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NEW CARBON NEUTRAL LNG ASSESSMENT

LNG DAILY

Volume 18 / Issue 218 / November 5, 2021

JKM rebounds above $30/MMBtu; Dec-Jan contango widens

KEY DRIVERS / MARKET HIGHLIGHTS

- APAC Physical MOC: 5 entities place 3 bids, 2 offers
- APAC Derivative MOC: 5 entities report 3 trades, 8 bids, 10 offers
- ADNOC offers 6 cargoes over Summer 2022 via tender
- Reload offers heard FOB Europe for prompt
- DES Europe sellers shift attention to late Q1

SHIPPING MARKET HIGHLIGHTS

- Day rates remain at $250,000/d in Pacific
- CNOOC heard fixed Cheniere ship at $250,000/d

NEWS HEADLINES

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SHIPPING RATES, NOV 5

		$/day		Ballast rate
Asia Pacific day rate	AARXT00	250,000	AAXTN00	100%
Atlantic day rate	AASYC00	195,000	AAXTM00	100%
TCR Australia-Japan	ATCRA00	250,000.00		
TCR USG-NWE	ATCRB00	195,000.00		
TCR USG-Japan	ATCRC00	195,000.00		

DAILY CUMULATIVE AVERAGES AND MONTHLY AVERAGES

Nov 5 ($/MMBtu)		Cumulative monthly average		Previous month average		
JKM	AAOVS00	32.185	Dec	AAOVS03	33.254	Nov
DES West India	AALIC00	30.139	Dec	AAWIC03	31.934	Nov
DES Mediterranean	AADCU00	28.007	Dec	AASWC03	29.207	Nov
DES Northwest Europe	AASDF00	28.071	Dec	AASDE03	29.202	Nov
FOB GCM Loading Month	LGCSM00	25.120	Dec	LGCSM31	27.329	Nov
JKM Yen	AAOVT00	3667.020	Dec	AAOVT03	3707.118	Nov
JKM Yuan	LJCWM00	206.079	Dec	LJCWM03	189.189	Nov

JKM ™	AAOVQ00	30.306	+2.154 ▲
Cumulative monthly average (Dec)	AAOVS00	32.185	
Previous month average (Nov)	AAOVS03	33.254	
CNL WTW JKTC	ACNLF00	0.804	

PLATTS DAILY LNG MARKERS ($/MMBtu)

Nov 5			Change	
DES Japan/Korea Marker (JKM)				
JKM (Dec)	AAOVQ00	30.306	2.154	▲
H1 Dec	AAPSU00	30.079	2.088	▲
H2 Dec	AAPSV00	30.532	2.220	▲
H1 Jan	AAPSW00	31.042	2.389	▲
H2 Jan	AAPXA00	31.100	2.400	▲
JKM (Dec) Japanese Yen	AAOVR00	3448.520	244.541	▲
JKM (Dec) Chinese Yuan (CNY/mt)	LJCMS00	10082.685	702.135	▲
DES Japan/Korea (JKM) derivatives Singapore close*				
Balmo-ND	LJKMB00	29.402	1.442	▲
Dec	LJKMO00	31.350	0.550	▲
Jan	LJKMO01	31.275	2.300	▲
Feb	LJKMO02	28.800	2.000	▲
DES Japan/Korea (JKM) derivatives London close*				
Dec	JKLMO00	30.484	-1.702	▼
Jan	JKLMO01	30.409	0.048	▲
Feb	JKLMO02	28.450	0.364	▲
DES Mediterranean Marker (MED)				
MED (Dec)	AASXY00	25.247	0.027	▲
H1 Dec	AASXZ00	25.122	0.002	▲
H2 Dec	AASYA00	25.372	0.052	▲
H1 Jan	AASYB00	25.434	0.067	▲
DES Northwest Europe Marker (NWE)				
NWE (Dec)	AASXU00	25.322	0.102	▲
H1 Dec	AASXV00	25.222	0.102	▲
H2 Dec	AASXW00	25.422	0.102	▲
H1 Jan	AASXX00	25.584	0.217	▲
Middle East Marker (MEM)				
MEM (Dec)	LMEMA00	28.100	2.150	▲
H1 Dec	LMEMB00	27.875	2.075	▲
H2 Dec	LMEMC00	28.325	2.225	▲
H1 Jan	LMEMD00	28.850	2.400	▲
H2 Jan	LMEME00	28.900	2.400	▲
DES West India Marker (WIM)				
WIM (Dec)	AARXS00	28.100	2.150	▲
H2 Nov	LMEAA00	27.775	2.025	▲
H1 Dec	LMEAB00	27.875	2.075	▲
H2 Dec	LMEAC00	28.325	2.225	▲
H1 Jan	LMEAD00	28.850	2.400	▲
H2 Jan	LMEAE00	28.900	2.400	▲
DES West India Marker (WIM) derivatives Singapore close*				
Dec	AWIMB00	29.075	0.525	▲
Jan	AWIMM01	29.900	2.300	▲
Feb	AWIMM02	27.500	2.000	▲
FOB Gulf Coast Marker (GCM)				
GCM	LGCSM01	23.000	-0.300	▼

*For full forward curve, see page 4

LNG NETBACK PRICES ($/MMBtu)

Nov 5			Change	
FOB Australia	AARXR00	27.970	2.100	▲
FOB Middle East	AARXQ00	27.150	2.150	▲
DES Brazil Netforward	LEBMH01	25.640	-0.380	▼
FOB Singapore	AARXU00	28.506	2.114	▲
FOB Murmansk	AARXV00	24.362	0.102	▲

MARKET COMMENTARIES

JKM rebounds above $30/MMBtu; Dec-Jan contango widens

Asia-Pacific spot LNG prices rebounded above $30/MMBtu as Dec-Jan contango widens on stronger winter demand expected for the forward period.

The S&P Global Platts JKM for December was assessed at $30.306/MMBtu Nov. 5. Platts assessed first-half December at $30.079/MMBtu and second-half December at $30.532/MMBtu, with a wider intramonth contango structure of 45.3 cents/MMBtu Nov. 5, compared with a contango of 32.1 cents/MMBtu Nov. 3.

During the Market on Close process Nov. 5, Vitol bid for Dec. 27-31 DES JKTC at the average of TTF December plus $3.50/MMBtu, BP bid for Dec. 12-16 DES JKTC at the average of TTF December plus $3.50/MMBtu, Trafigura bid for Jan. 5-7 DES JKTC at $31.40/MMBtu.

On the offer, Shell offered a Dec. 9-11 DES JKC cargo at the average of TTF December plus $4.10/MMBtu while Uniper offered a Jan. 1-3 DES JKTC at the average of JKM January plus 21 cents/MMBtu.

On the derivatives MOC, there were three trades of 25 lots each for December JKM derivatives at $31.35/MMBtu, whereby PetroChina sold to Trafigura.

Platts assessed December JKM Singapore close at $31.35/MMBtu, on the repeated traded bids.

Production concerns at Equatorial Guinea were alleviated after Marathon Oil announced that Equatorial Guinea had resumed operations on Nov. 1, according to the entity's Q3 earnings call on Nov. 5.

Pakistan LNG's buy tender for two prompt cargoes closed on Nov. 5, which was previously reported due to deferrals from its term suppliers Gunvor and Eni, potentially due to production issues at Equatorial Guinea, multiple sources said. The tender was for Nov. 19-20 and Nov. 26-27 deliveries.

However, feedgas flows to the Freeport LNG facility continued to hover below 1.5 Bcf/day in the week of Oct. 31, hitting lows of 0.5 Bcf/day on Nov. 3, according to Platts data, as the pre-treatment plant at the facility remained shut after an unspecified incident on Oct. 31, as previously reported by Platts.

Meanwhile, Chinese LNG buyers observed a drop in trucked LNG prices after a surge earlier in the week of Oct. 31 to above 8,000 Yuan/mt (equivalent to $21/MMBtu).

The ex-terminal truck LNG prices in China fell by 300 Yuan/mt on Nov. 4 to low-8,000 Yuan/mt, and had already fallen to below 8,000 Yuan/mt in some regions on Nov. 5, according to domestic sources.

"[Domestic] demand is just not there, there's pressure from adequate pipeline supplies too...it's very difficult to continue raising offers," a major Chinese importer noted.

Moreover, several end-users reported sufficient inventories across northeast Asia resulting in lackluster spot demand for December but stated the possibility of additional requirements for January if a colder-than-normal winter materializes.

"I am wishing for an average winter this year since spot prices are already so high. So far, it hasn't been very cold in our region," a northern Japanese LNG buyer said.

