LAUVA00	5.54	LAUVB00	6.69	LAUVC00	5.36
USGC via Panama	LAUVI00	5.54	LAUVL00	6.69		
USGC via Suez	LAUVJ00	8.37	LAUVM00	7.42	LAUVO00	5.36
USGC via Cape	LAUVK00	8.62	LAUVN00	7.89	LAUVP00	6.67

EMEA discharge ports

		South West Europe		North West Europe		Kuwait/UAE
Middle East	AAUSX00	3.41	AAUTE00	4.06	LMEMM00	0.51
Australia (Dampier)	AAUSY00	5.29	AAUTF00	5.97	LMEMN00	2.80
Australia (Gladstone)	ACABD00	6.75	ACABE00	7.46	ACABI00	4.23
Trinidad	AAUSZ00	1.94	AAUUC00	1.91	LMEMP00	4.48
Nigeria	AAUTA00	2.17	AAUTG00	2.33	LMEMQ00	4.08
Algeria	AAUTB00	0.48	AAUTH00	1.00	LMEMR00	2.65
Belgium	AAUTC00	0.84			LMEMS00	3.45
Peru	AAUTD00	5.53	AAUTI00	5.73	LMEMT00	7.21
Russia	AAUUB00	6.70	AAUTJ00	7.16	LMEMU00	5.15
Spain			ACAAD00	0.84	LMEMV00	2.87
Norway	ACAAK00	1.41	ACAAL00	0.83	LMEMW00	4.09
Murmansk			AARXW00	0.99		
USGC*	LAUVD00	2.55	LAUVE00	2.52	LMEMX00	5.15
USGC via Suez					LMEMY00	5.15
USGC via Cape					LMEMZ00	6.46

Americas discharge ports

		US Atlantic Coast		Argentina		Brazil
Middle East	AAUTK00	4.64	AAUTS00	4.96	ACAAP00	5.71
Australia (Dampier)	AAUTL00	5.82	AAUTT00	4.98	ACAAQ00	5.98
Australia (Gladstone)	ACABF00	5.64	ACABH00	4.29	ACABG00	5.27
Trinidad	AAUTM00	1.00	AAUTU00	2.26	ACAAR00	1.53
Nigeria	AAUTN00	2.44	AAUTV00	2.49	ACAAS00	2.14
Algeria	AAUTO00	1.63	AAUTW00	2.87	ACAAT00	2.52
Belgium	AAUTP00	1.47	AAUTX00	3.25	ACAAU00	2.90
Peru	AAUTQ00	4.81	AAUTY00	2.23	ACAAV00	3.39
Russia	AAUTR00	7.28	AAUTZ00	6.39	ACAAW00	8.97
Spain	ACAAE00	1.35	ACAAF00	2.89	ACAAG00	2.34
Norway	ACAAM00	1.64	ACAAN00	3.87	ACAAO00	3.71
USGC*			LAUVG00	3.47	LAUVH00	2.72

*Most economic.

All values calculated based on prevailing spot market values during the day for LNG, bunker fuel and ship chartering. No route cost is calculated for Zeebrugge to NW Europe, or Spain to SW Europe. Other routes appear blank on days when a public holiday in one or another location means underlying values are not published. Detailed assessment methodology, including assumed route times and underlying values, is found on www.platts.com.

Malaysia's Petronas seeks to cut winter LNG deliveries from Bintulu LNG by 15-20 cargoes

- **Over half dozen offtakers receive DQT notifications**
- **Bulk of cargoes meant for Dec-Mar delivery**
- **Japanese utilities may turn to fuel oil, coal or spot LNG purchases**

Malaysia's national oil company Petronas has sought to cancel or defer 15-20 more LNG cargoes contracted mainly with Japanese customers and scheduled for delivery during the Northern Hemisphere winter, multiple sources with direct knowledge of the matter told S&P Global Platts.

Over half a dozen LNG importers, including power and gas utilities, confirmed they had received notifications from Petronas formalizing its intent to exercise downward quantity tolerance, or DQT, on cargoes to be delivered from November onward from two plants — MLNG Dua and Satu at the nine-train Bintulu LNG complex.

Petronas did not respond to queries.

The bulk of the LNG cargoes were for December to March delivery, the market sources said. DQT is the right exercised by a supplier to reduce contracted volumes by a fixed percentage, which usually is around 10%, in the event of unusual circumstances.

Suppliers typically try to manage minor disruptions through optimizing supply within their own portfolios, or other business arrangements like agreeing to increase supply at a later date. Triggering contract clauses are only done as a last resort to avoid legal disputes.

The latest notifications impact LNG supply during winter and have stoked concerns among Japanese utilities and end-users that have largely refrained from procuring spot cargoes after prices spiked to record levels.

The S&P Global Platts JKM for December was assessed at $29.265/MMBtu Nov. 11.

"We were aware of the clause but didn't expect it will be used on us. Petronas seems to be exercising all the DQT rights they have," a Japanese power utility that received a DQT request said, adding that it is now weighing alternatives like coal and fuel oil to minimize input costs as spot LNG prices are "too high."

One of Japan's largest gas utilities that is subject to DQTs on more than one offtake contracts with Petronas said it may look at jointly procuring replacement cargoes with non-Japanese importers.

"We will have to consider double discharge with another utility to avoid purchasing a full-sized cargo at high spot prices," a source with the gas utility said.

"It seems uncharacteristic for Petronas to be unwilling to negotiate on DQT with end-users, so they could be pressured by the government," the source added.

Wider impact

Some gas utilities with a higher exposure to Bintulu LNG's volumes but with a smaller operating footprint are feeling the pinch from the reduced Malaysian LNG outflows.

"A drop of one cargo for us has a big impact so we will have to adjust our long-term cargo delivery for the remaining fiscal year [up to March 2022] and request earlier delivery for annual delivery programs [from] April onward," one of Japan's smaller gas utilities said. The person said downstream JLC sales would not be able to match spot LNG cargos even if they were priced in the mid-$20/MMBtu.

JLC, or Japan LNG Customs arrival, is an average price of all LNG including spot and term cargoes arriving in Japan.

The bulk of Malaysia's LNG cargoes are exported from the Bintulu LNG complex comprising three trains each at MLNG and MLNG Dua, two trains at MLNG Tiga, and a ninth train operated by Petronas LNG 9.

Bintulu LNG boasts nearly 30 million mt/year of capacity and is rated as the largest facility of its kind at a singular location.

Petronas had started warning offtakers of possible cargo deferrals as early as August due to upstream issues, including mercury contamination at the Mubadala Petroleum-operated Pegaga project off Sarawak, designed to mainly supply MLNG Tiga.

