S&P Global
Platts

LNG DAILY

Volume 18 / Issue 215 / November 2, 2021

JKM edges lower for fifth straight day on lackluster demand

KEY DRIVERS / MARKET HIGHLIGHTS

- APAC Physical MOC: 4 entities report 3 bids, 1 offer
- APAC Derivatives MOC: 4 entities report 14 bids, 10 offers
- EGAT issues two cargo buy tender for Dec. 10-12 and Dec. 16-18 delivery
- Pakistan LNG issues two-cargo buy tender for Nov. 19-20 and Nov. 26-27 delivery
- Volatility continues as market eyes Gazprom auction
- In Atlantic MOC, BP bids for DES Rotterdam delivery

SHIPPING MARKET HIGHLIGHTS

- Day rates increase to $250,000/day in Pacific basin
- Southbound Panama Canal maximum wait rises

NEWS HEADLINES

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SHIPPING RATES, NOV 2

		$/day		Ballast rate
Asia Pacific day rate	AARXT00	250,000	AAXTN00	100%
Atlantic day rate	AASYC00	190,000	AAXTM00	100%
TCR Australia-Japan	ATCRA00	250,000.00		
TCR USG-NWE	ATCRB00	190,000.00		
TCR USG-Japan	ATCRC00	190,000.00		

DAILY CUMULATIVE AVERAGES AND MONTHLY AVERAGES

Nov 2 ($/MMBtu)		Cumulative monthly average		Previous month average		
JKM	AAOVS00	32.677	Dec	AAOVS03	33.254	Nov
DES West India	AALIC00	30.658	Dec	AAWIC03	31.934	Nov
DES Mediterranean	AADCU00	28.531	Dec	AASWC03	29.207	Nov
DES Northwest Europe	AASDF00	28.605	Dec	AASDE03	29.202	Nov
FOB GCM Loading Month	LGCSM00	25.458	Dec	LGCSM31	27.329	Nov
JKM Yen	AAOVT00	3723.815	Dec	AAOVT03	3707.118	Nov
JKM Yuan	LJCWM00	209.234	Dec	LJCWM03	189.189	Nov

JKM ™	AAOVQ00	26.225	-2.275 ▼
Cumulative monthly average (Dec)	AAOVS00	32.677	
Previous month average (Nov)	AAOVS03	33.254	
CNL WTW JKTC	ACNLF00	0.654	

PLATTS DAILY LNG MARKERS ($/MMBtu)

Nov 2			Change	
DES Japan/Korea Marker (JKM)				
JKM (Dec)	AAOVQ00	26.225	-2.275	▼
H1 Dec	AAPSU00	26.050	-2.250	▼
H2 Dec	AAPSV00	26.400	-2.300	▼
H1 Jan	AAPSW00	26.800	-2.350	▼
H2 Jan	AAPXA00	26.800	-2.350	▼
JKM (Dec) Japanese Yen	AAOVR00	2979.947	-280.738	▼
JKM (Dec) Chinese Yuan (CNY/mt)	LJCMS00	8728.907	-784.347	▼
DES Japan/Korea (JKM) derivatives Singapore close*				
Balmo-ND	LJKMB00	26.296	-2.048	▼
Dec	LJKMO00	30.125	-0.925	▼
Jan	LJKMO01	27.050	-2.450	▼
Feb	LJKMO02	25.025	-2.500	▼
DES Japan/Korea (JKM) derivatives London close*				
Dec	JKLMO00	31.000	2.550	▲
Jan	JKLMO01	27.990	1.090	▲
Feb	JKLMO02	26.649	2.074	▲
DES Mediterranean Marker (MED)				
MED (Dec)	AASXY00	24.279	1.869	▲
H1 Dec	AASXZ00	24.179	1.869	▲
H2 Dec	AASYA00	24.379	1.869	▲
H1 Jan	AASYB00	24.280	1.717	▲
DES Northwest Europe Marker (NWE)				
NWE (Dec)	AASXU00	24.329	1.794	▲
H1 Dec	AASXV00	24.229	1.794	▲
H2 Dec	AASXW00	24.429	1.794	▲
H1 Jan	AASXX00	24.380	1.717	▲
Middle East Marker (MEM)				
MEM (Dec)	LMEMA00	24.025	-2.275	▼
H1 Dec	LMEMB00	23.850	-2.250	▼
H2 Dec	LMEMC00	24.200	-2.300	▼
H1 Jan	LMEMD00	24.600	-2.350	▼
H2 Jan	LMEME00	24.600	-2.350	▼
DES West India Marker (WIM)				
WIM (Dec)	AARXS00	24.025	-2.275	▼
H2 Nov	LMEAA00	23.800	-2.250	▼
H1 Dec	LMEAB00	23.850	-2.250	▼
H2 Dec	LMEAC00	24.200	-2.300	▼
H1 Jan	LMEAD00	24.600	-2.350	▼
H2 Jan	LMEAE00	24.600	-2.350	▼
DES West India Marker (WIM) derivatives Singapore close*				
Dec	AWIMB00	28.025	-1.475	▼
Jan	AWIMM01	25.625	-2.325	▼
Feb	AWIMM02	23.725	-2.300	▼
FOB Gulf Coast Marker (GCM)				
GCM	LGCSM01	21.750	2.000	▲

*For full forward curve, see page 4

LNG NETBACK PRICES ($/MMBtu)

Nov 2			Change	
FOB Australia	AARXR00	24.000	-2.320	▼
FOB Middle East	AARXQ00	23.050	-2.250	▼
DES Brazil Netforward	LEBMH01	24.170	2.080	▲
FOB Singapore	AARXU00	24.505	-2.345	▼
FOB Murmansk	AARXV00	23.389	1.744	▲

PLATTS LNG ASIA JKM RATIONALE & EXCLUSIONS

The S&P Global Platts JKM for December was assessed at $26.225/MMBtu Nov. 2.
Platts assessed first-half December at $26.050/MMBtu and second-half December at $26.400/MMBtu, with a narrower intramonth contango structure of 35 cents/MMBtu Nov. 2, compared with a contango of 40 cents/MMBtu Nov. 1.
BP reported a bid for a Dec. 3-7 DES JKTC cargo at TTF Dec plus $3.55/MMBtu, with a GHV of 1,030-1,110 Btu/cu ft, which was normalized 8 cents lower on lower maximum GHV limit compared with the Platts standard of 1,030-1,130 Btu/cu ft, and equated to a fixed price of $25.805/MMBtu.
Vitol reported a bid for a Dec. 27-31 DES JKTC cargo at TTF Dec plus $3.60/MMBtu, with GHV of 1,000-1,110 Btu/cu ft, which was normalized 8 cents lower on lower maximum GHV limit compared with the Platts standard of 1,030-1,130 Btu/cu ft, and equated to a fixed price of $25.855/MMBtu.
Shell reported an offer for a Dec. 9-11 DES JKC cargo at TTF Dec plus $4.80/MMBtu, with a volume of 3.4-3.6 TBtu and GHV of 1,030-1,140 Btu/cu ft, which was normalized 41 cents higher on wider quantity range, larger vessel size and higher maximum GHV limit compared with the Platts standard of 1,030-1,130 Btu/cu ft, and equated to a fixed price of $27.545/MMBtu.
During the derivatives MOC process, Dare Global placed the most competitive bid for 25 lots at $29.61/MMBtu and the most competitive offer for 25 lots at $30.40/MMBtu. Platts assessed December JKM Singapore close at $30.125/MMBtu Nov. 2, above the bid and below the offer.
For January JKM derivatives, Dare Global placed the most competitive offer for 25 lots at $27.40/MMBtu and the most competitive bid for 25 lots at $26.61/MMBtu. Platts assessed January JKM Singapore close at $27.050/MMBtu Nov. 2, above the bid and below the offer. Platts valued ICE TTF December at $22.334/MMBtu 4:30 pm Singapore time, based on a 25 euro cent/MWh differential between December and January TTF spread. Platts valued ICE TTF January at $22.250/MMBtu at 4:30 pm Singapore time, based on a $4.8/MMBtu differential between JKM January and TTF January.
This rationale applies to symbol(s) <AAOVQ00>
Exclusions: None

PLATTS LNG ASIA WIM RATIONALE & EXCLUSIONS

The S&P Global Platts WIM for December was assessed at $24.025/MMBtu Nov. 2.
Platts assessed first-half and second-half December at $23.850/MMBtu and $24.200/MMBtu, respectively, with a narrower intramonth contango structure of 35 cents/MMBtu, compared with 40 cents/MMBtu Nov. 1.
Platts assessed the December JKM/WIM spread at $2.200/MMBtu Nov. 2.
This rationale applies to symbol(s) <AARXS00>
Exclusions: None

PLATTS LNG US FOB GULF COAST DAILY RATIONALE & EXCLUSIONS

The FOB Gulf Coast Marker (GCM) was assessed at $21.75/MMBtu on Nov. 2.
The assessment was based on tradable values reported by market participants at $19.74/MMBtu and $20.50/MMBtu by the middle of the day for FOB USGC cargoes loading 30 to 60 days forward, in conjunction with elevated freight rates for shipments through the Atlantic and Pacific, lengthy maximum wait times at the Panama Canal and higher prices in end-user markets.
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. 2 at $24.329/MMBtu.
H1 NWE for December was assessed at $24.229/MMBtu
H2 NWE for December was assessed at $24.429/MMBtu
The NWE prices were assessed higher day-on-day reflecting higher flat prices for December TTF. The December TTF contract rose to Eur 65.400/MWh on Nov. 1, a Eur 90 cent/MWh increase from Oct. 29. NBP/TTF premiums rose to an intraday high of $0.910/MMBtu. Towards market close, gains in the December TTF contract led to NBP/TTF premiums ending at $0.610/MMBtu at 4:30 pm London time. NBP/TTF January contract premiums fell from an intraday high of $1.354/MMBtu to $0.872/MMBtu by market close.
The Mediterranean Marker (MED) for December was assessed at $24.279/MMBtu
H1 MED for December was assessed at $24.179/MMBtu
H2 MED for December was assessed at $24.379/MMBtu
The MED price was assessed higher day-on-day. MED prices were assessed at a discount to NWE as weaker PVB prices made the UK market more attractive for cargoes. Additionally, Iberian gas stocks looked strong. Spanish inventories have been making strong builds, now sitting at over 80% capacity, 4 percentage-points higher than the European average. Spanish inventories experienced their first inventory withdrawal on Oct. 31 since April 2021, according to data from Gas Infrastructure Europe.
In the Atlantic MOC, BP bid for a Dec. 15-17, 3.3 +/- 5% TBtu cargo into Rotterdam at ICE TTF December front month average minus 10 cents/MMBtu. This was converted to a fixed price of $23.929/MMBtu. This was normalized down 3 cent due to the prompter alternate discharge port nomination than the Platts standard and a lower cargo size for cargoes delivered into NWE, compared to Platts' standard 3.5TBtu +/- 5% to a final price $23.899/MMBtu.
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: No data was excluded from the assessment.

MARKET COMMENTARIES

JKM edges lower for fifth straight day on lackluster demand

Asian LNG spot prices edged lower for the fifth straight day on lackluster buying interest.

The S&P Global Platts JKM for December was assessed at $26.225/MMBtu on Nov. 2.

Platts assessed the first half of December at $26.050/MMBtu and the second half of December at $26.400/MMBtu, with a narrower intra-month contango structure of 35 cents/MMBtu on Nov. 2, compared to a contango of 40 cents/MMBtu on Nov. 1.