PLATTS LNG ASIA JKM RATIONALE & EXCLUSIONS

The S&P Global Platts JKM for December was assessed at $30.306/MMBtu Nov. 5. Platts assessed first-half December at $30.079/MMBtu and second-half December at $30.532/MMBtu, with a wider intramonth contango structure of 45.3 cents/MMBtu Nov. 5, compared with a contango of 32.1 cents/MMBtu Nov. 3. Value on Dec. 10 was assessed at $30.93/MMBtu, below Shell's offer for a Dec. 9-11 DES JKC cargo at TTF Dec full-month average plus $4.10/MMBtu. It was normalized 41 cents higher on higher maximum GHV limit, larger volume and quantity range, as well as larger ship size range, equating to a fixed price of $30.144/MMBtu. Value on Jan. 6 was assessed at $31.08/MMBtu, above Trafigura's bid for a Jan. 5-7 DES JKTC cargo at $31.40/MMBtu, with GHV of 1,037-1,125 Btu/cu ft, which was normalized 33 cents lower on smaller GHV range, smaller volume and later discharge port nomination within same country, equating to a fixed price of $31.07/MMBtu. BP placed a bid for a Dec. 12-16 DES JKTC cargo at TTF Dec full-month average plus $3.50/MMBtu, with a GHV of 1,030-1,110 Btu/cu ft. It was normalized 33 cents lower on lower maximum GHV and smaller volume, equating to a fixed price of $28.804/MMBtu. Vitol placed a bid for a Dec. 27-31 DES JKTC cargo at TTF Dec full-month average plus $3.50/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 $29.054/MMBtu. Platts assessed January JKM at the Singapore close at $31.275/MMBtu, between a bid at $31.05/MMBtu and an offer at $32/MMBtu. Platts valued ICE TTF January at $25.975/MMBtu, based on a $5.30/MMBtu differential between JKM January and TTF January. Platts valued TTF December full-month average at $25.634/MMBtu, which was also assessed on a 1 cent/MMBtu differential between January TTF and December TTF.
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 $28.10/MMBtu Nov. 5. Platts assessed first-half and second-half December at $27.875/MMBtu and $28.325/MMBtu, respectively, with a narrower intramonth contango structure of 45 cents/MMBtu, compared with 30 cents/MMBtu Nov. 3. Platts assessed the December JKM/WIM spread at $2.206/MMBtu Nov. 5.
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 $23/MMBtu on Nov. 5.
The assessment was for FOB USGC cargoes loading 30 to 60 days forward. With a lack of tradable values, the market was assessed in line with a rising shipping market reflecting bearishness in FOB levels.
Exclusions: None

PLATTS LNG EUROPEAN ASSESSMENT RATIONALE & EXCLUSIONS

The Northwest Europe Marker (NWE) for December was assessed Nov. 5 at $25.322/MMBtu.
H1 NWE for December was assessed at $25.222/MMBtu.
H2 NWE for December was assessed at $25.422/MMBtu.
DES NWE prices made gains of 10.20 cents/MMBtu day on day alongside similar movements in the TTF market. A spread of over $1/MMBtu between the January NBP and TTF allowed for stronger prices into H2 December.
The Mediterranean Marker (MED) for December was assessed at $25.247/MMBtu
H1 MED for December was assessed at $25.122/MMBtu.
H2 MED for December was assessed at $25.372/MMBtu.
DES MED prices made smaller gains on day due to the narrower PVB/TTF spread alongside reports of FOB volume on offer out of Spain for December.
The assessments were based on pricing information from market sources for cargoes delivering within the region for December delivery
This rationale applies to symbol(s) <AASXU00, AASXY00>
Exclusions: None

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

Date	Seller	Loading	Buyer	Basis	Loading window	Offer/Bid	Notes
Best bids/offers							
Nov 05		none reported					

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

Date	Buyer	Destination	Seller	Source	Basis	Delivery period	Bid/Offer	Notes
Best bids/offers								
Nov 05	BP	JKTC			DES	Dec 12-16	Dec TTF+3.5 bid	MOC
Nov 05	Vitol	JKTC			DES	Dec 27-31	Dec TTF+3.5 bid	MOC
Nov 05	Trafigura	JKTC			DES	Jan 5-7	31.40 bid	MOC
Nov 05			Shell		DES	Dec 9-11	Dec TTF+4.10 offer	MOC
Nov 05			Uniper		DES	Jan 1-3	Jan JKM+0.21 offer	MOC
Nov 05	Trafigura		PetroChina			Dec JKM Derivatives	31.35 traded bid	MOC, 25 lots
Nov 05	Trafigura		PetroChina			Dec JKM Derivatives	31.35 traded bid	MOC, 25 lots
Nov 05	Trafigura		PetroChina			Dec JKM Derivatives	31.35 traded bid	MOC, 25 lots
Last 5 trades		**APAC**						
Oct 26	PTT	Thailand		Qatar	DES	Nov 27-29, Dec 3-5	low-33	Tender
Oct 26	Shell, Total		EGAS	Egypt	FOB	Nov 14-15, Nov 24-25	28.25, 28.70	Tender
Oct 22	Vitol	JKTC	PetroChina		DES	Dec 6-8	Dec TTF plus 3.05 traded offer	MOC
Oct 21	Vitol	JKTC	PetroChina		DES	Dec 7-11	Dec TTF plus 3.45 traded bid	MOC
Oct 21	PetroChina	JKC	Shell		DES	Dec 10-12	Dec TTF plus 3.00 traded offer	MOC

"Koreans are quite balanced [in terms of inventories] till the end of this year, too early to tell for next year, that'll be heavily dependent on weather, might buy for January if it turns colder than expected," a south Korean end-user said.

"Because of [deferrals or cancellations from] Petronas, the expectation is that Japanese will buy more for January," a producer said.

The Dec-Jan contango widened by 24.1 cents/MMBtu on Nov. 5 from Nov. 3 to 76.6 cents/MMBtu.

In the bilateral market, ExxonMobil was heard to have sold a December cargo loading from Gorgon in the week ended Oct. 30. Further details could not be obtained at the time of reporting.

On tenders, ADNOC issued a strip tender offering six cargoes for April 7-13, May 15-21, June 12-18, July 20-26, Aug. 20-26, and Sept. 17-23 on a Brent-linked basis. The tender closes on Nov. 9.

— *Shermaine Ang*

European LNG reload volumes heard on offer, jumpy TTF

In the Atlantic, there was reported to be volume offered on an FOB basis out of Europe for prompt load, with most traders hesitant to take positions in such a volatile market.

Platts assessed the DES Northwest Europe at $25.322/MMBtu on Nov. 5, up 10.2 cents/MMBtu on-day with an intramonth contango of 20 cents/MMBtu for H1 and H2 December.

Platts assessed the TTF December contract at $25.009/MMBtu, up 2.1 cents/MMBtu on-day. The contract sunk to an intra-day low of Eur73.21/MWh at the open and reaching a peak of Eur78/MWh in morning trade.

"TTF is so sensitive right now," said a Europe-based trader.

Elsewhere, higher Russian flows were nominated through the Mallnow gas compressor for Nov. 5-6. The nominated gas flows return to a similar level seen before flows fell to zero on Oct. 29. In Norway, an unplanned outage at the Skarv field led to a 5 million cm/d decline in supply. The outage has an uncertain capacity consequence and duration, arising from a processing problem, according to Gassco data.

There was reported to be late November volume on offer out of Northwest Europe on an FOB basis, and for early December out of Spain. Despite this, sources were unable to report offer levels as most remain unable to enter into negations.

Iberian inventories continued their strong builds. Spanish tanks have still not started winter inventory withdrawals and continued builds see Spanish stocks sitting over 82% full, nearly 7 percentage points higher than the European average.

The source said if there were to be reload deals, that would make the Atlantic shipping market even tighter.

It was reported that there has been more interest from sellers to offer volume down the curve for late Q1/early Q2 2022 delivery, but no deals reported.

In the JKM derivatives market, there remained a high degree of spread trades for February, March and April in the JKM/TFU (TTF in $/MMBtu) as well as a few Cal-26 deals occurring, both at $7.900/MMBtu.

In shipping, the market showed neither an uptrend nor a downturn Nov. 5, with day rates remaining at $250,000/d for the Pacific basin and at $195,000/d in the Atlantic.

Yamal LNG was reported with a vessel requirement for January loading.

Woodside was heard looking for a ship, 170,000 cu m, ex Corpus Christi, USG for an early January loading.

ENOC was reported with a tonnage requirement for December loading.

A Cheniere controlled LNG tanker was reported fixed by CNOOC for a mid-December loading ex Australia to North Asia at rate of $250,000/d.