"Pegaga field will be one of the key gas suppliers to Malaysia's total gas supply to the Petronas LNG Complex in Bintulu, Sarawak. Mubadala Petroleum has done all the necessary mitigation and actions to manage the mercury," a Mubadala spokesperson said in response to queries about cargo delays. — *Masanori Odaka, Hwee Hwee Tan*

Equatorial Guinea LNG exports resume after Alba gas processing plant fix

- **SCF Barents left Punta Europa site Nov 11**
- **LNG exports were halted in late September**
- **Issue hit operations at Alba processing facility**

An LNG cargo loaded at Equatorial Guinea's Punta Europa terminal left the facility on Nov. 11, the first export from the site since late September, S&P Global Platts trade-flow analytics software cFlow showed.

The cargo was loaded onto the SCF Barents tanker, which is now currently headed south off the coast of Gabon, cFlow showed Nov. 12.

According to S&P Global Platts Analytics, the cargo is carrying the equivalent of 105 million cu m of gas and is currently bound for India.

LNG exports from Equatorial Guinea were suspended after an incident on Sept. 26 at Marathon Oil's Alba gas plant, which processes gas from the Alba field that is then used as feedstock for the Equatorial Guinea LNG production facility.

Marathon said Nov. 3 that normal operations had resumed at the Alba plant, which paved the way for LNG exports to resume.

Before the incident, the last LNG vessel to load a cargo was the Maran Gas Amphipolis, which left Punta Europa on Sept. 25.

The near seven-week outage came as spot LNG prices hit all-time highs, with the Platts benchmark JKM spot Asian LNG price reaching a record high of $56.33/MMBtu on Oct. 6.

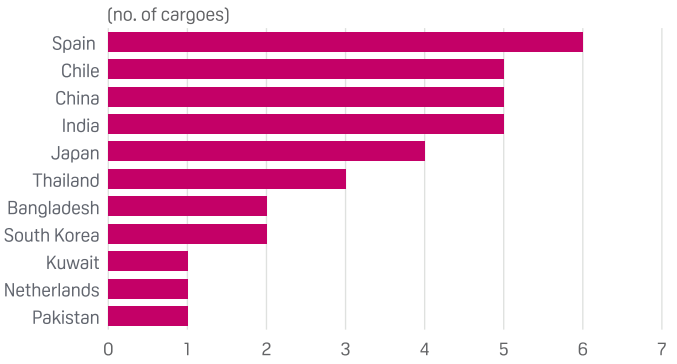
Prices have remained volatile through October and into November, with the JKM assessed at $30.79/MMBtu on Nov. 11, up by 353% compared with the same date a year ago.

Alen boost

LNG exports from Equatorial Guinea have totaled 3.4 Bcm so far in 2021, according to Platts Analytics, with deliveries boosted following the startup of the Alen gas project in February.

Supplies have been delivered to a wide range of destinations this year, with the main markets being Spain (six cargoes), Chile, China and India (five each), Japan (four) and Thailand (three).

VARIED DESTINATIONS FOR EQUATORIAL GUINEA'S 2021 LNG EXPORTS



Source: S&P Global Platts Analytics

The one-train, 3.7 million mt/year EG LNG complex — which shipped its first LNG cargo in 2007 — had traditionally relied on gas from the now declining Marathon-operated Alba field, but Alen is now topping up the feedgas supply.

First gas from Alen was delivered to the EG LNG export facility on Bioko Island via a new 950 MMcf/d capacity pipeline by Noble Energy EG, a subsidiary of US major Chevron.

The backfill project at Alen — where gas was previously reinjected into the reservoir to support enhanced liquids recovery since entering operation in 2013 — provides for the monetization of 580 Bcf of gas over six years.

Alen is part of Equatorial Guinea's plans for a regional gas hub and "intra-African LNG industry," with energy minister Gabriel Mbaga Obiang Lima saying Nov. 4 the country would continue to look to further develop gas and LNG in the country.

The plans for a regional gas hub include a proposed cross-boundary project with Cameroon to develop shared resources in the Yoyo-Yolanda condensate gas field and well as regional gas deals with Nigeria.

Obiang said that working with US partners, the country also had a plan for the stalled Fortuna floating LNG project to produce low-carbon LNG. — *Stuart Elliott*

Thailand's Oct LNG imports at all-time high amid production declines at largest gas field

- **Erawan gas output drops sharply amid Chevron-PTT dispute**
- **Thailand's LNG imports to remain high in coming months**

Thailand's LNG imports hit an all-time high in October and could remain high in the coming months as it ramps up purchases of expensive spot LNG cargoes to stave off a widening domestic gas supply shortfall, mainly from sharply lower output at its largest gas field Erawan that is also embroiled in a dispute.

The Southeast Asian country's gas crunch comes amid declining output at mature assets exacerbated by slowing investment, COVID-19 related slowdowns, the exit of several international oil majors and national oil companies struggling to boost reserves or make high-profile discoveries.

Thailand's national oil company PTT faces production issues similar to Malaysia's Petronas and Indonesia's Pertamina, and is being forced to tap into the seaborne LNG market at a time when global LNG prices have risen to record levels.

Thailand's LNG imports hit an all-time high of 800,000 mt in October, which was a 55% increase from September and a 63% increase from the same period a year earlier, according to S&P Global Platts Analytics.

Shipping data suggests November and December volumes could remain high or be even higher. Thailand's LNG imports from January to September averaged 520,218 mt, according to customs data.

PTT and state-power company Electricity Generating Authority of Thailand, the two main LNG importers, issued several tenders for spot LNG cargoes for delivery from October to December, reflecting higher-than-usual procurement levels.

Several October and November cargoes were awarded at around $30-$35/MMBtu, which are some of the highest prices Thailand has paid for LNG, and some were not awarded due to steep prices, traders said. The Platts JKM for Dec was assessed at $29.265/MMBtu Nov. 11.

Thailand has imported more spot LNG so far this year compared to previous years, based on its contracted volumes with Qatar Petroleum and other portfolio players — BP, Shell and Petronas — and tendering picked up significantly even after spot prices started climbing since July, Jeff Moore, Asia LNG manager with Platts Analytics, said.

This is uncharacteristic of price-sensitive Thai importers, and the NOCs would need to get state clearance for high-priced imports, despite flexibility from suppliers like Qatar, signaling a desperate need for gas supply, traders said.

Gas production declines

Thailand relies on domestic production for about 70% of its total gas demand, and the remaining comes equally from pipeline imports via Myanmar and seaborne LNG at around 15% each.