During the Platts Market on Close assessment process Nov. 2, BP reported a Dec. 3-7 DES JKTC cargo, with GHV of 1,030-1,110 Btu/cu ft, at the average of December TTF plus $3.55/MMBtu.

Vitol reported a Dec. 27-31 DES JKTC cargo, with GHV of 1,000-1,110 Btu/cu ft, at the average of December TTF plus $3.60/MMBt.

Further down the curve, Trafigura reported a Jan. 5-7 DES JKTC cargo, with a volume of 3.3 TBtu, at $24.80/MMBtu.

On the sell side, Shell offered a Dec. 9-11 DES JKC cargo at the average of December TTF plus $4.80/MMBtu, with a volume of 3.4-3.6 TBtu and GHV of 1,030-1,140 Btu/cu ft.

In the derivatives MOC, Dare Global placed the most competitive bid for 25 lots of December JKM at $29.61/MMBtu and the most competitive offer for 25 lots at $30.40/MMBtu. Platts assessed December JKM Singapore close at $30.125/MMBtu on Nov. 2, above the bid and below the offer.

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

Date	Seller	Loading	Buyer	Basis	Loading window	Offer/Bid	Notes
Best bids/offers							
11/2/2021		Rotterdam delivery	BP	DES	Dec 15-17	TTF ICE-0.10 bid	MOC

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

Date	Buyer	Destination	Seller	Source	Basis	Delivery period	Bid/Offer	Notes
Best bids/offers								
11/2/2021	BP	JKTC			DES	Dec 3-7	Dec TTF+3.55 bid	MOC
11/2/2021	Trafigura	JKTC			DES	Jan 5-7	24.8	MOC
11/2/2021	Vitol	JKTC			DES	Dec 27-31	Dec TTF+3.60 bid	MOC
11/2/2021		JKC	Shell		DES	Dec 9-11	Dec TTF+4.80 bid	MOC
Last 5 trades		**APAC**						
10/26/2021	PTT	Thailand		Qatar	DES	Nov 27-29, Dec 3-5	low-33	Tender
10/26/2021	Shell, Total		EGAS	Egypt	FOB	Nov 14-15, Nov 24-25	28.25, 28.70	Tender
10/22/2021	Vitol	JKTC	PetroChina		DES	Dec 6-8	Dec TTF plus 3.05 traded offer	MOC
10/21/2021	Vitol	JKTC	PetroChina		DES	Dec 7-11	Dec TTF plus 3.45 traded bid	MOC
10/21/2021	PetroChina	JKC	Shell		DES	Dec 10-12	Dec TTF plus 3.00 traded offer	MOC

For January JKM derivatives, Dare Global placed the most competitive offer for 25 lots at $27.40/MMBtu and the most competitive bid for 25 lots at $26.61/MMBtu. Platts assessed January JKM Singapore close at $27.050/MMBtu on Nov. 2, above the bid and below the offer.

No trade was reported during the physical and derivatives MOC process Nov. 2.

Market participants continued to talk of production issues at Bontang, Oman and Equatorial Guinea, and as focus shifted to reverse pipeline gas flows via Mallnow.

"Mallnow flows is still zero, the day ahead nomination would be the most plausible explanation to me," a Singapore-based trader said.

On the demand front, buying activity from end-users in the region remained limited despite spot prices falling 23.4% week on week, However, several sources noted that some interest may arise if spot prices weaken further.

"Haven't heard end-users out in the market. Chinese 2nd tier [buyers] are really quiet, Korea is also very quiet," a producer said.

"Chinese companies are OK with current stocks. If TTF is down, JKM would follow, might boost demand but only a little," a Chinese buyer said.

Another Chinese end-user added that "some interest may arise if prices fall below $25/MMBtu".

On tenders, EGAT issued a buy tender seeking one cargo DES Map Ta Phut for Dec. 10-12 or Dec. 16-18 delivery, closing on Nov. 3.

Pakistan LNG issued a two-cargo buy tender for Nov. 19-20 and Nov. 26-27 DES Port Qasim as its term suppliers canceled deliveries from Equatorial Guinea, market participants told S&P Global Platts.

— *Regina Sher*

Spanish gas inventory draw helps lift European LNG prices amid expensive freight

European LNG prices jumped Nov. 2 amid another rise in already expensive shipping rates and as Spanish gas inventories experienced their first withdrawal since April.

The S&P Global Platts DES Northwest Europe for December was assessed at $24.329/MMBtu, gaining $1.794/MMBtu day on day. The first half of December was assessed at $24.229/MMBtu, and the second half was assessed at $24.429/MMBtu. That maintained the intramonth contango at 20 cents/MMBtu compared with Nov. 1.

Eurogas continued to trade in a volatile range during the day, as market participants anticipated the Nov. 8 auction by Russia's Gazprom. Dutch TTF opened the day as high as Eur71.155/MWh, before dropping as low as Eur62.55/MWh and then gaining momentum to close at Eur71.155/MWh. Platts assessed the TTF November contract at $24.031/MMBtu on Nov. 2, up $1.821/MMBtu on the day.

"I'm hearing that people are looking at reloads from NWE to Far East in December, which will push up the premium," an Atlantic-based trader said. "But freight is tight, which is making it tough."

NBP/TTF premiums were assessed at 61.04 cents/MMBtu Nov. 2. That came as the UK bolstered LNG and gas inventories at the Dragon LNG terminal Nov. 1. LNG storage net withdrawals were experienced at the Isle of Grain and South Hook terminals, according to data from utility National Grid.

Additionally, PVB/TTF premiums remained weaker than NBP premiums, as Iberian inventories looked strong. Spanish inventories were sitting at over 81% full Oct. 31 but experienced their first inventory withdrawal since April, according to data from Gas Infrastructure Europe.

In the Atlantic Platts Market on Close assessment process, BP bid for a DES Rotterdam Dec. 15-17 delivery cargo at TTF minus 10 cents/MMBtu.

Day rates increased by $20,000 to $250,000/day for the Pacific basin and by $9,000 to $190,000/day in the Atlantic.

Indian Oil was reported to have received four offers for its mid-December tonnage requirement ex Sempra Energy's Cameron LNG in Louisiana. The Flex Volunteer, 174,000 cu m, was reported fixed by Royal Dutch Shell at a rate of $250,000/day.

At the Panama Canal — the shortest route for US Gulf Coast cargoes headed to East Asia — the maximum wait time for unreserved LNG tankers was 11 days southbound and 12 days northbound Nov. 2, versus 10 days southbound and 13 days northbound the day before, according to Panama Canal Authority data compiled by Adimar Shipping. — *Harry Weber, Zack Smith, Michael Hoffmann*

ASIA/MIDDLE EAST ($/MMBtu), NOV 2*

DES Japan/Korea Marker (JKM)		
JKM (Dec)	AAOVQ00	26.225
JKM (H1 Dec)	AAPSU00	26.050
JKM (H2 Dec)	AAPSV00	26.400
JKM (H1 Jan)	AAPSW00	26.800
JKM (H2 Jan)	AAPXA00	26.800
Asian Dated Brent (16:30 Singapore)	ADBAA00	14.72
JKM vs Henry Hub futures	AAPRZ00	20.913
JKM vs NBP futures	AAPSA00	3.018
JKM vs TTF	LNTFJ00	2.194
JKM vs Asian Dated Brent (16:30 Singapore)	AAPSB00	11.509
JKM vs MED (16:30 London)	ALNGB00	1.946
JKM vs NWE (16:30 London)	ALNGA00	1.896

DES Japan/Korea (JKM) derivatives Singapore close		
Balmo-ND	LJKMB00	26.296
Dec	LJKMO00	30.125
Jan	LJKMO01	27.050
Feb	LJKMO02	25.025
Mar	LJKMO03	21.375
Q1 2022	LJKQR01	24.483
Q2 2022	LJKQR02	14.900
Summer 2022	LJKSN01	14.350
Winter 2022	LJKSN02	14.800
2022	LJKYR01	17.000
2023	LJKYR02	11.425
2024	LJKYR03	8.900

DES Japan/Korea (JKM) derivatives London close		
Dec	JKLMO00	31.000
Jan	JKLMO01	27.990
Feb	JKLMO02	26.649
Mar	JKLMO03	22.980
Q1 2022	JKLQR01	25.873
Q2 2022	JKLQR02	15.425
Summer 2022	JKLSN01	14.900
Winter 2022	JKLSN02	15.500
2022	JKLYR01	17.825
2023	JKLYR02	11.900
2024	JKLYR03	9.425

DES West India Marker (WIM)		
WIM (Dec)	AARXS00	24.025

DES West India Marker (WIM) derivatives Singapore close		
Dec	AWIMB00	28.025
Jan	AWIMM01	25.625
Feb	AWIMM02	23.725
Mar	AWIMM03	20.150
Q1 2022	AWIMQ01	23.167
Q2 2022	AWIMQ02	13.600
Summer 2022	AWISN01	13.050
Winter 2022	AWISN02	13.500
2022	AWIMY01	15.700
2023	AWIMY02	10.125
2024	AWIMY03	7.650

Carbon Neutral LNG		
CNL WTW JKTC Differential (ex-Australia)	ACNLF00	0.654
CNL WTT JKTC Differential (ex-Australia)	ACNLB00	0.144
CNL DES JKTC Differential (ex-Australia)	ACNLG00	0.139
CNL Combustion JKTC	ACNLJ00	0.510

FOB Middle East		
FOB Middle East	AARXQ00	23.050

FOB Australia (netback)		
JKM (Dec)	AAOVQ00	26.225
(-) Freight	AAUSA00	2.23
FOB Australia	AARXR00	24.00

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	24.031
Jan	GTFWM20	23.997

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	11.84	
NEAT Coal Index	JKTCB00	8.045	
Minas crude oil	LCABO00	13.900	
Naphtha CFR Japan	LNPHJ00	17.139	

EUROPE ($/MMBtu), NOV 2

		$/MMBtu		Eur/MWh		Eur/MMBtu
DES Mediterranean Marker (MED)						
MED (Dec)	AASXY00	24.279	LNMTA00	71.478	LNMXA00	20.965
MED (H1 Dec)	AASXZ00	24.179				
MED (H2 Dec)	AASYA00	24.379				
MED (H1 Jan)	AASYB00	24.280				
Dated Brent (16:30 London)	ADBAB00	14.57				
MED vs Henry Hub futures	AASYF00	18.852				
MED vs TTF	LNTFS00	0.248				
MED vs NBP futures	AASYH00	-0.323				
MED vs Dated Brent (16:30 London)	AASYJ00	9.707				
MED vs NWE	ALNSA00	-0.050				
MED vs JKM	AASYM00	-1.946				
DES Northwest Europe Marker (NWE)						
NWE (Dec)	AASXU00	24.329	LNNTA00	71.626	LNNXA00	21.008
NWE (H1 Dec)	AASXV00	24.229				
NWE (H2 Dec)	AASXW00	24.429				
NWE (H1 Jan)	AASXX00	24.380				
Dated Brent (16:30 London)	ADBAB00	14.57				
NWE vs Henry Hub futures	AASYE00	18.902				
NWE vs TTF	LNTFN00	0.298				
NWE vs NBP futures	AASYG00	-0.273				
NWE vs Dated Brent (16:30 London)	AASYI00	9.757				
NWE vs MED	AASYK00	0.050				
NWE vs JKM	AASYL00	-1.896				
NWE as a % of NBP	AASYD00	98.89				