A Teekay ship, 174,000 cu m, was heard fixed by Petrobras for a period of three years with the rate not reported. — *Piers De Wilde, Zack Smith*

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ASIA/MIDDLE EAST ($/MMBtu), NOV 5*

DES Japan/Korea Marker (JKM)			
JKM (Dec)	AAOVQ00	30.306	
JKM (H1 Dec)	AAPSU00	30.079	
JKM (H2 Dec)	AAPSV00	30.532	
JKM (H1 Jan)	AAPSW00	31.042	
JKM (H2 Jan)	AAPXA00	31.100	
Asian Dated Brent (16:30 Singapore)	ADBAA00	13.99	
JKM vs Henry Hub futures	AAPRZ00	24.715	
JKM vs NBP futures	AAPSA00	3.708	
JKM vs TTF	LNTFJ00	5.207	
JKM vs Asian Dated Brent (16:30 Singapore)	AAPSB00	16.321	
JKM vs MED (16:30 London)	ALNGB00	5.059	
JKM vs NWE (16:30 London)	ALNGA00	4.984	

DES Japan/Korea (JKM) derivatives Singapore close		
Balmo-ND	LJKMB00	29.402
Dec	LJKMO00	31.350
Jan	LJKMO01	31.275
Feb	LJKMO02	28.800
Mar	LJKMO03	25.000
Q1 2022	LJKQR01	28.358
Q2 2022	LJKQR02	16.050
Summer 2022	LJKSN01	15.425
Winter 2022	LJKSN02	15.875
2022	LJKYR01	18.500
2023	LJKYR02	12.000
2024	LJKYR03	9.250

DES Japan/Korea (JKM) derivatives London close		
Dec	JKLMO00	30.484
Jan	JKLMO01	30.409
Feb	JKLMO02	28.450
Mar	JKLMO03	24.425
Q1 2022	JKLQR01	27.761
Q2 2022	JKLQR02	15.900
Summer 2022	JKLSN01	15.250
Winter 2022	JKLSN02	15.650
2022	JKLYR01	18.400
2023	JKLYR02	11.900
2024	JKLYR03	9.100

DES West India Marker (WIM)		
WIM (Dec)	AARXS00	28.100

DES West India Marker (WIM) derivatives Singapore close		
Dec	AWIMB00	29.075
Jan	AWIMM01	29.900
Feb	AWIMM02	27.500
Mar	AWIMM03	23.800
Q1 2022	AWIMQ01	27.067
Q2 2022	AWIMQ02	14.850
Summer 2022	AWISN01	14.250
Winter 2022	AWISN02	14.700
2022	AWIMY01	17.350
2023	AWIMY02	10.825
2024	AWIMY03	8.350

Carbon Neutral LNG		
CNL WTW JKTC Differential (ex-Australia)	ACNLF00	0.804
CNL WTT JKTC Differential (ex-Australia)	ACNLB00	0.177
CNL DES JKTC Differential (ex-Australia)	ACNLG00	0.171
CNL Combustion JKTC	ACNLJ00	0.626

FOB Middle East		
FOB Middle East	AARXQ00	27.150

FOB Australia (netback)		
JKM (Dec)	AAOVQ00	30.306
(-) Freight	AAUSA00	2.34
FOB Australia	AARXR00	27.97

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

Platts Dutch TTF		
Dec	GTFWM10	25.099
Jan	GTFWM20	25.099

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	11.31	
NEAT Coal Index	JKTCB00	7.133	
Minas crude oil	LCABO00	13.303	
Naphtha CFR Japan	LNPHJ00	16.373	

EUROPE ($/MMBtu), NOV 5

	$/MMBtu		Eur/MWh		Eur/MMBtu
DES Mediterranean Marker (MED)					
MED (Dec)	AASXY00	25.247	LNMTA00	74.483	LNMXA00 21.846
MED (H1 Dec)	AASXZ00	25.122			
MED (H2 Dec)	AASYA00	25.372			
MED (H1 Jan)	AASYB00	25.434			
Dated Brent (16:30 London)	ADBAB00	14.27			
MED vs Henry Hub futures	AASYF00	19.625			
MED vs TTF	LNTFS00	0.148			
MED vs NBP futures	AASYH00	-0.415			
MED vs Dated Brent (16:30 London)	AASYJ00	10.980			
MED vs NWE	ALNSA00	-0.075			
MED vs JKM	AASYM00	-5.059			
DES Northwest Europe Marker (NWE)					
NWE (Dec)	AASXU00	25.322	LNNTA00	74.704	LNNXA00 21.911
NWE (H1 Dec)	AASXV00	25.222			
NWE (H2 Dec)	AASXW00	25.422			
NWE (H1 Jan)	AASXX00	25.584			
Dated Brent (16:30 London)	ADBAB00	14.27			
NWE vs Henry Hub futures	AASYE00	19.700			
NWE vs TTF	LNTFN00	0.223			
NWE vs NBP futures	AASYG00	-0.340			
NWE vs Dated Brent (16:30 London)	AASYI00	11.055			
NWE vs MED	AASYK00	0.075			
NWE vs JKM	AASYL00	-4.984			
NWE as a % of NBP	AASYD00	98.67			

Competing fuel prices		
Northwest Europe fuel oil	LAEGR00	12.95
CIF ARA 15-60 day thermal coal	CSAAB00	6.34

NORTH AMERICA ($/MMBtu), NOV 5

FOB Gulf Coast Marker (GCM)		
GCM	LGCSM01	23.000
Dated Brent (16:30 London)	ADBAB00	14.27
GCM vs JKM	LGMJM01	-7.306
GCM vs Henry Hub futures	LGMHM01	17.484
GCM vs TTF	LNTFG00	-2.099
GCM vs NWE	LGEUR00	-2.322
GCM vs MED	LGMET00	-2.247
GCM vs NBP futures	LGMNM01	-2.662
GCM vs Dated Brent (16:30 London)	LGMDB00	8.733
GCM vs USGC HSFO	LGMFO00	12.540

Competing fuel prices		
US Gulf Coast high sulfur fuel oil	LUAXJ00	10.89
New York Harbor 1%S fuel oil	LUAXD00	12.80

*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.

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RECENT TENDERS AND STRIPS

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

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NEWS

INPEX to use underground gas storage in Japan in case of winter LNG supply hitch

- **Underground storage connects to Japan's largest gas field**
- **Eased OPEC+ output cut boosts July-Sept output to quarterly record high**
- **Ichthys LNG plant to be shut for next maintenance July 2022**

Japan's largest upstream company INPEX said Nov. 5 it will use its domestic underground gas storage facility near its wholly-owned Minami Nagaoka gas field in the northwest as a supply source as part of its contingency plans for the country's winter LNG supply emergency.

INPEX has a 2.3 million cubic meters/day of natural gas supply capacity from using the underground storage facility at its Sekihara gas field, which dried up in 1968, in the north of the Minami-Nagaoka gas field in the times of emergency, a company spokesperson said.

The Sekihara underground gas storage facility connects via pipelines to the Minami-Nagaoka gas field, which is the largest gas field in Japan, producing 5.2 million cu m/day of natural gas.

The Minami-Nagaoka gas field connects to INPEX's Naoetsu LNG import terminal and 1,500 km pipeline from the Niigata prefecture in the northwest to the Kanto region in the eastern Japan, as far away as to Tokyo.

INPEX's move is part of its efforts to ensure Japan's LNG supply during winter after the country experienced a power supply shortage last winter because of high demand during extreme cold spells in January, when local power utilities were forced to restrict gas-fired power generation due to low LNG stocks.

Takayuki Ueda, president and CEO of INPEX, said Oct. 21 that the company will try to squeeze as much "surplus supply" from running and maintaining full operations stably at its LNG plants including at its operated Ichthys project in Australia for winter.

Raising output

INPEX also said Nov. 5 it has raised its 2021 oil and gas production outlook further to 576,000 b/d of oil equivalent due mainly to the eased OPEC+ output cuts, compared with 559,000 boe/d it had expected at the beginning of the year.

Due to the eased OPEC+ output cuts, INPEX said it had produced 640,000 boe/d over July-September, a record-high on a quarterly basis after its output fell during scheduled maintenance at the Ichthys project over May-June, the spokesperson said.

The Ichthys project, in which INPEX has a 66.245% stake with operatorship, is scheduled to have maintenance next at its two LNG trains over July 1-Aug. 5, 2022. The project has the capacity to produce about 8.9 million mt/year of LNG, 1.65 million mt/year of LPG and 100,000 b/d of condensate in Australia.

OPEC and its allies are standing firm on boosting crude output quotas by a modest 400,000 b/d for December, shrugging off intense lobbying from the US and other consuming countries for more volumes to bring surging oil prices down.

With oil demand still under pressure from COVID-19 infections in many parts of the world and expected seasonal weakness as the

SOUTH AMERICA ($/MMBtu), NOV 5

DES Brazil Netforward		
DES Brazil (Dec)	LEBMH01	25.640
DES Brazil vs NWE Fuel Oil Derivative	LAARM01	12.690
DES Brazil vs DES MED LNG	LASWM01	0.393
DES Brazil vs Dated Brent	LADBM01	11.373
DES Brazil vs Henry Hub (16:30 London)	LAHHM01	20.018
DES Brazil vs JKM (16:30 London)	LAJKM01	-4.666
DES Brazil vs NBP (16:30 London)	LABPM01	-0.022

NORTH AMERICAN FEEDGAS ($/MMBtu), NOV 4

Daily average US LNG feedgas cost	ALNFG00	5.602
30-day moving average US LNG feedgas cost	ALNUS00	5.352
Daily average USGC LNG feedgas cost	ALNFH00	5.617
30-day moving average USGC LNG feedgas cost	ALNUG00	5.394

Export facility		Estimated feedgas cost
Sabine Pass	ALNFA00	5.627
Corpus Christi	ALNFB00	5.594
Cove Point	ALNFC00	5.456
Cameron	ALNFD00	5.629
Freeport	ALNFE00	5.604
Elba Island	ALNFF00	5.786

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 5

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 5

NYMEX HH Singapore close	(Dec)	AAPSD00	5.591
NYMEX HH Singapore close	(Jan)	AAPSE00	5.695
ICE NBP Singapore close	(Dec)	AAPSF00	26.596
ICE NBP Singapore close	(Jan)	AAPSG00	27.119
NYMEX HH London close	(Dec 21)	AASYN00	5.622
NYMEX HH London close	(Jan 22)	AASYO00	5.731
ICE NBP London close	(Dec 21)	AASYR00	25.662
ICE NBP London close	(Jan 22)	AASYS00	26.034
NYMEX HH US close	(Dec 21)	NMNG001	5.516
NYMEX HH US close	(Jan 22)	NMNG002	5.626

MARINE FUEL LNG BUNKER, NOV 5

	$/MMBtu		$/mt (Oil)		$/mt (LNG)	
Singapore	LNBSG00	29.806	LNBSM00	1151.793	LNBSF00	1549.912
	Eur/MWh		**$/mt (Oil)**		**$/mt (LNG)**	
Rotterdam	LNBRT00	73.100	LNBRM00	956.501	LNBRF00	1288.456

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

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calendar turns to 2022, OPEC+ ministers on Nov. 4 maintained their previously agreed plan. — *Takeo Kumagai*

Vitol, Qatar Petroleum emerge as lowest bidders in Pakistan LNG spot tender

Vitol Bahrain and QP Trading have emerged as the lowest bidders in state-owned LNG importer Pakistan LNG's latest spot tender that closed on Nov. 5, according to tender documents.