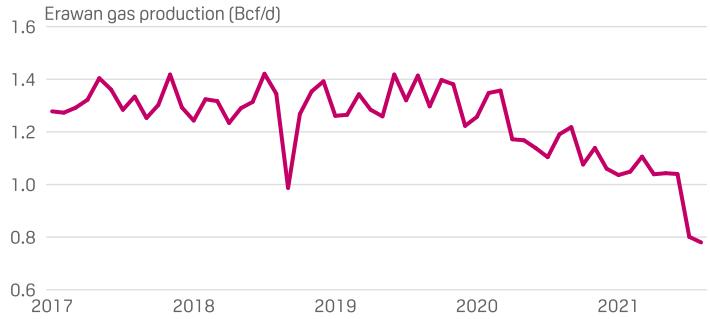
The Erawan gas field in the Gulf of Thailand is the country's single largest gas producing asset that accounted for over 36% of its domestic gas production in 2020, and supplied around 25% of total gas demand, official data showed.

Erawan's gas production fell to 801 million cu ft/d in July and 780 million cu ft/d in August, from 1,040 million cu ft/d in June, according to data from Thailand's energy ministry. It had averaged 1,185 million cu ft/d in 2020.

Erawan's output is expected to continue declining, and result in a 21% drop in Thailand's annualized gas output for 2021 from 3,262 million cu ft/d in 2020, Chong Zhi Xin, IHS Markit Director for South Asia and Southeast Asia Gas and LNG, said. He said Erawan's production, which has been contracting since July, may halve by the end of this year from 1,036 million cu ft/d posted in January.

"This is attributed to falling production rate owing to the lack of investments in new upstream developments," Chong said. IHS Markit expects LNG imports to remain high as PTTEP's ability to ramp up production at other fields to offset Erawan is limited.

THAILAND'S LARGEST GASFIELD'S OUTPUT DROPPING RAPIDLY



Source: Thailand energy ministry

Erawan dispute

The Erawan field is currently operated by Chevron, but with the concessions expiring, renewed production sharing contracts had been awarded to state explorer PTT Exploration and Production, or PTTEP, which is scheduled to take over in April 2022.

The renewed PSCs had raised concerns about tougher fiscal terms under the new contracts and about whether NOCs can keep hydrocarbons flowing.

PTTEP had said there was an investment plan in place to ensure continuity in gas supply when it takes over in 2022, and maintain production levels of at least 800 million cu ft/d from Erawan.

IHS Markit's Chong said while PTTEP sought to gain early access as the incoming field operator to shore up production, the plans were complicated by a multi-year dispute over the extent of Chevron's exposure to the costs of decommissioning Erawan's production structures.

Chevron Thailand said it is working with the government and PTTEP to "resolve complex transition issues, such as decommissioning liability for assets to be transferred free of charge to the government and operated by PTTEP, as well as safe and non-disruptive site access for both current and future operators."

A company spokesman said "production and resource prospects will be significantly affected by the specific assets which the government has chosen not to transfer to the new operator."

PTT, PTTEP and EGAT did not respond to queries. — *Hwee Hwee Tan, Shermaine Ang*

Dutch Vopak to end 'active' participation in German LNG project

- **Vopak set up terminal JV with Gasunie, Oiltanking**
- **One of two LNG terminals under development in Germany**
- **No binding capacity contracts announced for project**

Dutch storage company Vopak said Nov. 12 it had decided to end its "active participation" in the planned 8 Bcm/year LNG import terminal at Brunsbuttel in northern Germany.

Vopak was one of three companies that formed the German LNG Terminal (GLT) development company together with Dutch gas grid operator Gasunie and Germany's Oiltanking.

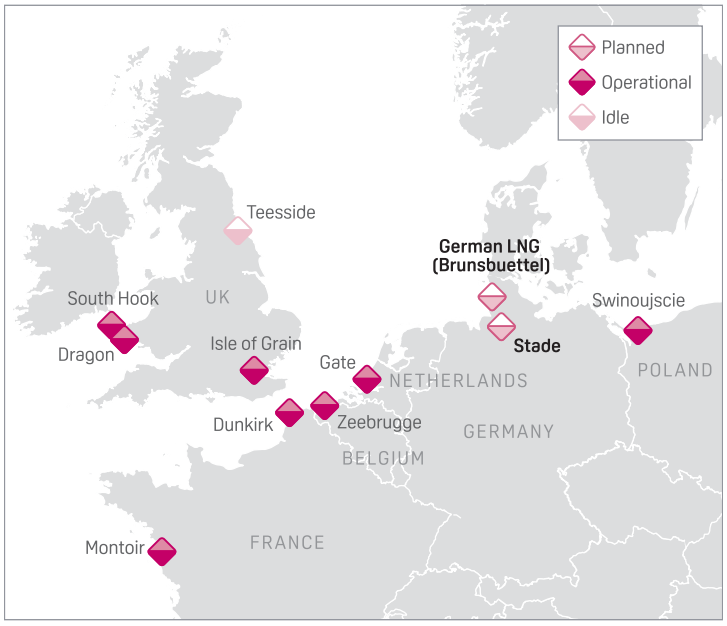
"After a strategic review, Vopak decided to discontinue its active participation in the German LNG project leading to an exceptional loss of Eur11.1 million ($12.7 million)," it said in its third-quarter earnings report.

"We remain optimistic in other LNG growth projects, such as Hong Kong, which are progressing well."

The Brunsbuttel terminal is one of two German LNG import projects under development, the other being Hanseatic Energy Hub's proposed 12 Bcm/year import facility at Stade.

Plans for a 10 Bcm/year floating LNG import terminal at Wilhelmshaven have been shelved.

NORTHWEST EUROPEAN LNG PROJECT LANDSCAPE



Source: S&P Global Platts

In early September, GLT managing director Rolf Brouwer — who had been seconded to the project by Vopak — returned to the Dutch company. He was replaced by new managing directors Philipp Kroepels and Michael Kleemiss.

Speaking on an earnings call Nov. 12, Vopak's outgoing CEO Eelco Hoekstra said there were "many good attributes" to the project. "We very much like the site. We see a line of sight on how to turn that particular location into an LNG storage facility," Hoekstra said.

But in addition to licensing and permitting issues, "we also see that the momentum commercially is not in full swing today."

Hoekstra said Vopak would continue to support the project, "but we'll do that in a more passive manner until conditions might change for the better."

A spokesperson for GLT told S&P Global Platts Nov. 12 that while Vopak would convert its active participation in the GLT venture into a passive one, it would "remain a partner in the joint venture."

"Together with Gasunie and Oiltanking, the goal of building and operating an LNG terminal in Brunsbuttel will continue to be pursued," the spokesperson said.

"Important milestones have already been reached, such as the

exemption decision by the European Commission and the submission of the application for planning approval. The basis has therefore now been laid to move into the phase of the approval process and implementation," the spokesperson said.

Binding contracts

To date, there have been no announcements of binding capacity contracts to support the project development.

In June, GLT said binding capacity contracts were still being finalized after the EC approved the project's request for a waiver from tariff and network-access regulation.

In September 2018, RWE agreed to a provisional deal to secure a substantial part of the plant's capacity, which was followed by similar deals with one unnamed company and Switzerland-based trader Axpo.