Competing fuel prices		
Northwest Europe fuel oil	LAEGR00	13.07
CIF ARA 15-60 day thermal coal	CSAAB00	7.43

NORTH AMERICA ($/MMBtu), NOV 2

FOB Gulf Coast Marker (GCM)		
GCM	LGCSM01	21.750
Dated Brent (16:30 London)	ADBAB00	14.57
GCM vs JKM	LGMJM01	-4.475
GCM vs Henry Hub futures	LGMHM01	16.208
GCM vs TTF	LNTFG00	-2.281
GCM vs NWE	LGEUR00	-2.579
GCM vs MED	LGMET00	-2.529
GCM vs NBP futures	LGMNM01	-2.852
GCM vs Dated Brent (16:30 London)	LGMDB00	7.178
GCM vs USGC HSFO	LGMFO00	10.480

Competing fuel prices		
US Gulf Coast high sulfur fuel oil	LUAXJ00	11.14
New York Harbor 1%S fuel oil	LUAXD00	13.18

*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	Issuer/location	Tender type	(Loading) or delivery period	Slots/ cargoes	Opening	Closing date	Validity	Notes	Results
November 02									
Tender	EGAT - Map Ta Phut	Buy	10-Dec-21 - 18-Dec-21	2 DES		03-Nov-21		Two cargo buy tender for Dec. 10-12 and 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
Tender	Darwin LNG - Darwin	Sell	20-Nov-21 - 27-Nov-21	1 DES	12-Oct-21	14-Oct-21	14-Oct-21	Nov 14-16 loading or Nov 20-27 DES	heard awarded to a trader at high $36 or approximately $37/MMBtu FOB to BP
Tender	APLNG - Australia Pacific LNG	Sell	(25-Nov-21 - 27-Nov-21)	1 DES	11-Oct-21	12-Oct-21			Heard awarded to Gunvor
EOI	Kogas - Prelude	Sell	(06-Dec-21 - 22-Dec-21)	1 DES or FOB				Dec 6-10 loading or Des 19-22 DES JKTC	heard not awarded
Tender	Tohoku Electric - Japan	Buy	08-Jan-22 - 28-Dec-23	6 Unknown	14-Oct-21	14-Oct-21	15-Oct-21	Jan. 2022-end 2023 delivery on a Brent-linked basis	heard awarded to a portfolio player
Tender	PTT - Map Ta Phut	Buy	18-Oct-21 - 29-Oct-21	2 DES		12-Oct-21		Closes at 10 AM (Thailand time) on October 12	Heard awarded at approximately $35/MMBtu to Shell and PTT International
Tender	EGAT - Map Ta Phut	Buy	10-Nov-21 - 16-Dec-21	2 DES		20-Oct-21		2 cargoes Nov 10-12 or 15-17, and Dec 10-12 or 14-16	
Tender	Adnoc - ADNOC Das Island	Sell	(01-Apr-22 - 23-Sep-22)	1 FOB		22-Oct-21		Cargo quantity of 146,000m3. Deadline for comments by Oct 22.	

NEWS

Russian gas flows into Europe fall to 16-month low in October

- **Four main corridors saw flows of 9.79 Bcm in Oct**
- **Flows via Belarus drop below 1 Bcm**
- **TurkStream supply rises on Hungary addition**

Russian gas flows to Europe fell to a 16-month low in October as deliveries via Belarus fell sharply, an analysis of data from S&P Global Platts Analytics showed Nov. 2.

Russian pipeline exports to Europe in October via its four main corridors — Nord Stream, Yamal-Europe, Ukraine and the TurkStream string to Europe — totaled just 9.79 Bcm, the lowest volume since July 2020, the data showed.

The main reason for the lower pipeline deliveries was a drop in supply via Belarus with flows through the key Yamal-Europe pipeline into Poland falling below 1 Bcm to just 0.85 Bcm.

It had been expected that less Russian gas would flow to Europe via the Yamal-Europe line after state-controlled Gazprom booked less than half of the capacity on offer in October on the pipeline.

The sharp fall in flows — which tallies with data from Gazprom showing a big drop in gas sales in Europe last month — lent support to European gas prices in October.

The TTF day-ahead price hit a record high of Eur116.10/MWh ($39.51/MMBtu) Oct. 5, according to Platts price assessments, and remained volatile through the month.

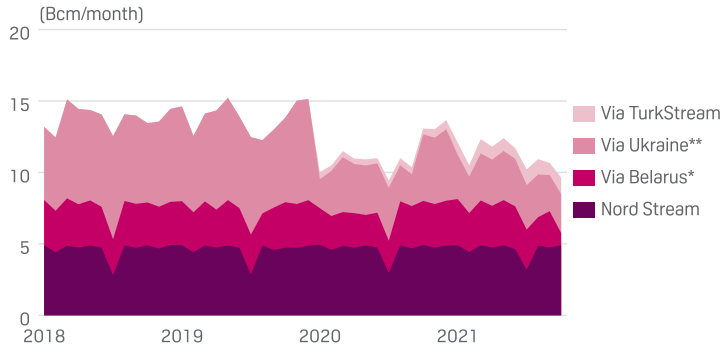
The last time Russian flows to Europe were lower than in October was July 2020, which saw maintenance shutdowns on the Nord Stream and Yamal pipelines, as well as a reduction in European demand due to the pandemic.

Route flows

Total flows via the Nord Stream system remained at, or above, capacity through October, totaling 4.91 Bcm.

Deliveries via Ukraine totaled 2.72 Bcm, higher than in September, but well down on the most recent peak of 5 Bcm in December 2020.

RUSSIAN GAS FLOWS TO EUROPE SLIDE TO 16-MONTH LOW IN OCT



*Comprises entry at Kondratki, Tietierowka, Wyskoje.
**Comprises net entry flows at Hermanowice, Velke Kapusany, Bereg, Issacea.
Converted to standard European measurement of 40 MJ/scm.
Source: S&P Global Platts Analytics

SOUTH AMERICA ($/MMBtu), NOV 2

DES Brazil Netforward		
DES Brazil (Dec)	LEBMH01	24.170
DES Brazil vs NWE Fuel Oil Derivative	LAARM01	11.100
DES Brazil vs DES MED LNG	LASWM01	-0.109
DES Brazil vs Dated Brent	LADBM01	9.598
DES Brazil vs Henry Hub (16:30 London)	LAHHM01	18.743
DES Brazil vs JKM (16:30 London)	LAJKM01	-2.055
DES Brazil vs NBP (16:30 London)	LABPM01	-0.432

NORTH AMERICAN FEEDGAS ($/MMBtu), NOV 1

Daily average US LNG feedgas cost	ALNFG00	4.986
30-day moving average US LNG feedgas cost	ALNUS00	5.274
Daily average USGC LNG feedgas cost	ALNFH00	4.990
30-day moving average USGC LNG feedgas cost	ALNUG00	5.322

Export facility		Estimated feedgas cost
Sabine Pass	ALNFA00	5.017
Corpus Christi	ALNFB00	4.937
Cove Point	ALNFC00	4.926
Cameron	ALNFD00	5.076
Freeport	ALNFE00	4.888
Elba Island	ALNFF00	5.191

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 2

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 2

NYMEX HH Singapore close	(Dec)	AAPSD00	5.312
NYMEX HH Singapore close	(Jan)	AAPSE00	5.426
ICE NBP Singapore close	(Dec)	AAPSF00	23.206
ICE NBP Singapore close	(Jan)	AAPSG00	23.667
NYMEX HH London close	(Dec 21)	AASYN00	5.427
NYMEX HH London close	(Jan 22)	AASYO00	5.535
ICE NBP London close	(Dec 21)	AASYR00	24.602
ICE NBP London close	(Jan 22)	AASYS00	24.769
NYMEX HH US close	(Dec 21)	NMNG001	5.542
NYMEX HH US close	(Jan 22)	NMNG002	5.640

MARINE FUEL LNG BUNKER, NOV 2

	$/MMBtu		$/mt (Oil)		$/mt (LNG)	
Singapore	LNBSG00	25.725	LNBSM00	994.091	LNBSF00	1337.700
	Eur/MWh		**$/mt (Oil)**		**$/mt (LNG)**	
Rotterdam	LNBRT00	69.800	LNBRM00	915.218	LNBRF00	1232.868

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

October also saw a change in the route by which Hungary imports Russian gas, with no more supplies via Ukraine.

Since Oct. 1, Hungary receives the bulk of its Russian imports via TurkStream and dedicated onshore pipelines in Bulgaria and Serbia.

Russian gas supplies to southeast Europe via the TurkStream pipeline hit a record high in October at 1.15 Bcm, or an average of 37 million cu m/d.

It brought the total volume of TurkStream gas entering Bulgaria in the first 10 months of the year to 9.37 Bcm.

The startup in 2020 of the two-string 31.5 Bcm/year TurkStream pipeline triggered an unprecedented reshuffle in the way Russian gas reaches southeast Europe.

One of the 15.75 Bcm/year strings feeds directly into the Turkish market, replacing volumes previously delivered via Ukraine in the Trans-Balkan pipeline, while the other 15.75 Bcm/year string enters Bulgaria at Strandzha.

Data is not available for flows into the Turkish market, though Russian supplies to Turkey have been at extremely high levels in 2021 through both TurkStream and Blue Stream, with sales reaching almost 7 Bcm in the second quarter, according to Gazprom data.

TurkStream diversion

In its first year of operation, Russian gas flows entering Bulgaria via TurkStream totaled 5.64 Bcm, or around 15 million cu m/d.

Initially, gas mostly either stayed in Bulgaria or was transited onto Greece and North Macedonia, with small volumes also moving into Romania.

Since the start of 2021, Russian gas sent via TurkStream can also be transited onto Serbia, Bosnia and Herzegovina, while since Oct. 1, supply can now also flow into Hungary and Croatia.

That brings to nine the number of countries receiving Russian gas via TurkStream.

The switch in delivery route for gas to Hungary and Croatia means less need for Russian capacity via Ukraine, despite the fact that Gazprom has booked capacity for supply via Ukraine into Hungary for the new gas year that started Oct. 1.

The dedicated onshore pipeline network for TurkStream deliveries showed its vulnerability, however, on Nov. 1 when an incident on a pipeline in Bulgaria saw flows into Serbia and onto Hungary and Bosnia suspended. — *Stuart Elliott*

PLATTS WIM RLNG DAILY PRICES, NOV 2

		$/MMBtu	Rupee/MMBtu
Ex-Terminal			
Dahej	RLEDA00	25.63	RLEIA001916.15
Hazira	RLEDB00	25.79	RLEIB001928.08
Dabhol	RLEDC00	25.70	RLEIC001921.76
Mundra	RLEDE00	25.74	RLEEI001924.48
Kochi	RLEDD00	26.24	RLEDI001961.67
Average	RLEDF00	25.82	RLEIF001930.43
Location			
Ahmedabad	RLDDJ00	26.13	RLDIJ001953.27
Morbi	RLDDK00	26.24	RLDIK001961.61
Panvel	RLDDL00	26.39	RLDIL001972.71
Dabhol	RLDDC00	26.39	RLDIC001972.71
Vijaipur	RLDDM00	26.31	RLDIM001966.97
Kota	RLDDN00	26.31	RLDIN001966.97
Chhainsa	RLDDO00	26.37	RLDIO001971.74
Jagdishpur	RLDDP00	26.37	RLDIP001971.74
New Delhi	RLDDQ00	26.37	RLDIQ001971.74
Koottanad	RLDDR00	26.88	RLDIR002009.58
Kakinada	RLDDS00	26.99	RLDIS002017.85
Average	RLDDT00	26.43	RLDIT001976.08

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.