On Nov. 2, Pakistan LNG had issued a tender to import two spot LNG cargoes for the delivery windows of Nov. 19-20 and Nov. 26-27, each with a quantity of 140,000 cu m, on a delivered ex-ship (DES) basis Port Qasim in Karachi.

Vitol Bahrain, a unit of commodity trader Vitol, was the lowest bidder for the Nov. 19-20 delivery window at a price of $29.8946/MMBtu. There were was one other bid for this window by QP Trading, a unit of Qatar Petroleum, at a price of $30.050/MMBtu, the documents showed.

QP Trading was the lowest bidder for the Nov. 26-27 delivery window at a price of $30.65/MMBtu. There were a total of three bid for this window and the other bidders were Vitol Bahrain at $31.0566/MMBtu and Total Energies Gas & Power at $30.96/MMBtu, the documents showed.

The prices were largely in line with prevailing spot LNG prices. The S&P Global Platts JKM for December was assessed at $30.306/MMBtu Nov. 5, while the monthly average for November was $33.254/MMBtu.

Prompt cargoes, which are required for delivery at very short notice, usually trade at a premium. Traders said that moderate prices for Pakistan LNG's tender indicate that cargoes on the prompt are available and markets may not be as tight as previously expected.

Pakistan LNG had issued its urgent tender for November cargoes after two term suppliers, Gunvor and Eni, had backed out from two LNG cargoes under a term agreement for delivery in the same window, according to officials at the ministry of petroleum.

Gunvor declined to comment, and Eni said it "suffered a disruption in the LNG supply chain originated by a third-party supplier."

Eni has a 15-year term agreement with Pakistan LNG for the delivery of one LNG cargo every month, whose current pricing is at 11.95% slope of Brent prices. Gunvor has a five-year term agreement to supply at 11.62% slope of Brent. — *Eric Yep, Haris Zamir*

PLATTS WIM RLNG DAILY PRICES, NOV 5

		$/MMBtu	Rupee/MMBtu
Ex-Terminal			
Dahej	RLEDA00	29.85	RLEIA002217.39
Hazira	RLEDB00	30.00	RLEIB002228.87
Dabhol	RLEDC00	29.94	RLEIC002223.99
Mundra	RLEDE00	29.97	RLEEI002226.71
Kochi	RLEDD00	30.47	RLEDI002263.90
Average	RLEDF00	30.05	RLEIF002232.17
Location			
Ahmedabad	RLDDJ00	30.35	RLDIJ002254.51
Morbi	RLDDK00	30.47	RLDIK002263.84
Panvel	RLDDL00	30.60	RLDIL002273.50
Dabhol	RLDDC00	30.60	RLDIC002273.50
Vijaipur	RLDDM00	30.53	RLDIM002268.21
Kota	RLDDN00	30.53	RLDIN002268.21
Chhainsa	RLDDO00	30.60	RLDIO002272.98
Jagdishpur	RLDDP00	30.60	RLDIP002272.98
New Delhi	RLDDQ00	30.60	RLDIQ002272.98
Koottanad	RLDDR00	31.12	RLDIR002311.81
Kakinada	RLDDS00	31.21	RLDIS002318.64
Average	RLDDT00	30.66	RLDIT002277.38

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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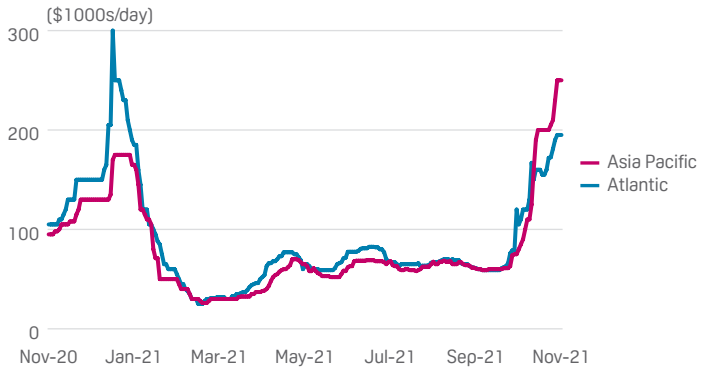
SHIPPING PRICES

SHIPPING RATES, NOV 5

		$/day
Asia Pacific day rate	AARXT00	250,000
Atlantic day rate	AASYC00	195,000
TCR Australia-Japan	ATCRA00	250,000.00
TCR USG-NWE	ATCRB00	195,000.00
TCR USG-Japan	ATCRC00	195,000.00
		$/MMBtu
PLF1 Middle East-Japan/Korea	AAUUA00	3.73
PLF2 Middle East-NWE	AAUTE00	3.97
PLF3 Trinidad-NWE	AAUUC00	1.85

SHIPPING RATES



Source: S&P Global Platts

SHIPPING CALCULATOR, NOV 5

	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	0.62	0.20
Supplementary boil-off cost ($/MMBtu)	0.20	0.06
Cost of voyage* ($/MMBtu)	2.34	0.92

*Includes port cost.

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FREIGHT ROUTE COSTS, NOV 5 ($/MMBtu)

Asian discharge ports

		Japan/Korea		South China/Taiwan		West India
Middle East	AAUUA00	3.73	AAUSH00	3.25	AAUSP00	0.92
Australia (Dampier)	AAUSA00	2.34	AAUSI00	1.88	AAUSQ00	2.26
Australia (Gladstone)	ACABA00	2.35	ACABB00	2.58	ACABC00	3.64
Bontang	AOJKA00	1.63	AOCTA00	1.18	AOWIA00	2.23
Bintulu	ABJKA00	1.65	ABCTA00	0.98	ABWIA00	2.03
Singapore	ASJKA00	1.85	ASCTA00	1.17	ASWIA00	1.56
Tangguh	ATJKA00	1.61	ATCTA00	1.38	ATWIA00	2.66
Trinidad via Suez	AAUSB00	7.36	AAUSJ00	6.91	AAUSR00	4.75
Trinidad via Panama	AAUXB00	5.10	AAUZB00	6.20		
Trinidad*	AAUZC00	5.10	AAUZD00	6.20		
Nigeria	AAUSC00	5.79	AAUSK00	5.13	AAUSS00	3.72
Algeria	AAUSD00	5.38	AAUSL00	4.95	AAUST00	2.95
Belgium	AAUSE00	6.25	AAUSM00	5.59	AAUSU00	3.54
Peru	AAUSF00	5.21	AAUSN00	5.96	AAUSV00	6.51
Russia	AAUSG00	0.95	AAUSO00	1.40	AAUSW00	3.59
Spain	ACAAA00	5.62	ACAAB00	4.97	ACAAC00	3.17
Norway	ACAAH00	7.17	ACAAI00	6.27	ACAAJ00	4.37
USGC*	LAUVA00	5.36	LAUVB00	6.47	LAUVC00	5.20
USGC via Panama	LAUVI00	5.36	LAUVL00	6.47		
USGC via Suez	LAUVJ00	8.10	LAUVM00	7.17	LAUVO00	5.20
USGC via Cape	LAUVK00	8.33	LAUVN00	7.62	LAUVP00	6.47

EMEA discharge ports

		South West Europe		North West Europe		Kuwait/UAE
Middle East	AAUSX00	3.33	AAUTE00	3.97	LMEMM00	0.50
Australia (Dampier)	AAUSY00	5.16	AAUTF00	5.83	LMEMN00	2.72
Australia (Gladstone)	ACABD00	6.59	ACABE00	7.29	ACABI00	4.12
Trinidad	AAUSZ00	1.88	AAUUC00	1.85	LMEMP00	4.35
Nigeria	AAUTA00	2.11	AAUTG00	2.27	LMEMQ00	3.97
Algeria	AAUTB00	0.47	AAUTH00	0.97	LMEMR00	2.57
Belgium	AAUTC00	0.81			LMEMS00	3.36
Peru	AAUTD00	5.39	AAUTI00	5.59	LMEMT00	7.03
Russia	AAUUB00	6.54	AAUTJ00	6.99	LMEMU00	5.02
Spain			ACAAD00	0.81	LMEMV00	2.79
Norway	ACAAK00	1.37	ACAAL00	0.80	LMEMW00	3.98
Murmansk			AARXW00	0.96		
USGC*	LAUVD00	2.48	LAUVE00	2.45	LMEMX00	5.01
USGC via Suez					LMEMY00	5.01
USGC via Cape					LMEMZ00	6.26