Under current plans, the terminal would provide a range of services including the loading and unloading of LNG carriers, LNG storage and regasification, feeding gas into the German network, and distribution of LNG via tank trucks and LNG tank cars. — *Stuart Elliott, James Burgess*

Russia in talks with Turkey to renew gas contracts: energy minister

- **Botas to see 4 Bcm/year contract expire at end-2021**
- **Private importers also set to see licenses expire**
- **Russian supplies key to meeting Turkish gas demand**

Russian energy minister Nikolay Shulginov has confirmed that Moscow is in talks with Ankara over the possible extension or renewal of some of Turkey's key gas import contracts.

In an interview with Russian newspaper Kommersant published Nov. 11, Shulginov said talks were being conducted with unspecified "companies" and that discussions related in part to commercial terms.

"It is not even the volumes that are being determined, but the technical capabilities of the supplies. Also, prices are being negotiated with companies," Shulginov said.

Eight Turkish companies currently hold contracts with Gazprom to import Russian gas, which is key to meeting demand set to reach as much as 60 Bcm this year.

State importer Botas holds two contracts for 16 Bcm/year and 4 Bcm/year, respectively, while seven private Turkish companies hold contracts for a combined total of 10 Bcm/year.

Of those contracts, Botas's 4 Bcm/year contract is set to expire at the end of 2021, while four of the private contracts totaling another 4 Bcm/year are with companies that hold import licenses due to expire between the end of February 2022 and the end of December 2022.

Botas's 16 Bcm/year contract runs to the end of 2025, while of the remaining private contracts, one runs to 2035, and three to 2042.

Take-or-pay issues

Over the past four years some of the seven private importers are known to have experienced problems meeting their contracted take-or-pay obligations, a situation which has been complicated by non-energy related issues.

Enerco, which holds a contract for 2.5 Bcm/year and an import license that expires at the end of December 2022, has not imported any gas since 2018.

And Avrasya Gaz, which holds a contract for 0.5 Bcm/year and an import license that runs to the end of February 2022, imported no gas in 2019 and only tiny quantities since then.

Both companies are controlled by Turkey's state-owned Savings and Deposits Insurance Fund, having been seized after their previous owners were implicated in the failed military coup of 2016.

The situation of Bosphorus Gaz, which holds a contract for 0.75 Bcm/year and an import license that runs to October 2022, is also complex.

The company, formerly controlled by Gazprom before being returned to its Turkish founders in 2018, has been a regular importer of Russian gas, but last year saw its CEO and deputy CEO implicated in a legal case over alleged political espionage.

Asked whether contracts held by private Turkish companies could be transferred to Botas, Shulginov said negotiations to that effect were underway "with Botas and the Turkish authorities".

"The process is not easy, but the Turkish partners are interested. I think there will be a solution," he said.

Ankara has been faced with a potential gas shortage this winter due to the double whammy of expiring contracts and soaring demand.

In April this year, Botas's contract for 6.6 Bcm/year of gas imports from Azerbaijan also expired.

Despite close relations between Ankara and Baku, talks over a renewal ran until August before a new deal was reached, with supplies from Azerbaijan to Turkey expected to total around 11 Bcm in 2022-2024.

Donmez comments

Speaking in a television interview Nov. 4, Turkish energy minister Fatih Donmez confirmed the new deal for Azeri gas had been concluded, and that Turkey has "some gas contracts" with Gazprom that will expire at the end of this year.

Donmez did not specify which contracts he was referring to or how much gas they involved, but said the contracts would be renewed "from the beginning of next year" and "in line with rising demand".

The 8 Bcm/year of contracts for Russian gas that are about to expire is imported through the TurkStream pipeline, along with gas imported under the other four private contracts totaling 6 Bcm/year.

Donmez said that "if the shippers comply with the plans", Turkey would hopefully be able to get through the winter without gas or power shortages.

Donmez also flew to Algeria on Nov. 10 where he held meetings with energy minister Mohamed Arkab.

Neither side has commented on whether the meetings involved discussions on possible winter spot LNG purchases by Turkey over and above any volumes delivered under Botas' existing agreement for 4.4 Bcm/year, which runs to October 2024.

Turkey also had a long-term contract for 1.3 Bcm/year of Nigerian LNG imports, which expired without renewal at the end of October. — *David O'Byrne*

Cheniere to supply LNG from Texas export facility under new deal with France's Engie

- **Previously undisclosed 11-year agreement signed in June**
- **Up to 1.2 million mt/year to be delivered FOB: US DOE letter**

Cheniere Energy reached a medium-term supply deal over the summer with French utility Engie tied to the US LNG exporter's Corpus Christi Liquefaction terminal in Texas, according to a recently released letter to the US Department of Energy that was previously filed under seal.

Under the terms of the 11-year sale and purchase agreement, a range of approximately 0.4-1.2 million mt/year of LNG is to be delivered to Engie free on board from the Cheniere terminal.

The transaction, between Cheniere's marketing unit and Engie, was reached June 23, according to the letter, dated July 23. The terms of the contract, beyond its length, volume and delivery basis, were not disclosed in the letter. The contract was to begin in 2021, though the letter did not say exactly when. Cheniere did not publicly announce the transaction at the time it was reached. A spokesperson declined to comment Nov. 11 when reached by phone.

Cheniere also operates an export facility at Sabine Pass in Louisiana. It expects to sanction in 2022 construction of an up to 10 million mt/year midscale liquefaction expansion at the site of its Texas facility.

Fixed-price term commercial activity among several US LNG exporters and developers — most notably Cheniere and Venture Global LNG — has picked up in recent months, amid high spot LNG prices in destination markets in Europe and Asia.

Cheniere has also signed supply deals this year with Canada's Tourmaline, a subsidiary of Swiss commodity trader Glencore, China's Sinochem and an affiliate of China's ENN Natural Gas. Each of those deals was announced by Cheniere at the time it was reached.

In 2015, Cheniere announced that its marketing unit had signed a five-year deal with Engie for the delivery of LNG cargoes on an ex-ship basis primarily to the Montoir de Bretagne LNG regasification terminal in France. That SPA covered the delivery of up to 12 cargoes per year from 2018 to 2023, with the volumes linked to Northern European indexes.

In November 2020, Engie said it had halted talks with NextDecade about a supply deal tied to NextDecade's proposed Rio Grande LNG export facility in South Texas, amid pressure that European utilities face from environmental interests to refrain from signing new long-term deals for importing US shale gas. — *Harry Weber*

Japan's Idemitsu to meet winter fuel oil demand for power from output, not imports

- **Raising refinery runs to above 80% from 73%**
- **Winter fuel oil supply requests from utilities double: CEO**
- **Robust fuel demand for power in last January on severe cold spells**

Japan's second-largest refiner Idemitsu Kosan intends to meet all of its winter fuel oil demand for thermal power generation from output, not via imports, the company said Nov. 12, despite facing supply requests from some power utilities that are double the peak volume last winter.