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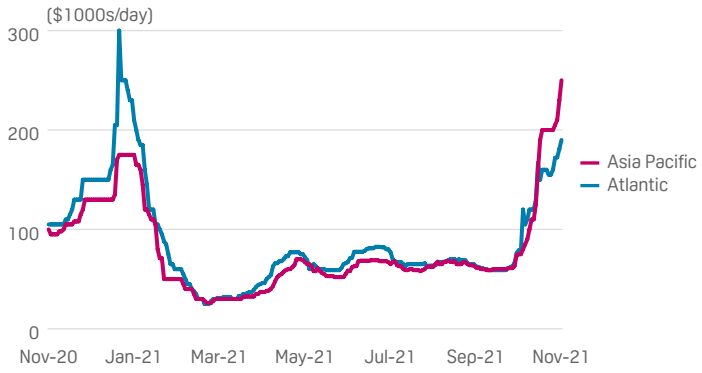
SHIPPING PRICES

SHIPPING RATES, NOV 2

		$/day
Asia Pacific day rate	AARXT00	250,000
Atlantic day rate	AASYC00	190,000
TCR Australia-Japan	ATCRA00	250,000.00
TCR USG-NWE	ATCRB00	190,000.00
TCR USG-Japan	ATCRC00	190,000.00
		$/MMBtu
PLF1 Middle East-Japan/Korea	AAUUA00	3.54
PLF2 Middle East-NWE	AAUTE00	3.92
PLF3 Trinidad-NWE	AAUUC00	1.80

SHIPPING RATES



Source: S&P Global Platts

SHIPPING CALCULATOR, NOV 2

	Australia-Japan/Korea	Middle East-India
Ship size (mt)	72980.77	72980.77
Trip length (days)	9	3
Carrier day rate ($/day)	250000	250000
Day rate cost ($/MMBtu)	1.44	0.61
Boil-off cost	0.53	0.17
Supplementary boil-off cost ($/MMBtu)	0.17	0.05
Cost of voyage* ($/MMBtu)	2.23	0.88

*Includes port cost.

FREIGHT ROUTE COSTS, NOV 2 ($/MMBtu)

Asian discharge ports

		Japan/Korea		South China/Taiwan		West India
Middle East	AAUUA00	3.54	AAUSH00	3.10	AAUSP00	0.88
Australia (Dampier)	AAUSA00	2.23	AAUSI00	1.80	AAUSQ00	2.15
Australia (Gladstone)	ACABA00	2.24	ACABB00	2.46	ACABC00	3.46
Bontang	AOJKA00	1.55	AOCTA00	1.13	AOWIA00	2.12
Bintulu	ABJKA00	1.58	ABCTA00	0.94	ABWIA00	1.94
Singapore	ASJKA00	1.76	ASCTA00	1.12	ASWIA00	1.49
Tangguh	ATJKA00	1.54	ATCTA00	1.32	ATWIA00	2.53
Trinidad via Suez	AAUSB00	6.84	AAUSJ00	6.42	AAUSR00	4.41
Trinidad via Panama	AAUXB00	4.75	AAUZB00	5.77		
Trinidad*	AAUZC00	4.75	AAUZD00	5.77		
Nigeria	AAUSC00	5.39	AAUSK00	4.78	AAUSS00	3.46
Algeria	AAUSD00	5.01	AAUSL00	4.61	AAUST00	2.75
Belgium	AAUSE00	5.82	AAUSM00	5.20	AAUSU00	3.30
Peru	AAUSF00	4.95	AAUSN00	5.66	AAUSV00	6.18
Russia	AAUSG00	0.91	AAUSO00	1.33	AAUSW00	3.41
Spain	ACAAA00	5.23	ACAAB00	4.63	ACAAC00	2.96
Norway	ACAAH00	6.67	ACAAI00	5.84	ACAAJ00	4.07
USGC*	LAUVA00	4.99	LAUVB00	6.01	LAUVC00	4.83
USGC via Panama	LAUVI00	4.99	LAUVL00	6.01		
USGC via Suez	LAUVJ00	7.53	LAUVM00	6.67	LAUVO00	4.83
USGC via Cape	LAUVK00	7.72	LAUVN00	7.07	LAUVP00	5.98

EMEA discharge ports

		South West Europe		North West Europe		Kuwait/UAE
Middle East	AAUSX00	3.29	AAUTE00	3.92	LMEMM00	0.48
Australia (Dampier)	AAUSY00	5.10	AAUTF00	5.76	LMEMN00	2.59
Australia (Gladstone)	ACABD00	6.51	ACABE00	7.20	ACABI00	3.91
Trinidad	AAUSZ00	1.83	AAUUC00	1.80	LMEMP00	4.04
Nigeria	AAUTA00	2.06	AAUTG00	2.21	LMEMQ00	3.71
Algeria	AAUTB00	0.46	AAUTH00	0.94	LMEMR00	2.41
Belgium	AAUTC00	0.79			LMEMS00	3.13
Peru	AAUTD00	5.32	AAUTI00	5.52	LMEMT00	6.66
Russia	AAUUB00	6.46	AAUTJ00	6.91	LMEMU00	4.76
Spain			ACAAD00	0.79	LMEMV00	2.61
Norway	ACAAK00	1.33	ACAAL00	0.78	LMEMW00	3.70
Murmansk			AARXW00	0.94		
USGC*	LAUVD00	2.41	LAUVE00	2.38	LMEMX00	4.65
USGC via Suez					LMEMY00	4.65
USGC via Cape					LMEMZ00	5.80

Americas discharge ports

		US Atlantic Coast		Argentina		Brazil
Middle East	AAUTK00	4.57	AAUTS00	4.77	ACAAP00	5.50
Australia (Dampier)	AAUTL00	5.73	AAUTT00	4.79	ACAAQ00	5.76
Australia (Gladstone)	ACABF00	5.55	ACABH00	4.12	ACABG00	5.07
Trinidad	AAUTM00	0.96	AAUTU00	2.12	ACAAR00	1.45
Nigeria	AAUTN00	2.36	AAUTV00	2.35	ACAAS00	2.03
Algeria	AAUTO00	1.57	AAUTW00	2.70	ACAAT00	2.37
Belgium	AAUTP00	1.41	AAUTX00	3.06	ACAAU00	2.73
Peru	AAUTQ00	4.74	AAUTY00	2.15	ACAAV00	3.27
Russia	AAUTR00	7.17	AAUTZ00	6.15	ACAAW00	8.63
Spain	ACAAE00	1.30	ACAAF00	2.72	ACAAG00	2.21
Norway	ACAAM00	1.58	ACAAN00	3.64	ACAAO00	3.49
USGC*			LAUVG00	3.26	LAUVH00	2.56

*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.

JKM LNG traded futures dip 16% on month in Oct on thin physical trading liquidity

- **January 2022, December 2021 most actively traded contracts**
- **56.4% of traded volume on ICE for Q1, Q2 contracts**
- **ICE claims 99.8% of total trade, CME share 0.2%**

JKM LNG futures traded volumes cleared on financial exchanges in October dipped 15.8% month on month and fell 3.9% year on year, according to exchange and broker data.

The derivatives contracts traded on both the Intercontinental Exchange and the Chicago Mercantile Exchange in October totaled 81,232 lots, which is equivalent to 15.6 million mt, or 246 cargoes.

JKM derivatives cleared on ICE, made up 99.8% of the total volume to end the month at 81,040 lots. The monthly contracts in Q1 2022 — January to March 2022 — were heavily traded on ICE at 39,365 lots, making up 48.6% of overall trade volumes in October.

In the same month, the CME cleared 192 lots, or 0.2%, of total trades.

A reduction in the liquidity for traded JKM derivatives last month could be attributed to record high spot LNG prices and high intraday price volatility in the European gas hub resulting in thin physical trading activity. Multiple trading houses were faced with tight credit lines, limiting their trading ability, while end-users faced with poor downstream economics remained mostly on the sidelines.

"It's not easy for physical trading now, credit is an issue with such a high flat price," a Singapore-based trader said.

"Too much volatility making it difficult for us [to trade]," a second Singapore trader said.

"Chinese buyers won't buy at this moment, too volatile, won't want to buy at this level and realize they can't pass [the costs] downstream later," a Chinese LNG buyer commented.

Platts had assessed the JKM in the mid-$30/MMBtu for most of October, compared with low-$6/MMBtu a year ago.

Meanwhile, the open interest on Oct. 29 was the second highest since the launch of the JKM derivatives — ICE recorded 118,832 lots, while the CME 2,559 lots.

Also on Oct. 29, front-month December 2021 and second-month January 2022 contracts had the highest open interest on ICE at 11,958 lots and 12,507 lots, respectively.

There was also a notable increase in the trading volume of the spread between Asia LNG futures and European pipeline gas derivatives on account of the continued fierce competition between the Pacific and Atlantic basins for the marginal cargo. — *Shermaine Ang*

Pakistan LNG seeks November spot cargoes after term suppliers disappoint

State-owned LNG importer Pakistan LNG Ltd. has issued a tender to import two spot LNG cargoes for November delivery, to meet urgent winter demand after two term suppliers Gunvor and Eni deferred their cargoes unexpectedly, sources at Pakistan's petroleum ministry said.

Pakistan LNG is looking for two spot LNG cargoes to be delivered in two windows of Nov. 19-20 and Nov. 26-27, each with a quantity of 140,000 cubic meters, on a delivered ex-ship (DES) basis at Port Qasim in Karachi, according to tender documents issued on Nov. 2.

The bid documents will be available from Nov. 2 to Nov. 4, and suppliers have time until Nov. 5 to place bids, the tender said.

The government has called for an urgent tender because Gunvor and Eni backed out from two LNG cargoes that were to be supplied, under a term agreement, in the same delivery window as the tender, an official of the ministry of petroleum said but declined to be named.

The official did not provide further details. Gunvor and Eni did not respond to queries.

Traders said the prompt cargoes needed by PLL are likely to have limited the ability of the suppliers to find replacements at short notice, and the tight market is likely to see relatively high bids from the market.

The S&P Global Platts JKM for December was assessed at $28.50/MMBtu on Nov. 1, while the monthly average for November was $33.254/MMBtu. Prompt cargoes are those required for delivery at very short notice and usually trade at a premium.

Eni has a 15-year term agreement with Pakistan LNG for the delivery of one LNG cargo every month, signed at 11.95% slope of the Brent prices; and Gunvor has a five-year term agreement to supply at 11.62% slope of Brent prices.