Americas discharge ports

		US Atlantic Coast		Argentina		Brazil
Middle East	AAUTK00	4.62	AAUTS00	4.83	ACAAP00	5.57
Australia (Dampier)	AAUTL00	5.80	AAUTT00	4.85	ACAAQ00	5.83
Australia (Gladstone)	ACABF00	5.62	ACABH00	4.18	ACABG00	5.14
Trinidad	AAUTM00	0.99	AAUTU00	2.19	ACAAR00	1.49
Nigeria	AAUTN00	2.43	AAUTV00	2.42	ACAAS00	2.09
Algeria	AAUTO00	1.62	AAUTW00	2.78	ACAAT00	2.44
Belgium	AAUTP00	1.46	AAUTX00	3.15	ACAAU00	2.81
Peru	AAUTQ00	4.79	AAUTY00	2.17	ACAAV00	3.31
Russia	AAUTR00	7.25	AAUTZ00	6.23	ACAAW00	8.74
Spain	ACAAE00	1.34	ACAAF00	2.80	ACAAG00	2.28
Norway	ACAAM00	1.63	ACAAN00	3.76	ACAAO00	3.60
USGC*			LAUVG00	3.36	LAUVH00	2.64

*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.

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A gambit or a new way to finance US LNG projects? Tellurian is about to find out

- **10-year contracts shorter in term than traditional model**
- **Cost of shipping also a key consideration in equation**

With the latest tinkering of its strategy for commercializing Driftwood LNG, US developer Tellurian is betting on the carbon price in Europe creating a floor for the international gas hubs to which it has linked its LNG supply contracts.

It is also hoping to satisfy banks it is seeking to loan it the money it needs to build the Louisiana facility that the shorter length of its deals with Gunvor, Vitol and Shell — compared with traditional long-term contracts — provide sufficient collateral.

Before the end of the year, Tellurian expects to have an answer to market questions about whether it can make the financing happen, in the face of uncertainty caused by extremely volatile end-user prices.

"If they do it, it will change the financing model globally for LNG projects," Poten & Partners' head of business intelligence, Jason Feer, said during a session at the World LNG & Gas Series Americas Summit & Exhibition conference in Lake Charles, which ended Nov. 5.

The 10-year deals that Tellurian signed to support the first phase of Driftwood LNG are indexed to a combination of the Platts JKM, the benchmark for spot-traded LNG delivered to Northeast Asia, and Dutch TTF, netted back for transportation charges. The LNG would be delivered free on board from Driftwood. Tellurian plans to produce its own feedgas for the first phase of the terminal.

"Does it work better with JKM and TTF high? Of course. It's a much higher margin," Tellurian CEO Octavio Simoes said in an interview with S&P Global Platts on the sidelines of the conference. "But we're not worried about how low does it get because there is a natural floor."

Based on a current carbon price in Europe of around Eur 65, that would translate to $6-$7 TTF, or European index, Simoes said.

"That's our model," he said.

By eliminating the US Henry Hub gas price from the equation, Tellurian hoped to alleviate one measure of volatility that was preventing more North American LNG projects from getting off the ground. The run-up in global gas prices over the last year has added a new layer of volatility, one that some LNG producers believe could eventually weaken global demand.

The shipping component in Tellurian's model also has raised some uncertainty in the market, given how expensive LNG freight is currently. On Nov. 5, day rates stood at $250,000/day for the Pacific basin and at $195,000/day in the Atlantic.

Those rates translate to around $6-$7/MMBtu for the Pacific and $2-$3/MMBtu in the Atlantic. Tellurian, on the other hand, expects the shipping costs it will be netting back to its counterparties to be $2/MMBtu from US-Asia and $1/MMBtu from the US to Europe.

The difference for Tellurian is the ships that Simoes said the counterparties the developer signed with will bring to the table.

"Somebody who signs a contract for 10 years isn't going to pay $6 or $7," Simoes said. "See this is the thing that people missed. Guvnor, Vitol and Shell, when they signed the deals for 3 million tons each and people said, 'Of course you sold them, there's no risk for them in those contracts.' They don't know what they're talking about. They are going to have to invest multibillions into the ships to lift those volumes over 10 years. They are not going to rely on the volatility of the charter, spot chartering, which may reach $200,000 a day."

Risk tolerance

Other US LNG developers with perhaps a more conservative view on tolerance for risk, including Sempra Energy, have so far stuck to the traditional business model that helped finance the first wave of major liquefaction facilities on the Gulf and Atlantic coasts.

Asked whether Sempra has missed the boat after recent long-term supply deals were announced by Cheniere Energy and Venture Global LNG with Chinese end-users, Dan Brouillette, head of Sempra's LNG infrastructure unit, said he believes there is plenty of demand to go around.

"There is plenty of opportunity for Sempra and other players in the marketplace," he told Platts in an interview during the conference.

He acknowledged that his US competition was undercutting other developers with liquefaction fees at around or below $2/MMBtu.

"We're going to look at everything we do," Brouillette said. "While there are going to be deals in the marketplace, short-term in duration, that's fine. That's not where we see our strengths." — *Harry Weber*

US' Marathon resumes normal operations in Equatorial Guinea after outage

- **Alba gas processing facility hit by incident on Sept 26**
- **Last LNG vessel departed from Equatorial Guinea on Sept 25**
- **Equatorial Guinea eyes 'intra-African LNG' industry: minister**

US-based Marathon Oil has resumed normal operations in Equatorial Guinea after an undisclosed incident in late September at its Alba gas processing plant left the facility unable to process wet gas.

The plant processes gas from the Alba field that is then used as feedstock for the Equatorial Guinea LNG production facility.

The incident occurred at the Alba facility on Sept. 26 and while partial operations were maintained, the plant was unable to process wet gas.

"Normal operations resumed this week," Marathon said in its third-quarter earnings report late Nov. 3, without adding further details.

There have been no LNG exports from Equatorial Guinea's Punta Europa terminal since the incident, according to S&P Global Platts cFlow trade-flow analytics.

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

LNG exports from Equatorial Guinea have totaled 3.32 Bcm so far in 2021, according to S&P Global Platts Analytics, with deliveries boosted following the startup of the Alen gas project in February.

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

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

The backfill project at Alen — where gas was previously reinjected

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into the reservoir to support enhanced liquids recovery since entering operation in 2013 — provides for the monetization of 580 Bcf of gas over six years.

Gas expansion

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

In an opinion piece, Obiang said Equatorial Guinea would look to realize the potential of its gas industry and become "increasingly competitive" in the gas sector.

He also dismissed the calls for a "blanket ban" on fossil fuel investments, saying now was not the time to halt gas production in Equatorial Guinea.

"With the pandemic receding, at least for now, and the market returning, we must embrace the opportunity to restore our economy," he said, adding that it would take more investment to produce the country's hydrocarbon resources, not less.

"With that in mind, Equatorial Guinea is revising its 2006 Hydrocarbon Law," he said, in the hope that the country would be able to attract more regional and international companies and incentivize investment.

The plans for a regional gas hub include the proposed cross-boundary project with Cameroon to develop shared resources in the Yoyo-Yolanda condensate gas field. "We are also going to prioritize regional gas deals with Nigeria as it is key," Obiang said.

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

Bulgaria resolves pipeline incident that hit gas flows into Serbia, Romania

- **Supplies had been impacted Nov 1 after pipeline rupture**
- **Russia delivers gas via Bulgaria to Serbia, Hungary, Romania**
- **Had knock-on effect on gas supplies to Bosnia**

Bulgaria's state-owned gas grid operator Bulgartransgaz said late Nov. 4 that the incident on a pipeline in the country that had impacted flows into Serbia and Romania had been fully resolved.

The damaged pipeline section is part of the onshore infrastructure bringing Russian gas via the TurkStream pipeline into central Europe.

In a transparency message, Bulgartransgaz said the incident had been fully resolved as of 17:00 local time (1500 GMT) on Nov. 4.

Russia's Gazprom now supplies all of its gas to Bulgaria, Romania and Serbia via TurkStream and the dedicated onshore pipeline network.

The pipeline failure in Bulgaria meant there was zero access to the Kireevo interconnection point on the border with Serbia and no access to the Ruse point on the border with Romania.

Flows were quickly restored to the Negru Voda interconnection point on the border with Romania, however.

Nonetheless, the suspension of flows into Serbia is an indication of the vulnerability of the onshore TurkStream system given that it relies on existing grid infrastructure in Bulgaria and a single route into Serbia.

During the outage, Serbia's Srbijagas sourced emergency volumes of gas from Hungary, which were also used to supply Bosnia and Herzegovina.

Bosnia's gas distribution company Sarajevogas on Nov. 1 had asked gas users to switch off appliances to preserve the gas network, in a sign of how serious the loss of supply was.