"Currently we are not importing fuel oil for power generation, and we do not have any plans to do so for this winter," a company spokesperson told S&P Global Platts. "We will supply our own produced product."

Idemitsu said Nov. 9 that it plans to raise its refinery run rates to over 80% in the second half of fiscal year 2021-22 (April-March), which would bring its average run rate for the fiscal year up to about 80%. Rates in the first half of the fiscal year ending March 31 averaged 73% because of heavy refinery maintenance programs.

Idemitsu's comments came just days after Shunichi Kito, the president and CEO of the Japanese refiner, said Nov. 9 that it has already received winter fuel oil supply requests from a couple of power utilities at double the peak volumes seen last winter, when the country's power supply was stretched to critical levels during extreme cold spells.

"Amid power shortage concerns this winter, power utilities are considering early procurements," Kito told a press conference. "We have also received supply [requests] from a couple of power utilities at roughly double the level of last January-February, which we are considering fulfilling firmly."

Japan's largest refiner ENEOS is also receiving a high number of inquiries from power utilities for the supply of fuel oil for winter, company president Katsuyuki Ota said Nov. 11, amid concerns that the country's refiners may not be able to meet all requests for oil supply from local power utilities for the coming winter.

"We are receiving a considerable volume of inquiries from power utilities for winter," Ota told a press conference, which he attributed to high LNG prices.

Petroleum Association of Japan President Tsutomu Sugimori said Oct. 27 that Japanese refiners were unsure whether they would be able to meet all the requests they were receiving for oil supply from local power utilities this winter. Sugimori is also chairman of ENEOS Holdings.

Last winter

Last January, Japanese refiners boosted fuel oil supplies to power generators following an emergency request from the Federation of Electric Power Companies of Japan.

Japan experienced a power supply shortage last winter as demand surged during extreme cold spells in January, with local power utilities forced to restrict gas-fired power generation due to low LNG stocks.

That was exacerbated by glitches at coal-fired power plants, low hydropower generation due to droughts, fluctuations in solar power output due to weather conditions, reduced oil-fired power generation capacity, and low nuclear power output.

"At the beginning of this year, when power [supply] tightened extremely, a very challenging moment arrived all of a sudden," Kito said, adding that there had been logistical challenges for refiners to ship fuel oil cargoes to power utilities due to a lack of coastal vessels.

"Following such events, power utilities are preparing early in this fiscal year, and we are also securing vessels as part of early preparations to avoid great confusion and maintain stable supply," Kito said. "However, we cannot predict the degree of power [supply] tightness. We believe we need to carefully respond to the situations."

According to Ministry of Economy, Trade and Industry data, total fuel oil sales to the domestic market rose 43% on the year to 179,585 b/d in January. There was also a shipment of 751,109 barrels of crude oil for power generation, nearly double the 429,323 barrels in December 2020 and after no crude shipments for power generation in January 2020.

In February, fuel oil sales fell 20.2% month on month and 4.3% year on year to 143,370 b/d as oil demand for power declined with the replenishment of LNG stocks by mid-February, according to METI data. Crude shipments for power burn slid to 112,613 barrels in February.

Japan's fuel oil imports came in at 798,641 barrels in January and rose further to 1.27 million barrels in February, compared with 164,157 barrels in December 2020, according to METI data. The fuel oil imports slid to 149,917 barrels in March. — *Takeo Kumagai*

HYDROGEN

COP26: Powerhouse Energy, HUI target lowest-cost hydrogen from waste plastic with Linde deal

- **Targeting Eur1.50/kg hydrogen as byproduct**
- **Turns waste plastic to syngas via pyrolysis**
- **Modular system to produce 1,000 mt/year hydrogen**

Powerhouse Energy and Hydrogen Utopia International plan to bring low-cost hydrogen and syngas to industrial gas customers in Europe using waste plastics as a feedstock, signing an agreement with industrial gas and chemicals company Linde at the UN Climate Change Conference.

Linde has signed a framework agreement with HUI to use the plastic waste-to-hydrogen technology across Europe, starting with a plant in Poland, HUI said in a statement Nov. 12.

The modular system converts waste plastic at high temperatures to syngas and hydrogen through pyrolysis and cracking of hydrocarbon chains into gases.

Linde Engineering will supply the technology to clean the syngas and extract and process the hydrogen, while HUI will build the waste-to-hydrogen system, HUI said. The project is subject to EU funding approval from the Just Transition Fund.

Each unit is can process 40 mt/day of waste plastic that can't be recycled, producing 14,500 mt/year of syngas and 1,000 mt/year of hydrogen.

HUI has an agreement with Powerhouse to develop the technology in Europe, outside of the UK.

Under the Linde deal, Linde Engineering has a five-year exclusivity option to supply HUI plants in Poland, Hungary and Greece, where HUI has the exclusive rights to the Powerhouse DMG system.

"We're talking with Linde at Eur3/kg ($3.50/kg)" for hydrogen supply without opex subsidy, Howard White, adviser to Hydrogen Utopia on behalf of Powerhouse Energy, told S&P Global Platts in an interview Nov. 11.

"If we wanted to drop the price of hydrogen to Eur2/kg or Eur1.50/kg, we could," he said.

S&P Global Platts assessed the cost of producing renewable hydrogen via alkaline electrolysis in Europe at Eur10.14/kg ($11.60/kg) Nov. 11 (Netherlands, including capex), based on month-ahead power prices, though prices based on power purchase agreements are much lower.

Blue hydrogen production by steam methane reforming (including carbon, CCS and capex) was assessed at Eur5.03/kg.

Soaring feedstock power and gas prices have pushed calculated hydrogen production costs dramatically higher in recent weeks, though anticipated production costs for green hydrogen are significantly lower based on falling costs of renewable power generation.

Flexible system

The Powerhouse system has advantages over other low-carbon hydrogen production pathways, White said.

"Our intention is to create the lowest-cost hydrogen available," he said. "The technology enables this because the hydrogen is actually a byproduct of the system."

The hydrogen production from Powerhouse's Distributed Modular Generation system is essentially a byproduct of syngas production, so it is not directly comparable with hydrogen production by either steam methane reforming or electrolysis of water, White said.

The system can be adjusted to increase or decrease the share of hydrogen produced, he added.

"It's a very flexible system," he said.

White said the feedstock was not only free; companies would pay to dispose of waste plastic.

The process uses an electric kiln on a green power tariff, and has other co-benefits such as cutting the use of virgin materials in syngas production.

The process had a zero-CO2 footprint, White said.

Potential applications for the syngas and hydrogen produced included use in the cement, steel and chemical industries, he said.