In its previous tender, PLL did not receive any bids for eight spot cargoes, four each for December and January delivery because of a wide two-week validity period for bid that traders were unable to comply with, raising concerns about a gas crisis in the winter season in Pakistan. — *Haris Zamir*

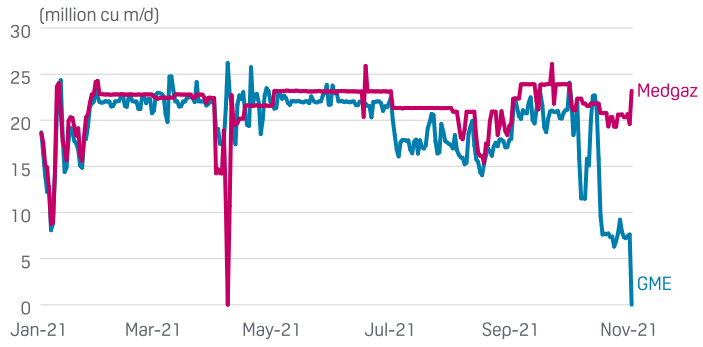
Algerian gas exports via Medgaz edge up as flows via Morocco drop to zero

- **Medgaz deliveries reach 23 million cu m on Nov 1**
- **Algeria ordered non-renewal of GME transit deal**
- **Spain has prepared, situation to go 'smoothly': Axpo**

Algerian gas exports using the direct Medgaz pipeline to Spain edged up to 23 million cu m on Nov. 1 as flows through the GME link via Morocco dropped to zero after a transit deal between Algiers and Rabat was not renewed.

Deliveries using Medgaz averaged 21 million cu m/d in the first 10 months of the year, according to data from S&P Global Platts Analytics, meaning the uplift on Nov. 1 was not significant.

ALGERIAN GAS FLOWS VIA GME LINK DROP TO ZERO ON NOV. 1



Source: S&P Global Platts Analytics

Relations between Algeria and Morocco have worsened significantly in recent months, with Algerian President Abdelmadjid Tebboune on Oct. 31 ordering state-owned Sonatrach to break all commercial relations with Morocco's state utility ONEE.

Algeria has previously said a number of times that it can meet Spanish gas demand using only Medgaz and LNG deliveries, but the non-renewal of the GME transit contract could still cause some concern in Europe given the current tight gas market and high prices.

However, speaking at the Flame conference Nov. 2, Antonio Canseco, head of LNG at Switzerland-based Axpo Solutions, said Spain had enough LNG import capacity to cope with the loss of the flows via GME.

"I don't think we are suffering too much from that," Canseco said. "We have a big LNG system, so I think this is going to go smoothly," he said, adding that imports via the GME line would be substituted with additional LNG imports.

"LNG storages are also full today in preparation for that event," he said.

Medgaz expansion

Algeria has moved to reassure Spain that it could guarantee gas deliveries, with energy minister Mohamed Arkab in August saying that preparations had been made to divert all gas from the GME pipeline into Medgaz.

In addition, the capacity of Medgaz is being increased to the equivalent of 10.5 Bcm/year, up from 8 Bcm/year currently, with the expanded capacity expected to be available from December.

The GME pipeline transited 5.93 Bcm of Algerian gas via Morocco to Spain in the first 10 months of 2021 — an average of 20 million cu m/d — according to Platts Analytics data.

By comparison, the Medgaz pipeline supplied some 6.51 Bcm of gas to Spain, or 21 million cu m/d, in the January-October period.

Total supplies in the first 10 months of 2021 through the two pipelines (12.44 Bcm) are already more than the expanded capacity of Medgaz, suggesting that pipeline would not be able to meet all Spanish gas demand in the future.

Spanish gas grid operator Enagas, meanwhile, said Oct. 31 it had sufficient stocks in November for 40 days' worth of demand after it ensured additional volumes were injected into storage prior to the halt of deliveries through the GME pipeline. — *Stuart Elliott*

Brazil tops importers of US LNG cargoes in October as Spanish deliveries climb

- **Hydro drain, pipeline worries cited for trade flows**
- **Prices in traditional end-user markets stay high**

Brazil was No. 1 buyer of US LNG for the third month in a row in October amid severe drought that has drained its hydroelectric resources, while Spain was a close second as pipeline gas supplies faced constraints, S&P Global Platts Analytics data showed.

The shifting trade flows came as prices in traditional end-user markets in Europe and Asia remained extremely high and congestion at the Panama Canal continued.

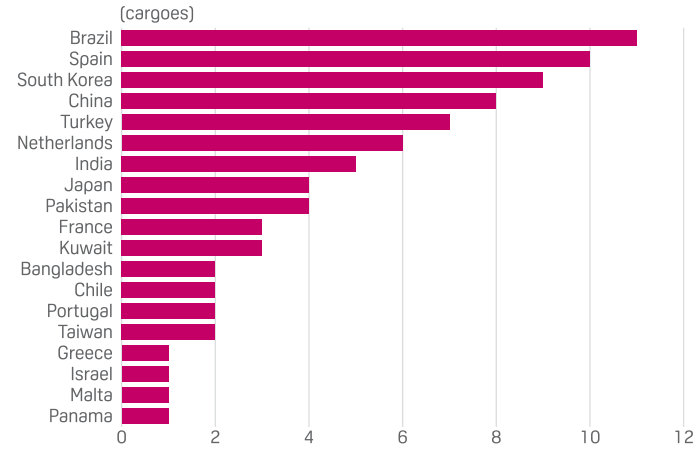
Power data from Brazil's National Electric System operator showed that hydro reservoirs remain critically low, with just 37 TWh in the Southeast and Central region at the end of October, over 23% lower than year-ago levels. That suggests that Brazil may remain dependent on US LNG imports through the upcoming winter.

More than two-thirds of Brazil's electricity is generated by hydro, prompting fears of blackouts in Latin America's largest economy. The trends in the recent month came even as much of Brazil saw above average rainfall over the past 30 days, US National Oceanic and Atmospheric Administration data showed.

In Spain, meanwhile, importers in late October nominated zero Algerian supplies for November via the GME pipeline through Morocco. That raised the potential that Spanish natural gas prices could find support heading into winter, providing incentives for spot LNG deliveries even with premiums that have been limiting European cargoes overall. PVB/TTF premiums remained weaker than NBP premiums on Nov. 2, as Iberian inventories looked strong.

Spanish inventories were sitting at over 81% full Oct. 31 but experienced their first inventory withdrawal since April, according to data from Gas Infrastructure Europe.

US LNG CARGO DELIVERIES OCT-21



Source: S&P Global Platts Analytics

During October, Brazil received 11 LNG cargoes from the US, one ahead of Spain's 10, Platts Analytics data showed. South Korea received the third-most US LNG cargoes during the month at nine, followed by China at eight and Turkey at seven. Japan, the world's biggest buyer of LNG, received only four US cargoes in October, about a third as many as Brazil.

Total Brazilian LNG imports fell to 13 cargoes in October, five fewer cargoes month-on-month. Domestic gas production and pipeline gas flows from neighboring Bolivia have been insufficient to satisfy its power needs.

Latin American LNG demand this year has been a reason for Europe being priced out of spot LNG imports at times.

The S&P Global Platts DES Northwest Europe for December was assessed at $24.329/MMBtu on Nov. 2, gaining $1.794/MMBtu day on day. The first half of December was assessed at $24.229/MMBtu, and the second half was assessed at $24.429/MMBtu. That maintained the intramonth contango at 20 cents/MMBtu compared with Nov. 1.

Platts assessed the US FOB Gulf Coast Marker on Nov. 2 at $21.75/MMBtu. — *Harry Weber, Ross Wyeno*

COP26: Global methane pledge launches with over 100 signatories

- **Signatories cover 50% of global methane emissions**
- **US launches methane emission action plan**
- **EC to propose methane emission regulation**

Over 100 countries have now joined an international pledge to reduce methane emissions as the initiative was officially launched at the UN Climate Change Conference in Glasgow, UK, on Nov. 2.

The signatories to the global methane pledge from more than 100 governments represent 70% of the global economy and almost half of methane emissions from human activities, the European Commission said in a statement Nov. 2.

Speaking at the initiative launch at COP26, European Commission President Ursula von der Leyen said rapid action was needed to combat climate change.

"We have to cut emissions fast, and methane is one of the gases we can cut fastest," von der Leyen said. "Doing that will immediately slow down climate change."

Methane emissions account for about half of the 1 degree Celsius net rise in global average temperature since the pre-industrial era, according to the latest report by the Intergovernmental Panel on Climate Change.

Speaking at COP26, US President Joe Biden said: "This isn't just something we have to do to protect the environment and our future. It's an enormous opportunity to create jobs and make meeting climate goals a core part of our economic recovery."

Countries joining the global methane pledge commit to a collective goal of reducing global methane emissions by at least 30% from 2020 levels by 2030 and moving toward using highest tier IPCC good practice inventory methodologies to quantify methane emissions, with a particular focus on high emissions sources, the EC said.

Successful implementation of the pledge would reduce warming by at least 0.2 C by 2050, it said.

The EC will in December propose regulating methane emissions, with rules to measure, report and verify emissions, von der Leyen added.

"The greatest potential for cuts is without any doubt in the energy sector," she said, noting that there was an increasing focus on tackling methane emissions in the agricultural sector too.

Countries joining the pledge also include 15 of the world's top 30 methane emitters, counting the US, EU, Indonesia, Pakistan, Argentina, Mexico, Nigeria, Iraq and Canada, the US government said in a statement Nov. 2.

However, some notable methane emitters from coal mining were absent from the list, including China, Russia, India and Australia, energy think-tank Ember said in a statement.

The US also launched its Methane Emissions Reduction Action Plan Nov. 2, "to identify and cost-effectively reduce methane emissions from all major sources," the government statement said.

"Platts Analytics latest Future Energy Outlooks Reference Case modeling of CO2 combustion indicates resulting emissions consistent with a 2.8 degree rise in global temperatures. While the shifting out emitting energy capital stock and turning over of fleets can take time — taking action on shorter lived methane — with a 20 years global warming potential that is around 85 times stronger than that of CO2 — can yield relative fast results," according to Platts Analytics' Roman Kramarchuk.

Tracking methane emissions

The UN Environment Programme launched an International Methane Emissions Observatory on Oct. 31, with backing from the EU.

The IMEO will bring transparency on human-caused methane emissions, initially focusing on the fossil fuel sector before expanding to other areas such as agriculture and waste, the EU said in a statement.

Governments and energy companies have major opportunities to reduce methane emissions from fossil fuel operations, many of them at little or no cost, the International Energy Agency said in a report Oct. 7.

Fossil fuel operations globally emitted close to 120 million mt of methane in 2020, nearly a third of all methane emissions from human activity, the IEA said.

"We urgently need to reduce methane emissions to keep our climate targets in reach," von der Leyen said in the statement. "Better satellite monitoring is essential and the EU is proud to support the creation of the International Methane Emissions Observatory."

The recent G20 meeting in Rome, Italy, also highlighted the importance of reducing methane emissions.

Methane emissions reductions "can be one of the quickest, most feasible and most cost-effective ways to limit climate change and its impacts," the group said in an Oct. 31 statement.

The IMEO will have a budget of Eur100 million ($116 million) over five years, and be financed by governments and philanthropies, with "core resources" from the European Commission, it said.

S&P Global Platts launched its methane performance certificate assessment Oct. 4, and assessed prices on Nov. 1 at 4.4 cents/MPC. This converts to $7.097/mtCO2e.

The Platts MPC assessment reflects the price of certificates traded in the spot market with the certificates traded separately from the physical gas. These certificates represent avoided methane emissions from the production of a specific volume of natural gas in the contiguous US and Canada. — *James Burgess*

Turkish gas demand could exceed 60 Bcm in 2021: minister

- **No problems expected in meeting demand: Donmez**
- **Long-term contracts protect against price spikes: Botas**
- **Botas optimizes supply portfolio depending on price**

Turkey's gas demand in 2021 could exceed 60 Bcm, energy minister Fatih Donmez told parliament's budgetary commission in footage broadcast Nov. 2 on national television.