The bulk of Hungary's Russian gas imports also now come in via Serbia after the supply via Ukraine was halted Oct. 1.

Since the start of October, Hungary had been taking 6 million cu m/d of gas via Serbia, according to data from S&P Global Platts Analytics.

Before the outage, flows from Bulgaria into Serbia at Kireevo had been running at around 13 million cu m/d, according to the data, meaning some 7 million cu m/d of gas supply was for Serbia itself as well as small onward deliveries to Bosnia.

TurkStream shift

The start in January 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.

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

However, since the start of 2021, Russian gas sent via TurkStream can also now be transited onto Serbia, Bosnia and Herzegovina, with Hungary also supplied via the new route since October.

Gas deliveries into Southeast Europe via TurkStream in the first 10 months of 2021 totaled 9.33 Bcm, an average of 31 million cu m/d. — *Stuart Elliott*

Mozambique signs $400 million deal for LNG-to-power plant

- **Agreement signed with UK's GL Africa Energy for 250MW plant**
- **Three-phase project to be completed by 2023**
- **First Mozambique LNG to be produced in second half of 2022**

Mozambique has finalized an agreement with UK-registered GL Africa Energy for the development of a 250MW LNG-to-power plant at Nacala in the north of the country, GL Africa Energy said Nov. 5.

The agreement was signed Nov. 4 in Maputo by Mozambique's energy minister Ernesto Max Elias Tonela and GL Africa Energy director Michael Kearns, signaling the start of a three-part phased investment totaling $400 million.

Under the deal, which will see GL Africa Energy build and operate the plant, an initial 50MW of capacity will be available within 16 months,

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while two more phases will add a further 200MW of capacity within 24 months, implying a completion date of late 2023.

GL Africa Energy is part of the international holding company, Janus Continental Group (JCG).

The head of JCG's energy business, Mamadou Goumble, said the deal was a "milestone" for the region and represented GL Africa Energy's largest investment in a power plant to date.

It already owns and operates power plant in Zambia.

Utility Electricidade de Mocambique will be the principle purchaser of the electricity generated.

"This project is a key pillar of the Mozambique government's gas monetization strategy and by utilizing Rovuma gas will be instrumental in further reducing the cost of energy," GL Africa Energy said.

Domestically, the plant will bring electricity to over half a million people, while excess supply from the new facility will be exported to other markets through the South African Power Pool (SAPP).

The company also hopes the investment will support the country's plan to turn the region into a viable trading hub.

LNG will allow a reduction in reliance on more polluting fuel oil, diesel and coal for power generation, it said.

Vast gas resources

More than 30 million mt/year of LNG production capacity is envisaged in Mozambique based on its vast offshore gas resources.

The Eni-operated Coral LNG project will be the first to start operations, currently slated for the second half of 2022.

Located in the offshore Rovuma basin, Coral was discovered in May 2012 and holds an estimated 450 Bcm of gas. It will produce gas for the 3.4 million mt/year floating LNG facility.

Eni confirmed last week that the plant would start up in the second half of 2022, entering the LNG market "at the right time."

The global LNG market is currently very tight due to strong demand and numerous supply-side issues.

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. 3 at $28.15/MMBtu, still 330% higher year on year.

While Coral proceeds as planned, the two other planned LNG projects in Mozambique face delays.

The TotalEnergies-operated, 13.1 million mt/year Mozambique LNG project is to be delayed by at least a year because of the security situation in the country. The company had targeted first LNG from the project in 2024.

The planned ExxonMobil-led 15.2 million mt/year Rovuma LNG facility, meanwhile, remains on hold with no final investment decision yet.

Both are located in northeastern Mozambique, close to the town of Palma and around 60 km from the port town of Mocimboa da Praia, which until recently was occupied by insurgents.

In late March, dozens of people were killed during attacks on Palma, prompting TotalEnergies in April to declare force majeure on work at Mozambique LNG. — *Stuart Elliott*

Ukraine to use gas for power generation on coal shortage

- **Coal stocks at critically low level**
- **Ukraine relies on nuclear power**
- **Gas storage stocks at 18 Bcm**

Ukraine's fossil fuel-burning power plants will use natural gas for power generation to keep the country's energy system stable if plants run out of coal, the energy ministry said Nov. 5.

The ministry held an emergency meeting Nov. 4 with power grid Ukrenergo, the state-owned gas company Naftogaz Ukrayiny, and the energy sector regulatory commission to outline emergency measures to replace coal with gas.

"To balance the energy system during the heating season, power units of thermal power plants and thermal power plants using natural gas as fuel will be involved," the ministry said in a statement.

"The required capacity will be activated only for balancing the power system and as a separate ancillary service."

Ukraine has been using coal for power generation to cut costs as gas is more expensive and the country relies on imports to meet gas demand. The plan to replace coal with gas underscores the gravity of the situation as coal stocks remain at a critically low level.

It comes as Russia suspended thermal coal exports to Ukraine on Nov. 1 and also blocked the transit of Kazakh coal via its territory to Ukraine.

Ukrenergo will give the ministry a list of power units that can use gas and will draft forecast monthly consumption levels between November and March, the ministry said.

Naftogaz will make sure that gas is available to power plants if required, and the company will draft long-term contracts with power plants, the ministry said.

Gas stocks

Ukraine has about 18 Bcm of gas in underground gas storage facilities as of early November, down 36% from about 28 Bcm a year ago, according to UkrTransGaz, the state-owned company that operates gas storage facilities.

Ukraine's storage facilities, some of the largest in the world, can hold 30.95 Bcm of gas. They are now filled at 57.7% of total capacity, according to UkrTransGaz.

Ukraine's thermal power plant coal stocks fell 6.7% since the beginning of this month to 506,400 mt as of Nov. 5, a critical level, as the country usually needs 2.5 million mt of coal in stock to cover the six-month high-demand season that began in the middle of October.

Meanwhile, Ukraine's power grid currently relies on nuclear power to ensure stability of the system amid coal shortages.

Nuclear power plants generate more than half of the country's power output. Some 11 nuclear power units out of 15 are currently in operation, while two units will be launched later this month and another one unit in December.

"The load on nuclear power generation this season will be at record high over the past five years," energy minister Herman Haluschenko told lawmakers in Parliament Nov. 4.

Energoatom plans to increase power generation by 7 billion kWh in

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the 2021-2022 high-demand season compared with the previous season and "this increase will reduce the need for coal by 3.6 million mt," Halushchenko said. — *Alexander Bor*

Cheniere to supply LNG to Sinochem in latest term US offtake deal with China

- **17½ year agreement linked to Henry Hub, plus fixed fee**
- **Venture Global also has been active on the commercial front**

China's Sinochem has agreed to buy as much as 1.8 million mt/year of LNG from Cheniere Energy under a long-term deal.

The deal, which Cheniere announced Nov. 5, is the latest in a frenzy of fixed-fee term commercial agreements between US exporters and Chinese counterparties that have been reached in recent months, amid a spot price surge in European and Asian end-user markets.

Under the agreement between Sinochem and Cheniere's marketing unit, the buyer will purchase an initial volume of about 900,000 mt/year in July 2022. That volume will eventually rise to 1.8 million mt/year over the course of the 17½ year term of the agreement, Cheniere said.

Sinochem, one of China's four largest state-owned oil companies, will buy the LNG on a free-on-board basis for a price indexed to the US Henry Hub, plus a fixed liquefaction fee that Cheniere did not disclose.

Cheniere did not say whether the volumes would be tied to a specific liquefaction terminal or be covered by multiple terminals. It operates Sabine Pass Liquefaction in Louisiana and Corpus Christi Liquefaction in Texas. Next year, it expects to sanction an up to 10 million mt/year midscale expansion at the site of its Texas facility.

The Sinochem deal follows Cheniere's Oct. 11 announcement that a subsidiary of China's ENN Natural Gas had signed a 13-year deal to buy 900,000 mt/year of LNG, starting in July 2022, from the US exporter. Cheniere previously signed two long-term contracts with PetroChina for a combined 1.2 million mt/year of LNG. Only a small portion is in effect, with shipments on the balance starting in 2023.

Also, active signing term supply deals with Chinese buyers of late has been Venture Global LNG.

Sinopec and its trading arm, Unipec, have agreed to buy at least 7.5 million mt/year of LNG from Venture Global.

When those purchases take effect, Venture Global would overtake Cheniere as the biggest US supplier of LNG to Chinese counterparties on a term basis.

Some 4 million mt/year of the supply, for a 20-year term, will come from Venture Global's proposed Plaquemines LNG export facility to be built south of New Orleans. According to Venture Global, another 3.5 million mt/year of supply, for a shorter term, is tied to its Calcasieu Pass terminal that is currently under construction in southwestern Louisiana. Sinopec pegged that commitment at 3.8 million mt/year. — *Harry Weber*

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HYDROGEN

Keppel to explore feasibility of producing renewable ammonia in Australia

- **Signs MOU with fertilizer producer Incitec, investment firm Temasek**
- **Feasibility study for export oriented projects**

Singapore energy producer Keppel Infrastructure Holdings Ltd., fertilizer producer Incitec Pivot Ltd. and state investment firm Temasek signed a memorandum of understanding to explore the feasibility of producing renewable ammonia in Australia and exporting it to be used as an energy feedstock or a carrier of hydrogen, Keppel said Nov. 5 in a statement.