"Our syngas is of a similar purity to the syngas that companies are already using," White added. "We'd be looking for a 10-year contract at probably 25% below the current market."

"Powerhouse Energy's technology is modular and designed to be used at a local level, providing a solution for plastic waste to communities across the world, helping to improve air quality and accelerate the clean energy transition," Powerhouse Business Development Executive Richard Hodgkinson said in an email Oct. 11.

Oil company interest

The initial focus is on a project in Konin in Poland, but HUI has plans to expand, and is in talks with large oil and gas companies over an agreement.

"If we make a deal with a major energy company, I would expect to roll out in the second half of 2022," HUI founder Aleksandra Binkowska told Platts in an interview.

HUI raised GBP2.2 million ($3 million) in a pre-initial public offer funding round on Sept. 9, and plans to raise a further GBP5 million to GBP7 million in an IPO on the Aquis Growth Market in November.

The company is to use the funds raised to build its first syngas

system, to be deployed around the middle of 2022.

Powerhouse Energy is developing a first commercial-scale plant in Ellesmere Port, Cheshire, in the UK. It has secured the site, and is planning first operations from 2023.

Another syngas-from-waste plastic producer, EQTEC, also sees potential for an increased role for hydrogen production.

"We are actively developing agreements with leading technology partners for joint, go-to-market solution development based on hydrogen and other applications," CEO David Palumbo said in a statement Sept. 28. — *James Burgess*

SUBSCRIBER NOTES

Platts launches Atlantic LNG physical eWindow

S&P Global Platts has launched the Platts Editorial Window, or eWindow, communication tool for its Atlantic LNG physical Market on Close (MOC) assessment process for its DES Northwest Europe (NWE), DES Mediterranean (MED) and FOB Gulf Coast Marker (GCM) price assessments on Sept. 24, 2021.
Participants in the Platts MOC process are now able to submit bids, offers and expressions of interest to trade for publication directly through the eWindow communication tool or through an editor, who would then publish the information using the software.
The instruments that are launched for the Platts Atlantic LNG are from the third to the fifth half-month forward (H+3 to H+5) in dollars per MMBtu for the DES NWE and DES MED assessments, and 30-60 days forward for FOB GCM.
Market participants can state their specific bid or offer delivery windows — for example, 3-day or 5-day delivery or loading windows — within these instruments.
The instruments will allow for a variety of different delivery or loading locations to be used in bids and offers, such as: DES UK, DES Spain, etc.
For delivery locations that are not listed individually, market participants can select "DES in TQC" and input the details directly the DES basis of the bid or offer in the Terms, Quality & Comments (TQC) box.
The instruments will allow for a volume range to be expressed for bids and offers, up to 0.3 TBtu.
If the bid or offer is in a volume range, then the instrument called Platts Atlantic LNG (Qty Range) would be selected. The instruments will also allow for a variety of pricing basis.
Market participants can also input directly other terms related to their bids or offers in the TQC box.
The eWindow instruments will generate a different format for headlines of bids, offers and trades published on Platts LNG Alert and via other Platts services.
For example, a headline that currently appears as:
Atlantic LNG MOC: COMPANY Offers Oct TTF ICE Front Month Average +0.15 $/MMBTU DES Pricing 24-30 September. 2 Day Delivery Window: 11-12 October. Base Discharge Port: Buyer to advise during CN process. No later than 20 days prior to the 2 Day Arrival Period, Buyer can nominate substitute Discharge Port in Mugardos, Rotterdam, Dragon, Isle of Grain, South Hook, Montoir, Dunkirk, Zeebrugge, Bilbao, Huelva, Barcelona, Sagunto, FOS. GHV: 1000 to 1120 Btu/SCF. Contract Quantity 3.65 Tbtu +/-5%. Base ship: will be nominated upon completion of deal. No later than 15 days prior to the 1 Day Arrival Period, Seller may nominate an Alternate LNG Ship subject to SSCS and terminal acceptance. Base Load Port: Freeport. Seller's option to nominate an Alternative Load Port no later than 15 days prior to the 2 day Arrival Period. Laytime 36 hours., will be published as:
Platts Atlantic LNG DES NWE+MED H3-H5, COMPANY offers Oct11-Oct12 100% TTF Full Month Oct $0.15 for 3.65 Pricing 24-30 September. Base Discharge Port: buyer to provide at trade confirmation. No later than 20 days prior to the 2 Day Arrival Period, Buyer can nominate substitute Discharge Port in Mugardos, Rotterdam, Dragon, Isle of Grain, South Hook, Montoir, Dunkirk, Zeebrugge, Bilbao, Huelva, Barcelona, Sagunto, FOS. GHV: 1000 to 1120 Btu/SCF. Base ship: will be nominated upon completion of deal. No later than 15 days prior to the 1 Day Arrival Period, Seller may nominate an Alternate LNG Ship subject to SSCS and terminal acceptance. Base Load Port: Freeport. Seller's option to nominate an Alternative Load Port no later than 15 days prior to the 2 day Arrival Period. Laytime 36 hours.
TIMING: All bids and offers will still have to be submitted by 16.00.00.000 London time. Following any trade, market participants will have 60 seconds to rebid or re-offer. No price changes are allowed from 16:28:00:000 to the close of the MOC process at 16.30.00.999. A rebid or re-offer, following a trade, in last 120 seconds prior to the close of the MOC will trigger a 120-second extension from 16.30.01.000 to 16.32.00.999, in order to adequately test that rebid or re-offer.
INCREMENTABILITY: Bids and offers can be improved by a maximum of $0.05/MMBtu and a minimum of $0.01/MMBtu every 120 seconds. As per Platts editorial guidelines, buyers or sellers can withdraw bids/offers at any time when communicating through eWindow, provided no prior interest to transact has been expressed by any potential counterparty. All bids and offers are firm from the moment they are submitted into eWindow to the moment they are traded, the MOC process closes or the bid/offer is withdrawn from the system by the trader or a Platts editor. Market participants can still send bids and offers directly to an LNG editor for publication via eWindow. In markets where Platts eWindow is in operation, the eWindow clock will be used to determine the correct sequence of events when a bid or offer is amended, withdrawn, or traded by an interested counterparty. Bids or offers submitted by phone, or any other medium, such as instant messaging software, shall be measured at the time the bid, offer or trade indication is actually transmitted through the eWindow system via the editor.
Guidelines for the publication of bids and offers in the MOC process are published in the LNG Timing and Increment Guidelines available here: https://www.spglobal.com/platts/en/our-methodology/methodology-specifications/lng/lng-timing-and-increment-guidelines.
Full information relevant to these assessments can be found in the Global LNG specifications guide available here: https://www.spglobal.com/platts/en/our-methodology/methodology-specifications/lng/liquefied-natural-gas-lng-assessments-and-netbacks-methodology.
Platts expects credit relationships that prevail inside its assessment environment to fully reflect relationships in the markets as a whole. eWindow provides direct entry and management of credit filters which should mirror those normally applied in the marketplaces.
Where Platts editors publish bids and offers on behalf of a company that submits data to an editor, counterparty credit settings are set to "open" for regular participants in the assessment process unless companies have notified Platts in advance of any restrictions.
If a counterparty submitting information through an editor has not already notified Platts of any counterparty credit restrictions, they should notify Platts at least one hour prior to the start of the MOC process if any counterparty credit filters need to be modified.
Please send all feedback, comments and questions to lngeditorialteam@spglobal.com and pricegroup@spglobal.com.
For written comments, please provide a clear indication if comments are not intended for publication by Platts for public viewing.
Platts will consider all comments received and will make comments not marked as confidential available upon request.