Donmez said 2021 demand was expected to be between 10 Bcm and 12 Bcm higher than the 48.5 Bcm reported in 2020.

But, Donmez said, Turkey's gas import portfolio was "well diversified" and because the country's import and storage infrastructure had sufficient capacity, he did not foresee any problems meeting demand.

The minister's comments were echoed by a senior official at state-

owned Botas who said gas demand was expected to reach 60 Bcm this year.

Speaking at the Flame conference, Botas's deputy head of gas supply and export, Yunus Emre Icik, also said the company was partly protected against the recent gas price increases through its portfolio of long-term contracts.

Icik said Botas was open to offers from LNG suppliers for both short- and medium-term deliveries.

"Turkey's LNG appetite stems from the increasing gas demand in the country. This year, demand will probably reach 60 Bcm/year," Icik said.

In total, Turkey has a daily LNG send-out capacity of 133 million cu m/d, which is around half of the daily winter demand of the Turkish gas market, he said.

"Turkey's LNG demand is highly dependent on power demand," Icik said, adding that any increase in power demand triggers the need for additional spot LNG procurement.

"Turkey will be open to any offer from suppliers — mid-term or short-term — as long as the price is advantageous."

Long-term contracts

Spot LNG prices have soared in recent months, with the S&P Global Platts JKM spot Asian LNG price hitting a record high $56.33/MMBtu on Oct. 6.

Prices remained volatile through October and into November, with the JKM assessed Nov. 2 at $26.23/MMBtu.

"It is obvious that the price shock in the global gas markets will increase the tendency towards long-term contracts," Icik said.

"We protect ourselves from price spikes by using long-term contracts, and some other mechanisms, such as having some upper and lower limits for the formulas."

Icik said Botas used supply portfolio optimization to manage its price exposure. "We are optimizing — if the LNG prices are lower than other sources, then we go for [the LNG]."

Botas would continue to have long-term contracts in its portfolio, with a small share of spot trading, he said.

Botas has long-term agreements for gas supplies from Russia, Azerbaijan, and Iran for pipeline gas, and Algeria for LNG. Its long-term LNG import contract with Nigeria expired at the end of October.

Botas unbundling

Separately, Donmez told the commission that Turkey was planning to unbundle Botas into two separate companies, with one responsible for managing and operating the country's gas network, while the other would focus on gas trading and imports.

Donmez said there was already a provision in Turkey's gas market law for the unbundling to be carried out, but did not give any indication when it was expected to take place.

He also confirmed plans to hold a public offering of shares in state power transmission grid operator TEIAS, but said the offering would be for only 5%-10% of equity and that the company would remain under state control. — *David O'Byrne, Stuart Elliott*

US-based TCR plans to revive trans-Caspian gas pipeline project

- **Eyes 10-12 Bcm/year link from Turkmenistan field**
- **Would link into existing Azeri gas infrastructure**
- **Gas could be used in Azerbaijan or exported: Mustard**

Trans Caspian Resources (TCR), a newly-founded US company, is planning to revive long-stalled plans for a pipeline to carry gas from Turkmenistan across the Caspian for possible transit on to Europe.

TCR told S&P Global Platts it plans to develop a pipeline to carry associated gas from Turkmenistan's offshore Magtymguly oil field to Azerbaijan's ACG field from where it can be fed into ACG's existing associated gas infrastructure and delivered onshore in Azerbaijan.

From there, it could be processed at Azerbaijan's Sangachal gas processing plant and fed into existing transit infrastructure.

TCR co-manager Alan Mustard, a former US ambassador to Turkmenistan, said the planned line would run for around 42 nautical miles and have a capacity of 10-12 Bcm/year.

The company is now looking to confirm technical and commercial viability. "If the feasibility studies indicate commercial and technical viability, we would need equity investment in the project itself, coupled with debt financing," said Mustard, adding that the company currently had no commercial backers or sources of funding in mind.

On the downstream potential for the project, Mustard said the company was not planning to market the gas itself, and was working on the assumption that Azeri state company Socar would buy the gas.

The decision as to where the gas goes, he said " would be up to the gas buyer, presumably Socar. It would not be our decision. It could be used domestically or exported," he said.

Energy transition

Commenting on why his company had decided to promote the development of a new trans-Caspian pipeline project just as the world is turning away from fossil fuels, Mustard said: "We believe that the time is now, given the need for energy in the South Caucasus region, the need to reduce flaring, the need to substitute natural gas for coal and oil during the coming transition to renewable energy sources."

According to a briefing document produced by TCR, feasibility studies conducted in 1999 and 2008 show a trans-Caspian gas pipeline is technically feasible, but that the question is whether it is economically or commercially feasible.

The document adds that the newly planned line would be smaller, cheaper and quicker to develop as it would maximize use of existing infrastructure attached to both fields, and is expected to cost between $500 million and $800 million.

Turkmenistan's Magtymguly field is operated by Malaysia's state-owned energy group Petronas, which Mustard says " is aware of our interest."

Previous attempts at developing a trans-Caspian gas pipeline have all failed.

The first and most advanced of the projects emerged in the late

1990s backed by GE, Bechtel and Shell and envisaged a 30 Bcm/year pipeline that would supply around 15 Bcm/year of gas to Turkey with the rest to be transited to Europe.

The project foundered due to the failure of the five Caspian littoral states to agree on a legal regime to govern the seabed which would allow for the construction of a pipeline, and the discovery of major gas reserves in the Azeri sector of the sea.

Subsequent attempts at reviving the project proved unable to resolve differences between the governments of Turkmenistan and Azerbaijan.

Both those problems appear to have been resolved.

A 2018 agreement between the five littoral states now allows for the laying of pipelines across the seabed, while an agreement earlier this year between Baku and Ashgabat over joint development of the disputed Dostluk oil and gas field has been understood to signal that the two countries are now able to work together to develop the region's resources. — *David O'Byrne*

LNG supply constrained by 'demonization' of natural gas: Texas LNG CEO

- **'Critical' point for industry as demand set to rise**
- **LNG project developers lament price volatility**
- **Price indices key to future market development**

LNG supply is being constrained by the "demonization" of natural gas, with lower supply causing price rises amid still growing demand, a senior industry official said Nov. 2.

Speaking at the Flame conference, Texas LNG CEO Vivek Chandra said the global gas and LNG industry needed to reiterate the importance of the fuel as a key part of the energy transition.

"The issue is not going to be demand, it's going to be supply," Chandra said. "This is really a critical point in our industry today. I feel that supply is being constrained by the demonization of natural gas," he said.

"This is a scary trend. If we don't have more supply, all we're doing is driving the prices higher and as we drive the prices higher, we see unintended consequences such as more coal being produced and more coal being consumed," he said.

Chandra said gas should still be seen as a "low-hanging fruit" in the energy transition given its credentials as a lower-emission fuel, and that gas was still seen as an important factor in energy transition in many parts of the world.

"Over the last couple of years, it seems we have lost control of the message. And suddenly we are being demonized," he said.

"We need to do what we can as an industry to bring back control of that message."

Texas LNG is a planned 4 million mt/year LNG export facility, and Chandra said the final investment decision on the project was expected "towards the end of next year" with first LNG expected in 2026.

Chandra added that the current global market was "extremely tight", with the recent price volatility also affecting the industry.

"Price volatility scares people away," he said. "We see emerging buyers who want to invest in gas, but there's a lot of commitment you have to make. It's not healthy at all. We'd much rather see a fair price."

Price indexation

Also speaking during the conference, a senior official at Indian gas importer and supplier H Energy said price indexation was a key factor in gas contracting.

"For us, the big question is which price index [to use]," H Energy executive vice president Manish Tiwari said.

"Do I buy Henry Hub, do I buy more JKM, do I do more Brent?" he asked, adding that a key factor would be how those numbers would play out "over the next 10 years."

"We don't struggle selling volumes downstream. The problem is how much JKM, how much Henry Hub and how much Brent should be in your portfolio so you can sell competitively," he said.

Tarek Souki, Executive Vice President, LNG Marketing at US LNG developer Tellurian, also said pricing was key in contracting LNG.

"The LNG business has been trying to figure out the contract structure that is going to lead to the future development of projects," Souki said, pointing to the different indexes available such as Henry Hub, European and Asian indexes.

"European customers love the idea of being able to get a TTF index because that's what they deal with on a day-to-day basis," he said. "We're in negotiations on all those different things."

Asian driver

Andrew Walker, vice president for strategy at the US' Cheniere Marketing, also told the conference that LNG buyers appeared to be prioritizing contractual diversification.

"One of the lessons buyers are taking out of the current environment is that this is still an industry where you have to take a diversified position, both in terms of supply and price index," he said.

"You need to take a balanced position, decide what your risk appetite is, buy across a range of tenures, a range of locations, a range of prices, to mitigate the cycles of the industry," he said.

Walker said Asia would remain the key driver of demand growth. "We see LNG trade continuing to grow, 3.3% per year through at least the next two decades," Walker said. "Asia is going to be a key engine of that growth."

He said different parts of the world would likely have different attitudes toward gas in the future.

"There are markets that will actually leverage gas, that will go faster in terms of the energy transition through leveraging gas, and they may go up above our medium expectation," he said.

Other markets could try to move beyond gas more quickly, he said, adding there was no "one-size-fits all."

He added that while demand growth would be focused in Asia, Europe may not "evolve gas out of the mix" as quickly as expected. — *Stuart Elliott*

Sing Fuels eyes geographic forays amid decarbonization efforts

- **Sees FY 2020-21 bunker sales volumes up 20%**
- **Aims to diversify product offerings**
- **Singapore bunker market resilient despite COVID-19 hurdles**

Global bunker trader Sing Fuels has eyes set on new geographic forays and diversification of product offerings as it strengthens its commitment toward the environment while the shipping industry embraces cleaner fuels, top company executives told S&P Global Platts in an interview.

The Singapore-based company's revenues jumped 45% year on year in the financial year ended September, with total marine fuel sales volumes up 20%, Sonnich Thomsen, managing director bunkers, said.

Sing Fuels reported robust growth despite weak global marine fuel demand due to COVID-19-related movement restrictions on shipping activity and shrinking margins amid intense competition.

"Sing Fuels is well positioned for another year of strong growth, with the company targeting a 20% [year on year] rise in its bunker fuel sales in financial year 2021-22," Thomsen said. "Europe as a region highly interests us. We are also hiring more people in the US."

The company aims to primarily grow organically and focus on trading operations, rather than becoming a physical supplier, COO Satnam Singh said.

"It is also considering joint ventures, partnerships, and acquisitions. So, the hunt is on."

A potential partner "has to be aligned with our DNA and culture that has helped us reach where we are today," Singh said, adding the company is looking for diversification "across the oil barrel" and exploring opportunities for base oils and lubricants in the Middle East.

It is also planning to establish an LPG trading desk by Q1 2022, Singh said. Sing Fuels already has an LNG trading desk that facilitates LNG bunkering, including, mapping global LNG suppliers, port availability, quantity and ships that require it.

Sustainable shipping

Sing Fuels is pursuing growth in the renewable energy sector, including, biofuels, and investing in clean technology companies to accelerate its decarbonization efforts.

It invested in Singapore-based energy storage company VFlowTech Pte Ltd that aims to develop affordable and efficient green energy solutions, including vanadium redox flow batteries, and formed a joint venture called VFlowTech Africa.