Renewable ammonia, also known as green ammonia, is increasingly seen as a suitable fuel for carbon-free electricity with the scope of direct use, or reprocessed to produce renewable hydrogen, with much of the talk focused on it being a good replacement of bunker fuels to decarbonize shipping.

The three parties will work closely with the Queensland and New South Wales governments to explore feasibility of essential infrastructure, licenses and approvals to facilitate the production and export of renewable ammonia globally, including Singapore, the statement said.

"This will also catalyze Keppel Infrastructure's development efforts in zero-emission solutions and low-carbon energy services in line with Keppel's Vision 2030," Cindy Lim, CEO of Keppel Infrastructure, said.

The MOU will be in line with Australia's National Hydrogen Strategy, which has identified seven clean hydrogen hubs across Australia, including Queensland and New South Wales, where giant-sized future hydrogen production bases are being designed over a 10-year horizon to cater to domestic and foreign markets alike.

Incitec Pivot has an existing ammonia asset in Kooragang Island in New South Wales and a potential greenfield site in Gladstone in Queensland, Incitec Pivot Managing Director & CEO, Jeanne Johns said, adding both sites have been nominated by the Australian government as locations for hydrogen hub development.

"We are looking forward to combining our leading ammonia manufacturing and handling expertise here in Australia with Keppel's large-scale energy and infrastructure development capabilities, and Temasek's experience in sustainable solutions," Johns said, adding it would play a role in the development of an Australian low carbon energy industry.

Funding details were unavailable, but Frederick Teo, Managing Director of Sustainable Solutions at Temasek, said carbon-free fuel to the market will enable more companies to grow in a sustainable manner and potentially open new business opportunities as well.

S&P Global Platts launched daily anhydrous ammonia cargo price assessments Oct. 13, designed to reflect delivered cargo prices on a CFR basis into Asia, Northwest Europe, and the US Gulf Coast, and cargo prices on an FOB basis loaded in the Middle East and the Black Sea.

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Ammonia on a CFR basis in Far East Asia was assessed at $735/mt Nov. 4, up 27.83% from $575/mt assessed on Oct. 12, when Platts first started the assessment.

Ammonia on a CFR basis in Northwest Europe was assessed at $850/mt Nov. 4, up 11.84%, from $760/mt on Oct. 12. — *Ruchira Singh*

Statkraft, Aker, Ocean Winds team up for floating wind tender in Norway

- **Consortium to use Principle Power's floating technology**
- **Statkraft already in fixed-bottom team with Aker, BP**
- **Tender details for 4.5 GW expected in early 2022**

Norwegian utility Statkraft, Aker Offshore Wind and Ocean Winds, a joint venture by Engie and EDP have teamed up in a consortium bidding to develop floating offshore wind in Norway, the companies said Nov. 5 in a joint statement.

A number of oil companies like Equinor, BP, Eni, TotalEnergies and utilities like Orsted, and RWE have already expressed interests and formed various consortia often with home-grown players for both floating and fixed-bottom projects in Norway.

Norway plans to tenders 4.5 GW in the Utsira Nord (floating) and Sorlige Nordsjo II areas in 2022.

"The ambition is to further develop and industrialize technology based on Principle Power's market-leading floating substructure technology," Aker Horizon CEO Kristian Rokke said.

Statkraft CEO Christian Rynning-Tonnesen noted the company's first foray into floating offshore wind.

The state-owned utility already formed a consortium with Aker and BP for fixed-bottom bids in Norway.

Ocean Winds already has experience with floating wind at Windfloat Atlantic in Portugal with the 50:50 venture of Portugal's EDP and France's Engie also developing fixed-bottom projects.

Norway's new energy minister Marte Mjors Persen is expected to detail plans for the both floating and fixed-bottom tenders in early 2022.

Former energy minister Tina Bru said in June that she expected to award two or three fixed-bottom projects at SN II for up to 3 GW without subsidies.

Up to three 500 MW floating projects could be awarded with subsidies offshore Haugesund at Utsira Nord, Bru added.

The world's biggest floating offshore wind project, the 50 MW Kincardine offshore Aberdeen in Scotland, started this month, Principle Power said Oct. 19.

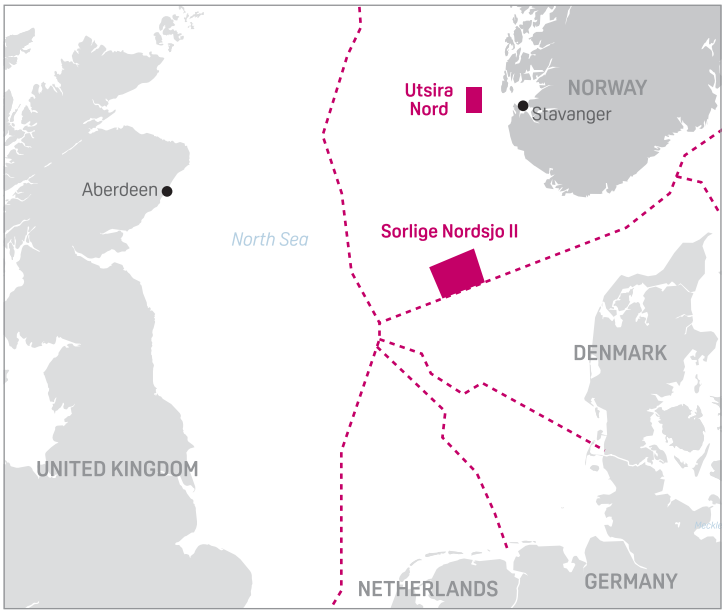
Norwegian oil company Equinor has been leading the field with the 30 MW HyWind Scotland operating since 2017 in Aberdeen Bay.

Construction is underway for Equinor's 88 MW HyWind Tampen offshore Norway to supply electricity to oil and gas platforms on the Norwegian Continental Shelf (NCS) from 2022.

Norway is linked to the UK power market since Oct, 1 via the 1.4 GW NSL interconnector with the UK targeting 40 GW offshore wind by 2030.

GB power currently trades at premium to Norway with Platts assessing GB 2022 baseload power at GBP123.54/MWh on Nov.4 after prices more than doubled this year.

NORWAY TO TENDER 4.5 GW OFFSHORE WIND



Source: Norway government

Northern Horizon vision

Aker on Nov.4 also presented a vision for 10 GW of floating offshore wind in Scotland beyond 2030.

The Northern Horizons project has been unveiled by Aker Horizons' portfolio companies Aker Offshore Wind and Aker Clean Hydrogen and consultancy DNV and was presented on the sidelines of the UN Climate Change Conference 2021.

The initiative is a response to the Scottish government's ambition to export hydrogen with the government targeting 5GW of hydrogen production by 2030, it said.

"Such innovation and private sector investment are key to meeting the UK and Scotland's net zero targets and delivering the unprecedented ambition on display here in Glasgow at COP26," Aker Offshore Wind UK head Sian Lloyd-Rees said.

The project would utilize floating offshore wind turbines and floating electrolysis installations to produce green hydrogen for transmission to a net zero hydrogen refinery on Shetland, it said.

Platts assessed UK hydrogen via PEM electrolysis including Capex at GBP12.81/kg based on UK front-month electricity and compared to a GBP4.22/kg cost-based assessment for ATR steam-reformed hydrogen including carbon and capex based on front-month gas.
— *Andreas Franke*

Ireland updates climate action plan as Equinor withdraws from ESB offshore venture

- **80% power from renewables by 2030**
- **Offshore legislation 'urgently needed'**
- **Boost for electrification of transport**

The Irish government has published a revised climate action plan to reduce the country's carbon emissions by 51% by 2030 as Norway's

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Equinor withdrew from a large offshore wind project.

The Nov. 4 plan targets doubling of renewables' contribution to the power mix, electrification of rail and bus services and close to a million electric vehicles supported by Eur10,000 ($11,535) grants.

"By 2030, up to 80% of electricity will be generated using renewable energy, with a mix of 5 GW from offshore wind, 8 GW from onshore wind and 1.5-2.5 GW from solar PV," the government said.

Renewables accounted for 43% of electricity consumed in Ireland during 2020. Gas-fired power met 50% of demand.

Ireland has 4.31 GW of onshore wind but only 25 MW of offshore wind at Arklow Bank.

The country is only now organizing the necessary legislation to get offshore wind farms permitted and built.

Meanwhile, Norway's Equinor confirmed it had pulled out of its Irish offshore wind partnership with state utility ESB on Nov. 4.

An assessment of regulatory processes was part of its decision, according to a report in the Irish Examiner.

ESB and Equinor were co-developing the two-phase, maximum 1.5 GW Moneypoint offshore wind farm 16 km off the Clare and Kerry coastline.

A key maritime area planning bill is currently before parliament and is expected to be enacted before the end of the year.

Noel Cunniffe, CEO of sector association Wind Energy Ireland, said the country was not reforming Ireland's planning and regulatory framework quickly enough "to deliver offshore wind and meet the targets in the Climate Action Plan."