Platts proposes to change timing and increment guidelines for Asia LNG MOC

S&P Global Platts is proposing to change the timing and increment guidelines for its Asia LNG Market on Close assessment process.
Platts proposes to allow a maximum price move of 5 cents/MMBtu per 60 seconds for bids and offers submitted through the eWindow communication

tool and through a Platts editor for the Asia LNG physical MOC process, and a maximum price move of 5 cents/MMBtu per 30 seconds for bids and offers submitted through the eWindow communication tool and 5 cents/MMBtu per 60 seconds for bids and offers through the Platts editor for the Asia LNG derivatives MOC process from Jan. 17, 2022.
Platts is also proposing to change the final state for the Asia LNG physical MOC process to 16:29:00 Singapore time for eWindow or manual MOC environment, and Asia LNG derivatives to 16:29:30 Singapore time for eWindow MOC environment and 16.29.00 Singapore time for manual MOC environment.
Time allowed for participants to repeat a bid or offer for Asia LNG physical will remain unchanged from the current guideline of maximum 60 seconds following a trade, while the maximum time allowed for participants to repeat a bid or offer for Asia LNG derivatives following a trade will be shortened to 30 seconds, from 60 seconds currently.
An extension of the MOC process will be triggered by a rebid or re-offer following a trade between 16:29:00 and 16:30:00 Singapore time for Asia LNG physical, and between 16:29:30 and 16:30:00 Singapore time for Asia LNG derivatives.
The extension period will last for one minute until 16:31:00 Singapore time for both Asia LNG physical and derivatives in order to adequately test that bid or offer.
The proposed changes will apply to bids and offers submitted by market participants for the Platts JKM, WIM and MEM assessments directly through the Platts Editorial Window, or eWindow, communication tool and through a Platts editor who would then publish bids and offers using the software.
Under Platts existing timing and increment guidelines, bids and offers for Asia LNG physical submitted directly through the eWindow tool and through a Platts editor can improve by up to 5 cents/MMBtu per 120 seconds, with final state at 16:28:00 Singapore time.
Bids and offers for Asia LNG derivatives submitted directly through the eWindow communication tool can improve by a maximum of 5 cents/MMBtu every 60 seconds, and by a maximum of 5 cents/MMBtu every two minutes in the manual MOC process, with final state at 16:29:00 Singapore time.
The increments have been amended to a maximum of 10 cents/MMBtu every 30 seconds for Asia LNG derivatives since Oct. 12, and to a maximum of 5 cents/MMBtu every 60 seconds for Asia LNG physical since Oct. 8 until further notice, to reflect the current volatility in the market due to European gas market price movements (https://www.spglobal.com/platts/en/our-methodology/subscriber-notes/101221-platts-asia-lng-derivatives-market-on-close-incrementability-changes).
Platts has established clearly defined timing guidelines and standards of incrementability that apply when publishing bids and offers in the MOC process, in order to ensure an orderly and transparent price assessment process.
Guidelines for the publication of bids and offers in the MOC process are available in the Platts LNG Timing and Increment Guide, available here: https://www.spglobal.com/platts/en/our-methodology/methodology-specifications/lng/lng-timing-and-increment-guidelines.
Please send all comments, feedback and questions to LNGeditorialteam@spglobal.com and pricegroup@spglobal.com by Dec. 1.
For written comments, please provide a clear indication if comments are not intended for publication by Platts for public viewing.
Platts will consider all comments received and will make comments not marked as confidential available upon request.

Vercer Capital Markets Trading Limited changes entity name to Dare Global Limited

Vercer Capital Markets Trading Limited has advised Platts that it would like to change its participating entity name in the Platts Market on Close assessment processes for:
Americas Fuel Oil - Paper
Asia Naphtha-Paper
Asia Mogas-Paper
Asia Jet Fuel-Paper
Asia Gasoil-Paper
Asia Fuel Oil-Paper
Asia APAC LNG - Paper
EMEA Naphtha-Paper
EMEA Mogas-Paper
EMEA Jet Fuel-Paper
EMEA Gasoil/Diesel- Paper
EMEA Fuel Oil - Paper
EMEA Crude BFOE CFDs- Paper
This follows the Vercer Capital Markets Trading Limited name change to Dare Global Limited.
Platts has reviewed Dare Global Limited and will consider information from Dare Global Limited in the Americas, Asia and EMEA assessment processes for the abovementioned markets, subject at all times to adherence with Platts editorial standards.
Platts will publish all relevant information from Dare Global Limited accordingly.
Platts welcomes all relevant feedback regarding MOC participation. Platts considers bids, offers and transactions by all credible and creditworthy parties in its assessment processes. For comments and feedback, please contact:
Platts editors at oilgroup@spglobal.com and PriceGroup@spglobal.com.