"Through this JV, we are aiming to build micro-grids," CEO Vikash Dhanuka said. "By building micro-grids in the African region, we would have access to our own carbon credits there that can be eventually used for offsetting for our customers."

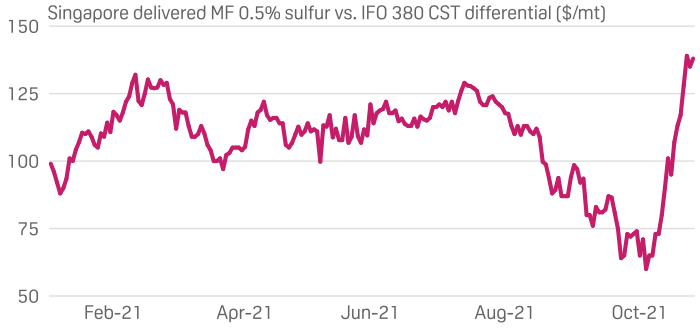
Shipping industry's decarbonization efforts are gaining traction due to stricter environmental rules, with the ongoing UN Climate Change Conference, COP26, only set to increase that focus.

"The industry's short-term decarbonization goals seem to be on track but more needs to be done," Thomsen said.

While investing in low-carbon ships is desirable, it comes with challenges and increased costs. "Who will pick up the tab for these alternative fuels still needs to be decided?" he asked.

The industry currently doesn't have any alternative fuels that are both scalable and viable, according to Singh.

Hi-5 BUNKER FUEL SPREAD FAVORS SCRUBBERS INSTALLATION



Source: S&P Global Platts

Bunker industry outlook

Global bunker sales are set to drop by 5%-6% year on year in 2021 due to the disruption caused by the pandemic, Thomsen said. Bunker sales slumped 8%-10% in 2020 from 2019, according to estimates from some industry sources.

However, major bunkering hubs such as Singapore have been more resilient due to its faster turnaround time for bunkering and stricter enforcement of rules, Thomsen said.

"There is an enormous thrust around scrubbers as the Hi-5 [spread] is more stable, and the payback is both easier to calculate and looks attractive," Thomsen said.

The Hi-5 spread averaged $298.90/mt in January 2020 in Singapore as the market transitioned to the IMO 2020 mandate. The spread has averaged mostly over $100/mt on a monthly basis in 2021, with October average at $102.24/mt, Platts data showed.

Sing Fuels is cautiously optimistic about the industry's outlook as the sector grapples with volatile oil prices, HSFO shortages and tight credit availability.

"We hope we don't see an extension of this [COVID-19] scenario, where travelling is allowed but only in pockets," Singh said.

— *Surabhi Sahu*

US LNG WEEKLY: GCM drops $6.25/MMBtu on week amid higher feedgas nominations

Increased output at domestic liquefaction terminals helped push US Gulf Coast FOB prices lower for the week of Oct. 26-Nov. 2.

Feedgas demand hit the highest level in more than six months on Oct. 29 at 11.8 Bcf/d, while it averaged 10.9 Bcf/d for the week, S&P Global Platts Analytics data showed. The rise in feedgas nominations translated to near 100% liquefaction terminal utilization amid commissioning of a sixth train at Cheniere Energy's Sabine Pass terminal in Louisiana.

However, feedgas demand at Freeport LNG in Texas fell towards the latter part of the week after a power trip involving a compressor that temporarily knocked Train 2 offline on Oct. 31. The operator was

able to restart the train after a cooldown period, according to an air emissions notice to state regulators. Freeport LNG is the only US liquefaction facility that uses electric motors exclusively instead of natural gas turbines to drive the liquefaction compressors on its trains.

At Kinder Morgan's Elba Island facility, feedgas nominations dropped by 40% to 191 MMcf/d on Nov. 2, Platts Analytics data showed. A Kinder Morgan spokesperson declined to comment on the reason for the sudden drop in feedgas demand at the Georgia facility, saying only that the operator was meeting its commitment to sole offtaker Shell.

Weather conditions disrupted shipments at Sabine Pass between Oct. 27- 29, as outbound cargoes were briefly stalled because of high winds and seas offshore that forced pilots to temporarily suspend service along the channel that feeds the terminal.

In a separate notice to shippers, the pilots that serve the channel that feeds Sempra Energy's Cameron LNG export terminal in Louisiana said service also was suspended temporarily due to high winds Oct. 29.

The Platts assessed Gulf Coast Marker dropped by $6.25/MMBtu during the week, reaching its lowest value of $19.75/MMBtu on Nov. 1, amid expensive freight rates for shipments through the Atlantic and Pacific, lengthy maximum wait times at the Panama Canal and higher prices in end-user markets. Platts assessed the GCM latest on Nov. 2 at $21.75/MMBtu.

Maximum waiting times at the Panama Canal for unreserved LNG tankers climbed during the week, adding additional pressure on the already tight shipping market. On Nov. 2, the Panama Canal Authority reported waiting time for northbound transit of up to 12 days, and up to 11 days for a southbound journey.

As for potential new US LNG supply, Tellurian Executive Chairman Charif Souki said "this may not be the most opportune time" to acquire upstream production the company needs to feed its proposed Driftwood LNG export project in Louisiana. In a podcast posted Nov. 2 on Tellurian's website, Souki cited higher valuations for US drilling acreage due to elevated Henry Hub prices. — *Harry Weber, Michael Hoffmann*

HYDROGEN

Japan's ENEOS aims for 300,000 mt/year CO2-free hydrogen from MCH by 2030

- **Trial uses solar-power derived hydrogen extracted from MCH to fill fuel cell**
- **New technology could cut facility costs for MCH output by 50%**
- **ENEOS has three hydrogen supply chain projects in Australia using MCH**

Japan's ENEOS said Nov. 2 it aims to commercialize 300,000 mt/year of CO2-free hydrogen output using its "Direct MCH" technology by around 2030, after successfully expanding a trial started in 2018.

ENEOS said it had used 6 kg of solar-power derived hydrogen extracted from methylcyclohexane made in Australia and transported to Japan to fill a fuel cell vehicle.

The filling of the FCV in Japan marks a step forward in its verification of its CO2-free hydrogen production, transport and extraction process to a "practical level," the company said.

"Following the completion of the FCV filling, we plan to demonstrate further at hydrogen stations in 2022 and expand it further by 2025," Koji Matsuoka, the manager of ENEOS's hydrogen carrier R&D group at its Innovation Technology Center of the Central Technical Research Laboratory, told an online press briefing.

"We are currently developing electrolyzers with an eye to commercialize from around 2030," Matsuoka said.

ENEOS is collaborating to develop the CO2-free hydrogen supply chain, using the Direct MCH technology with Japan's Chiyoda and the Queensland University of Technology. It plans to develop a medium-sized electrolyzer with an output of 150 kW in 2023 and expand the output further to 5 MW with a large scale electrolyzer in 2025.

"We are targeting an extraction of 300,000 mt/year of hydrogen after 2030," said Mastuoka, adding that this was a break-even level for the commercial scale. "We are striving to develop and build plants at this scale."

Australian projects

ENEOS' Direct MCH is a high-efficiency electrolysis process that converts toluene directly into MCH, without first converting it into hydrogen, which would reduce facility costs for MCH production by about 50% compared with the conventional process, the company said.

ENEOS is attempting to develop CO2-free hydrogen supply chains in Japan and abroad, toward achieving 2040 carbon neutrality, a decade earlier than the national target of 2050.

ENEOS has signed three memorandums of understanding with Australian Fortescue Future Industries, Origin Energy and France's France's Neoen to consider developing supply chains of CO2-free hydrogen derived from renewables in Australia, under which companies aim to transport hydrogen in the form of MCH to Japan.

ENEOS sees Australia as a good location for hydrogen production due to its climate, including wind and sunlight, and expansive land.

"Our current three CO2-free supply chain projects in Australia are mainly using water electrolysis," said Matsuoka, adding that its Direct MCH technology could replace water electrolysis once developed.

"We are currently considering together with partners in Australia about building plants using water electrolysis, which will come first, and the new technology in parallel for when once technologies are established," Matsuoka added. — *Takeo Kumagai*

Equinor progresses UK blue hydrogen plant project with pre-FEED contracts

- **Contractors to give design plans for 600-MW plant**
- **Final stage FEED 2022, investment decision 2023**
- **First hydrogen in 2026-27, additional 1.2 GW planned**

Equinor has awarded pre-front end engineering and design contracts for its planned H2H Saltend 600-MW low-carbon hydrogen production plant in the UK to three companies, it said Nov. 2.

The contractors will provide design proposals for the proposed plant, which will produce hydrogen from natural gas in conjunction with carbon capture and storage technology to reduce CO2 emissions, the company said in a statement.

Equinor plans to select one of the consortiums at the end of 2022 for the final stage of FEED engineering, before making a final investment decision in the later part of 2023.

"Producing hydrogen from natural gas with carbon capture and storage provides a practical, scalable solution to decarbonize a wide range of sectors that currently depend on fossil fuel," Equinor Vice President for UK Low Carbon Solutions Dan Sadler said in the statement.

The three contractors are KBR and Tecnimont consortium, Technip Energies consortium and Linde, through its businesses at Linde Engineering and BOC UK.

Equinor plans to build a further 1.2 GW of low-carbon hydrogen production, which will largely be used to fuel the Keadby hydrogen power station, which it is developing with utility SSE Thermal.

Hydrogen production from H2H Saltend, in the UK's northeast, will enable fuel switching in the Humber region from 2026-27, reducing CO2 emissions by 1.1 million mt/year, Equinor said.

The Keadby power station is expected to start up in 2028-29, reducing CO2 emissions by around 2 million mt/year.

The combined 1.8 GW of hydrogen production capacity is over a third of the UK's 5 GW capacity target by 2030.

In October, the UK government selected the East Coast Cluster, which the Humber project feeds into, as one of the country's first two industrial decarbonization clusters. This opens the way for government funding for the region's CCS project, with the aim of starting operations by the mid-2020s.

HyNet, in the UK's northwest, also received backing from the government.

Calculated costs for blue hydrogen production from natural gas with carbon capture and storage are currently lower than for green hydrogen, produced by electrolysis of water powered by renewables.

But electrolyzer costs are falling rapidly, with expectations that costs could be competitive with blue hydrogen in some locations this decade.

S&P Global Platts assessed the cost of producing hydrogen by autothermal reforming with carbon capture and storage at GBP3.83/kg ($5.22kg) on Nov. 1, including capex and carbon.

Hydrogen production via alkaline electrolysis in the UK (including capex) was assessed at GBP10.45/kg. — *James Burgess*

SUBSCRIBER NOTES

Platts proposes new daily carbon neutral hydrogen assessments

S&P Global Platts is proposing to launch its first suite of carbon-neutral hydrogen assessments, effective Dec. 9, 2021.

Building on its industry-leading price valuations for hydrogen, Platts would launch new carbon-neutral hydrogen price assessments that incorporate the cost of carbon capture, renewable energy certificates and where appropriate the cost of offsetting carbon emissions generated during production.

Carbon offset costs would be accounted for using Platts CNC nature-based carbon credits, as measured in $/mtCO2e in certain markets. Platts would complement these backstop calculated prices with available source data including bids, offers and reported trades as these become available. Other factors that will be considered include market information on power-purchase agreements and hydrogen offtake agreements. In the absence of spot market activity, Platts would consider carbon neutral hydrogen production costs as a baseline against which market prices would be assessed.