Once the maritime bill was enacted, developers would hopefully be able to apply for planning permission next year "and get them delivered for 2030," Cunniffe said.

A new grid system for offshore wind was also needed, he said.

"We need to get government, industry and [network operator] Eirgrid around a table to figure out how we can connect these projects to the grid as efficiently as possible," he said.

ESB said it would continue developing the Moneypoint project.

Cunniffe said Ireland would need "seven to 10 wind farms around the east, south and west coast by 2030," and a pipeline of 20-GW of proposals in various stages of development could deliver.

Transport emissions

Further measures planned for the power sector in the updated climate program included increased electricity storage, deployment of zero-emissions gas (biogas, biomethane and hydrogen) and production of renewable hydrogen for use in other industries, all aimed at delivering a 62%-81% reduction in sector emissions by 2030.

In transport, the plan set out targets for 845,000 passenger electric vehicles, 95,000 zero-emission vans and 3,500 zero-emission heavy goods vehicles.

The bioethanol blend rate was to reach 10% for existing gasoline cars and 20% for existing diesel cars.

Replacement bus and rail services will have to be green, to include the addition of 1,500 EV buses and expanded electrified rail services, all aimed at a 42%-50% reduction in transport emissions.

In buildings the plan sets a target for 2.7 TWh of district heating demand by 2030 and a 50% reduction in public sector building emissions.

In industry, it would seek to deliver carbon capture and storage facilities in two cement/lime plants to achieve 1.5 million mtCO2e savings.

In all the program was forecast to require Eur125 billion of public and private sector investment, the government said. — *Henry Edwardes-Evans*

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$/MMBtu
-Australia Carbon Neutral Hydrogen A$/MMBtu 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

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-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.

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

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

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

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

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.

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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.

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HYDROGEN & CARBON

NORTH AMERICA HYDROGEN ASSESSMENTS, NOVEMBER 4*

	Excluding Capex		Including Capex	
Production Pathway	**$/kg**	**Change**	**$/kg**	**Change**
Alberta (C$/kg)				
SMR w/o CCS	0.8466	-0.0123	1.5682	-0.0105
Alkaline Electrolysis	3.7576	-0.0824	4.9493	-0.0794
PEM Electrolysis	4.3406	-0.0952	6.4757	-0.0898
Appalachia				
SMR w/o CCS	0.8366	-0.0085	1.4319	-0.0086
Alkaline Electrolysis	4.5326	+0.6565	5.4119	+0.6565
PEM Electrolysis	5.2359	+0.7584	6.8114	+0.7584
Gulf Coast				
SMR w/o CCS	0.8793	+0.0281	1.3834	+0.0282
Alkaline Electrolysis	2.9106	+0.1067	3.7430	+0.1067
PEM Electrolysis	3.3622	+0.1232	4.8536	+0.1232
Midcontinent				
SMR w/o CCS	0.8450	+0.0054	1.3763	+0.0054
Alkaline Electrolysis	3.5720	-0.1114	4.4258	-0.1115
PEM Electrolysis	4.1262	-0.1287	5.6560	-0.1287
Northeast				
SMR w/o CCS	0.8674	-0.0246	1.5020	-0.0247
Alkaline Electrolysis	3.2038	+0.2954	4.1084	+0.2954
PEM Electrolysis	3.7008	+0.3411	5.3216	+0.3411
Northern California				
SMR w/o CCS	0.9318	-0.0424	1.6621	-0.0424
Alkaline Electrolysis	2.9180	-0.3711	3.9042	-0.3711
PEM Electrolysis	3.3707	-0.4287	5.1378	-0.4287
Northwest				
SMR w/o CCS	0.8304	+0.0078	1.4130	+0.0078
Alkaline Electrolysis	2.3258	+0.2232	3.2219	+0.2232
PEM Electrolysis	2.6867	+0.2579	4.2923	+0.2579
Rockies				
SMR w/o CCS	0.8323	+0.0059	1.3904	+0.0058
Alkaline Electrolysis	2.7861	+0.4799	3.6527	+0.4799
PEM Electrolysis	3.2184	+0.5544	4.7711	+0.5544
Southeast				
SMR w/o CCS	0.9044	-0.0129	1.4241	-0.0128
Alkaline Electrolysis	2.9437	+0.0539	3.7983	+0.0539
PEM Electrolysis	3.4004	+0.0623	4.9317	+0.0623
Southern California				
SMR w/o CCS	0.8986	-0.0049	1.5994	-0.0049
Alkaline Electrolysis	2.7604	-0.4318	3.7263	-0.4318
PEM Electrolysis	3.1887	-0.4988	4.9193	-0.4988
Upper Midwest				
SMR w/o CCS	0.8773	+0.0064	1.4458	+0.0064
Alkaline Electrolysis	3.8462	+0.2321	4.7526	+0.2322
PEM Electrolysis	4.4430	+0.2682	6.0669	+0.2682

*Assessed previous day

JAPAN HYDROGEN ASSESSMENTS, NOVEMBER 5

	Excluding Capex		Including Capex	
Production Pathway	**Yen/kg**	**Change**	**Yen/kg**	**Change**
SMR w/o CCS	536.8333	+36.6122	622.8666	+36.5971
Alkaline Electrolysis	697.4763	-79.5940	839.5518	-79.9936
PEM Electrolysis	805.7001	-91.9448	1060.2573	-92.6607

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 5

	$/mtCO2e	Change	Eur/mtCO2e	Change
Platts CEC	7.900	+0.250	6.850	+1.930

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.

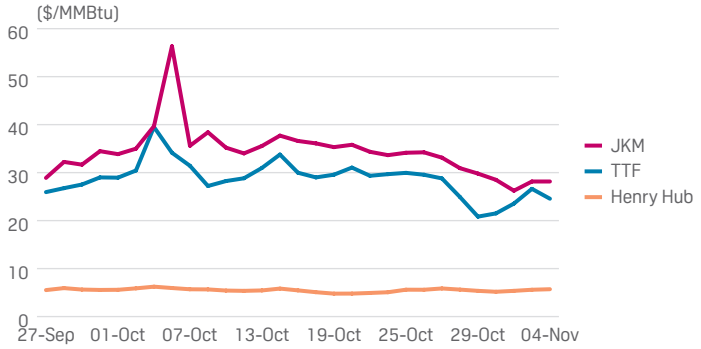
UK HYDROGEN ASSESSMENTS, NOVEMBER 5

Production Pathway	GBP/kg	Change	GBP/KWh	Change
ATR w CCS	3.9334	+0.0298	0.1180	+0.0009
ATR w CCS (inc. Capex & Carbon)	4.2526	+0.0298	0.1276	+0.0009
Alkaline Electrolysis	10.2017	+0.0672	0.3061	+0.0020
Alkaline Electrolysis (inc. Capex)	10.8187	+0.0676	0.3246	+0.0020
PEM Electrolysis	11.7820	+0.0776	0.3535	+0.0023
PEM Electrolysis (inc. Capex)	12.8876	+0.0785	0.3867	+0.0024

NETHERLANDS HYDROGEN ASSESSMENTS, NOVEMBER 5

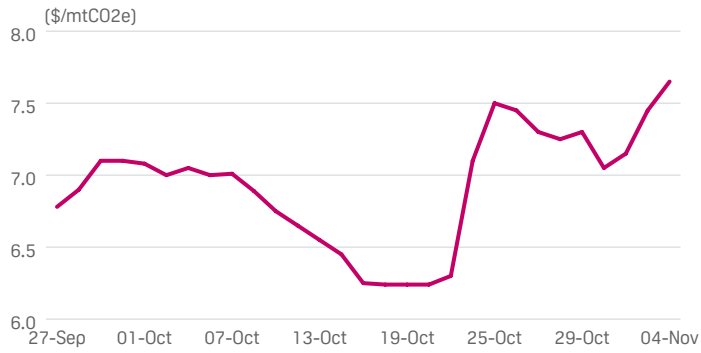
Production Pathway	Eur/kg	Change	Eur/KWh	Change
SMR w/o CCS	3.3932	+0.0126	0.1018	+0.0004
SMR w/o CCS (inc. Capex)	3.8293	+0.0121	0.1149	+0.0004
SMR w/o CCS (inc. Carbon)	3.9215	+0.0062	0.1177	+0.0002
SMR w/o CCS (inc. Capex & Carbon)	4.3576	+0.0057	0.1307	+0.0001
SMR w CCS	4.2660	+0.0212	0.1280	+0.0006
SMR w CCS (inc. Capex)	4.9723	+0.0205	0.1492	+0.0006
SMR w CCS (inc. Carbon)	4.3189	+0.0206	0.1296	+0.0006
SMR w CCS (inc. Capex & Carbon)	5.0251	+0.0199	0.1508	+0.0006
Alkaline Electrolysis	9.9193	+0.1385	0.2976	+0.0041
Alkaline Electrolysis (inc. Capex)	10.6395	+0.1377	0.3192	+0.0041
PEM Electrolysis	11.4556	+0.1599	0.3437	+0.0048
PEM Electrolysis (inc. Capex)	12.7461	+0.1586	0.3824	+0.0047

NATURAL GAS/LNG



Source: S&P Global Platts

PLATTS CEC



Source: S&P Global Platts

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