HYDROGEN & CARBON

NORTH AMERICA HYDROGEN ASSESSMENTS, NOVEMBER 11*

	Excluding Capex		Including Capex	
Production Pathway	**$/kg**	**Change**	**$/kg**	**Change**
Alberta (C$/kg)				
SMR w/o CCS	NA	NA	NA	NA
Alkaline Electrolysis	NA	NA	NA	NA
PEM Electrolysis	NA	NA	NA	NA
Appalachia				
SMR w/o CCS	0.6243	+0.0313	1.2196	+0.0313
Alkaline Electrolysis	2.6890	-0.4971	3.5684	-0.4971
PEM Electrolysis	3.1062	-0.5742	4.6817	-0.5743
Gulf Coast				
SMR w/o CCS	0.7325	+0.0390	1.2365	+0.0390
Alkaline Electrolysis	2.2031	+0.2348	3.0355	+0.2348
PEM Electrolysis	2.5449	+0.2712	4.0363	+0.2712
Midcontinent				
SMR w/o CCS	0.6927	+0.0409	1.2240	+0.0410
Alkaline Electrolysis	1.3445	+0.1446	2.1983	+0.1446
PEM Electrolysis	1.5531	+0.1671	3.0829	+0.1671
Northeast				
SMR w/o CCS	0.6625	+0.0253	1.2972	+0.0253
Alkaline Electrolysis	2.3656	-0.2437	3.2702	-0.2437
PEM Electrolysis	2.7327	-0.2814	4.3534	-0.2815
Northern California				
SMR w/o CCS	0.9189	-0.0134	1.6492	-0.0134
Alkaline Electrolysis	2.9659	-0.0635	3.9521	-0.0635
PEM Electrolysis	3.4260	-0.0734	5.1931	-0.0734
Northwest				
SMR w/o CCS	NA	NA	NA	NA
Alkaline Electrolysis	NA	NA	NA	NA
PEM Electrolysis	NA	NA	NA	NA
Rockies				
SMR w/o CCS	NA	NA	NA	NA
Alkaline Electrolysis	NA	NA	NA	NA
PEM Electrolysis	NA	NA	NA	NA
Southeast				
SMR w/o CCS	0.7320	+0.0125	1.2517	+0.0126
Alkaline Electrolysis	2.1311	-0.2760	2.9858	-0.2759
PEM Electrolysis	2.4618	-0.3187	3.9930	-0.3188
Southern California				
SMR w/o CCS	0.9305	+0.0629	1.6313	+0.0629
Alkaline Electrolysis	3.1349	-0.0560	4.1008	-0.0560
PEM Electrolysis	3.6212	-0.0648	5.3519	-0.0647
Upper Midwest				
SMR w/o CCS	0.7418	+0.0403	1.3102	+0.0402
Alkaline Electrolysis	2.8558	-0.2081	3.7621	-0.2081
PEM Electrolysis	3.2989	-0.2403	4.9228	-0.2404

*Assessed previous day

JAPAN HYDROGEN ASSESSMENTS, NOVEMBER 12

	Excluding Capex		Including Capex	
Production Pathway	**Yen/kg**	**Change**	**Yen/kg**	**Change**
SMR w/o CCS	548.9862	+26.3014	635.2160	+26.2748
Alkaline Electrolysis	939.2431	+45.2691	1081.6433	+45.2254
PEM Electrolysis	1084.9825	+52.2936	1340.1214	+52.2153

ASSESSMENT RATIONALE

The S&P Global Platts hydrogen prices are daily valuations that incorporate the cost of variable natural gas, electricity, and carbon inputs, where applicable. A second set of valuations include fixed assumptions for capital and operating expenses. The Platts hydrogen prices are not based on observed or reported market transactions. Details on the Platts hydrogen methodology can be found at: https://www.spglobal.com/platts/en/our-methodology/methodology-specifications/energy-transition/hydrogen-methodology.

VOLUNTARY CARBON CREDITS, NOVEMBER 12

	$/mtCO2e	Change	Eur/mtCO2e	Change
Platts CEC	8.350	-0.050	7.293	-0.031

Note: The Platts CEC assessment reflects the value of CORSIA-eligible credits in the voluntary carbon market, and is not a component of Platts hydrogen assessments.

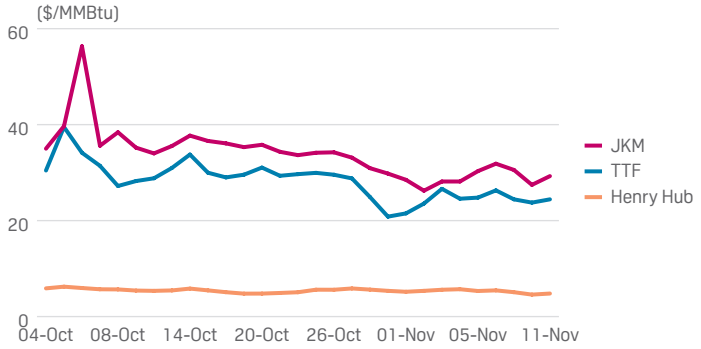
UK HYDROGEN ASSESSMENTS, NOVEMBER 12

Production Pathway	GBP/kg	Change	GBP/KWh	Change
ATR w CCS	3.9372	-0.0356	0.1181	-0.0011
ATR w CCS (inc. Capex & Carbon)	4.2564	-0.0355	0.1277	-0.0011
Alkaline Electrolysis	10.3696	+0.0299	0.3111	+0.0009
Alkaline Electrolysis (inc. Capex)	10.9901	+0.0283	0.3297	+0.0008
PEM Electrolysis	11.9760	+0.0345	0.3593	+0.0010
PEM Electrolysis (inc. Capex)	13.0878	+0.0318	0.3927	+0.0010

NETHERLANDS HYDROGEN ASSESSMENTS, NOVEMBER 12

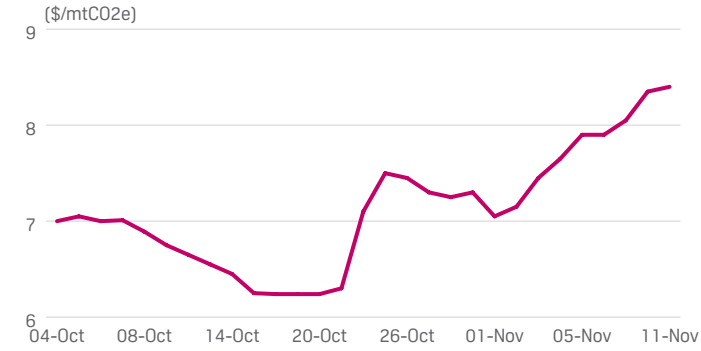
Production Pathway	Eur/kg	Change	Eur/KWh	Change
SMR w/o CCS	3.4118	-0.0062	0.1024	-0.0002
SMR w/o CCS (inc. Capex)	3.8520	-0.0057	0.1156	-0.0001
SMR w/o CCS (inc. Carbon)	3.9755	-0.0096	0.1193	-0.0003
SMR w/o CCS (inc. Capex & Carbon)	4.4158	-0.0090	0.1325	-0.0003
SMR w CCS	4.2711	+0.0052	0.1281	+0.0001
SMR w CCS (inc. Capex)	4.9840	+0.0061	0.1495	+0.0001
SMR w CCS (inc. Carbon)	4.3275	+0.0049	0.1298	+0.0001
SMR w CCS (inc. Capex & Carbon)	5.0404	+0.0058	0.1512	+0.0001
Alkaline Electrolysis	9.6382	+0.2268	0.2892	+0.0068
Alkaline Electrolysis (inc. Capex)	10.3653	+0.2278	0.3110	+0.0068
PEM Electrolysis	11.1310	+0.2621	0.3340	+0.0079
PEM Electrolysis (inc. Capex)	12.4336	+0.2636	0.3730	+0.0079

NATURAL GAS/LNG



Source: S&P Global Platts

PLATTS CEC



Source: S&P Global Platts