Platts would start publishing daily assessments in six locations, which have the potential to become hydrogen hubs as global markets emerge: California and US Gulf Coast in the Americas, the Netherlands and Saudi Arabia in Europe and the Middle East, and Japan and Australia in Asia-Pacific.

Assessments would be measured in $/kg, $/MMBtu, Eur/kg, Eur/MMBtu, Yen/kg, Yen/MMBtu, A$/kg, A$/MMBtu.

The prices would be published on Platts Dimensions Pro and under the Market Data Category: HY.

The following symbols would be created:

-Australia Carbon Neutral Hydrogen A$/kg
-Australia Carbon Neutral Hydrogen A$/kg MAvg
-Australia Carbon Neutral Hydrogen A$/MMBtu
-Australia Carbon Neutral Hydrogen A$/kg MAvg
-Australia Carbon Neutral Hydrogen $/kg
-Australia Carbon Neutral Hydrogen $/kg MAvg
-Australia Carbon Neutral Hydrogen $/MMBtu
-Australia Carbon Neutral Hydrogen $/MMBtu MAvg
-California Carbon Neutral Hydrogen $/kg
-California Carbon Neutral Hydrogen $/kg MAvg
-California Carbon Neutral Hydrogen $/MMBtu
-California Carbon Neutral Hydrogen $/MMBtu MAvg
-Far East Asia Carbon Neutral Hydrogen Yen/kg
-Far East Asia Carbon Neutral Hydrogen Yen/kg MAvg
-Far East Asia Carbon Neutral Hydrogen Yen/MMBtu
-Far East Asia Carbon Neutral Hydrogen Yen/MMBtu MAvg
-Far East Asia Carbon Neutral Hydrogen $/kg
-Far East Asia Carbon Neutral Hydrogen $/kg MAvg
-Far East Asia Carbon Neutral Hydrogen $/MMBtu
-Far East Asia Carbon Neutral Hydrogen $/MMBtu MAvg
-Middle East Carbon Neutral Hydrogen $/kg
-Middle East Carbon Neutral Hydrogen $/kg MAvg
-Middle East Carbon Neutral Hydrogen $/MMBtu
-Middle East Carbon Neutral Hydrogen $/MMBtu MAvg
-NW Europe Carbon Neutral Hydrogen Eur/kg
-NW Europe Carbon Neutral Hydrogen Eur/kg MAvg
-NW Europe Carbon Neutral Hydrogen Eur/MMBtu
-NW Europe Carbon Neutral Hydrogen Eur/MMBtu MAvg
-NW Europe Carbon Neutral Hydrogen $/kg
-NW Europe Carbon Neutral Hydrogen $/kg MAvg
-NW Europe Carbon Neutral Hydrogen $/MMBtu
-NW Europe Carbon Neutral Hydrogen $/MMBtu MAvg
-USGC Carbon Neutral Hydrogen $/kg
-USGC Carbon Neutral Hydrogen $/kg MAvg
-USGC Carbon Neutral Hydrogen $/MMBtu
-USGC Carbon Neutral Hydrogen $/MMBtu MAvg

Please send all questions and comments to hydrogenassessments@spglobal.com and pricegroup@spglobal.com by Nov. 11, 2021. 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.

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.

Deepavali publishing schedule for S&P Global Platts Asia LNG

The S&P Global Platts Singapore office will be closed on Thursday, Nov. 4 for the Deepavali holiday, and there will be no daily LNG assessments published from Singapore on that day.
Additionally, Platts in Asia will close its Market on Close assessment process early on Wednesday, Nov. 3, and all assessments will be on basis 12:30 pm Singapore time (0430 GMT).
Normal Singapore publishing schedule will resume on Friday, Nov. 5.
For full details of Platts' publishing schedule and services affected, refer to http://www.platts.com/HolidayHome. For queries, please contact support@spglobal.com.

HYDROGEN & CARBON

NORTH AMERICA HYDROGEN ASSESSMENTS, NOVEMBER 1*

	Excluding Capex		Including Capex	
Production Pathway	**$/kg**	**Change**	**$/kg**	**Change**
Alberta (C$/kg)				
SMR w/o CCS	0.9012	-0.0563	1.6182	-0.0571
Alkaline Electrolysis	5.9663	-0.2287	7.1503	-0.2301
PEM Electrolysis	6.8921	-0.2641	9.0134	-0.2668
Appalachia				
SMR w/o CCS	0.7650	+0.0783	1.3603	+0.0782
Alkaline Electrolysis	3.2791	+0.3308	4.1585	+0.3308
PEM Electrolysis	3.7879	+0.3822	5.3635	+0.3822
Gulf Coast				
SMR w/o CCS	0.7824	-0.0327	1.2864	-0.0327
Alkaline Electrolysis	2.6089	+0.2771	3.4413	+0.2771
PEM Electrolysis	3.0137	+0.3201	4.5050	+0.3200
Midcontinent				
SMR w/o CCS	0.7628	+0.0010	1.2941	+0.0010
Alkaline Electrolysis	3.3149	+0.9353	4.1688	+0.9354
PEM Electrolysis	3.8293	+1.0806	5.3591	+1.0805
Northeast				
SMR w/o CCS	0.7863	+0.0498	1.4210	+0.0498
Alkaline Electrolysis	2.5952	-0.3185	3.4998	-0.3185
PEM Electrolysis	2.9979	-0.3679	4.6186	-0.3680
Northern California				
SMR w/o CCS	1.0619	+0.0247	1.7922	+0.0247
Alkaline Electrolysis	3.5642	+0.0025	4.5504	+0.0025
PEM Electrolysis	4.1172	+0.0029	5.8842	+0.0028
Northwest				
SMR w/o CCS	0.8685	+0.0436	1.4511	+0.0436
Alkaline Electrolysis	3.0078	-0.4070	3.9040	-0.4069
PEM Electrolysis	3.4745	-0.4701	5.0801	-0.4701
Rockies				
SMR w/o CCS	0.7910	-0.0219	1.3492	-0.0218
Alkaline Electrolysis	3.2007	-0.5016	4.0672	-0.5017
PEM Electrolysis	3.6973	-0.5795	5.2499	-0.5795
Southeast				
SMR w/o CCS	0.8077	-0.0264	1.3273	-0.0264
Alkaline Electrolysis	2.5996	+0.1783	3.4542	+0.1782
PEM Electrolysis	3.0029	+0.2059	4.5342	+0.2059
Southern California				
SMR w/o CCS	1.0199	+0.0618	1.7207	+0.0618
Alkaline Electrolysis	3.4910	+0.0432	4.4569	+0.0432
PEM Electrolysis	4.0327	+0.0500	5.7633	+0.0500
Upper Midwest				
SMR w/o CCS	0.8055	-0.0044	1.3739	-0.0044
Alkaline Electrolysis	3.2524	+0.2018	4.1588	+0.2018
PEM Electrolysis	3.7570	+0.2330	5.3809	+0.2330

*Assessed previous day

JAPAN HYDROGEN ASSESSMENTS, NOVEMBER 2

	Excluding Capex		Including Capex	
Production Pathway	**Yen/kg**	**Change**	**Yen/kg**	**Change**
SMR w/o CCS	469.8245	-41.1664	555.7368	-41.7562
Alkaline Electrolysis	970.0858	+81.0864	1111.9616	+80.1125
PEM Electrolysis	1120.6111	+93.6687	1374.8104	+91.9238

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 2

	$/mtCO2e	Change	Eur/mtCO2e	Change
Platts CEC	7.150	+0.100	6.162	+0.070

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.

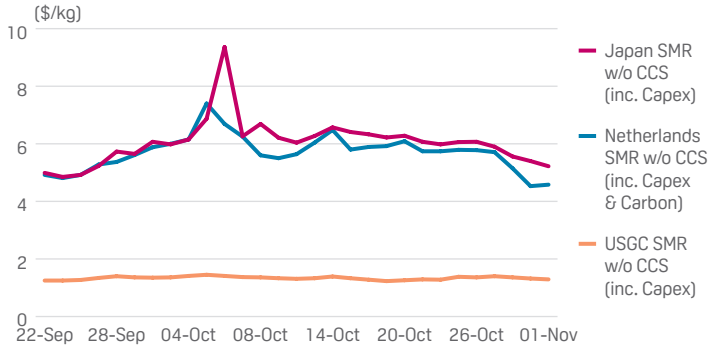
UK HYDROGEN ASSESSMENTS, NOVEMBER 2

Production Pathway	GBP/kg	Change	GBP/KWh	Change
ATR w CCS	3.7478	+0.2327	0.1124	+0.0069
ATR w CCS (inc. Capex & Carbon)	4.0669	+0.2326	0.1220	+0.0070
Alkaline Electrolysis	10.0686	+0.2313	0.3021	+0.0070
Alkaline Electrolysis (inc. Capex)	10.6802	+0.2342	0.3204	+0.0070
PEM Electrolysis	11.6283	+0.2672	0.3489	+0.0080
PEM Electrolysis (inc. Capex)	12.7240	+0.2723	0.3818	+0.0082

NETHERLANDS HYDROGEN ASSESSMENTS, NOVEMBER 2

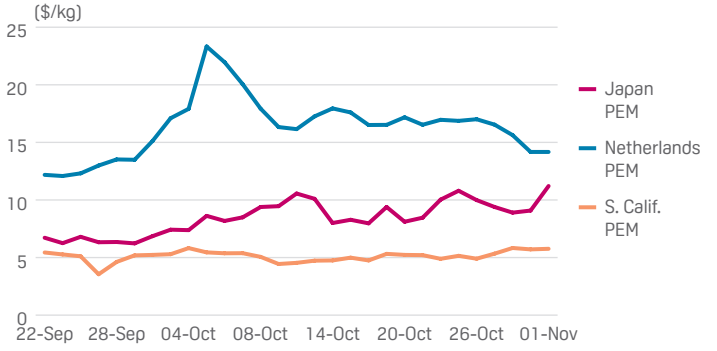
Production Pathway	Eur/kg	Change	Eur/KWh	Change
SMR w/o CCS	3.2422	+0.2355	0.0973	+0.0071
SMR w/o CCS (inc. Capex)	3.6774	+0.2357	0.1103	+0.0070
SMR w/o CCS (inc. Carbon)	3.7715	+0.2519	0.1132	+0.0076
SMR w/o CCS (inc. Capex & Carbon)	4.2068	+0.2522	0.1262	+0.0076
SMR w CCS	4.0702	+0.2533	0.1221	+0.0076
SMR w CCS (inc. Capex)	4.7750	+0.2537	0.1433	+0.0076
SMR w CCS (inc. Carbon)	4.1232	+0.2550	0.1237	+0.0076
SMR w CCS (inc. Capex & Carbon)	4.8279	+0.2553	0.1449	+0.0077
Alkaline Electrolysis	9.3651	-0.1095	0.2810	-0.0033
Alkaline Electrolysis (inc. Capex)	10.0839	-0.1090	0.3025	-0.0033
PEM Electrolysis	10.8155	-0.1264	0.3245	-0.0038
PEM Electrolysis (inc. Capex)	12.1033	-0.1257	0.3631	-0.0038

SMR w/o CCS COST COMPARISONS



Source: S&P Global Platts

PEM ELECTROLYSIS COST COMPARISONS



Source: S&P Global Platts