LNG Unlimited

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Japan hosts LNG Producer-Consumer conference in Tokyo focused on prices

Event first held in 2012 launched Tokyo's call for the end of enforced destination clauses

Our Asia-Pacific editor

Minster Hiroshige Seko will open event in Tokyo

The Japanese government will host its sixth annual LNG Producer-Consumer Conference on October 18 in Tokyo when spot and long-term contract pricing will be among the main topics of debate.

The conference was first held in 2012 when Japan launched its partially successful campaign in favour of lower LNG prices and the end of destination clauses in contracts.

Regional

The event is scheduled to take place at the International Convention Center at the Grand Prince Hotel New Takanawa in Tokyo.

Co-hosts are the Japanese Ministry of Economy, Trade and Industry and the Asia Pacific Energy Research Centre.

The one-day event will be opened by Hiroshige Seko, Japan's minister for the sector, on behalf of the world's biggest LNG consumer.

He will be followed by Mohammed Bin Saleh Al-Sada, the Minister of Energy and Industry of Qatar, the world's largest producer with around 77 million tonnes per annum of output.

A further 13 ministers will address the conference, including Dharmendra Pradhan, the Indian Minister of Petroleum and Natural Gas.

The US will be represented by Rob Smith, Deputy Assistant Secretary at the Office of Oil and Natural Gas at the US Department of Energy.

The conference is covering a lot of ground in one day as there will also be panel discussions on topics such as "New LNG Opportunities" and "LNG as Transport Fuel".

Delegates will also discuss "Producer Consumer Cooperation towards Developing LNG Market in Asia" with a panel moderated by Jonathan Stern of the Oxford Institute for Energy Studies.

LNG company executives will give more than 20 presentations between the numerous panel sessions.

The executive speakers include Jane Liao, Chief Executive of the Natural Gas Business at Taiwan's CPC Corp., Elizabeth Spomer, CEO and President of Jordan Cove LNG in the US state of Oregon and Tokyo Gas President Michiaki Hirose.

Among others making presentations are Jean-Marc Ichbia, Director of the LNG Projects Department of Russian energy company Novatek and Meg A. Gentle, President and CEO of Tellurian Inc., developer of the Driftwood export venture in Louisiana.

The final main panel session is on "Flexible LNG Market and Spot Trading".

The moderator of this session will be Ken Koyama, Chief Economist and Managing Director of the Institute of Energy Economics in Japan.

"In recent years, as the environment surrounding the field of LNG has been dramatically changing, the trade in LNG is expected to continue to be revitalized and expanded," said the Japanese Ministry.

"Since the inauguration in 2012, the conference has been annually held as a platform on which LNG producers and consumers are able to share long-term forecasts of LNG supply and demand and to collaborate in committing to making trade markets transparent," it added.

"At the previous conferences, over 1,000 people each time, from 30 countries and areas, have come together and proactively discussed the actions that LNG producers and consumers should take to overcome challenges," it stated.

The Ministry said the 2017 conference participants will reflect the current changes seen in the LNG markets and "the importance of appropriate future development" of the markets. ■

UNLIMITED AGENDA

Spanish LNG participant Gas Natural Fenosa leaves Barcelona HQ over political uncertainty

Our Europe editor

Gas Natural Fenosa, the Spanish utility whose liquefied natural gas assets include long-term LNG contracts to receive cargoes from the US Sabine Pass export plant in Louisiana as well as from Russia, said it would move its headquarters out of Barcelona because the escalating independence activity in the region of Catalonia was affecting business confidence.

"In view of the political and social situation in recent weeks in Catalonia and due to the legal uncertainty that this generates, the Board of Directors of the company has agreed, as long as this situation continues, the temporary transfer of its headquarters to the current corporate offices in Madrid at Avenida San Luis, 77," said the GNF statement.

Conditions

"This decision does not affect those companies of the group that render their services exclusively in Catalonia," the company explained.

"The measure is adopted to maintain the normal operation of the company and in order to protect the interests of the company, its customers, employees, shareholders, creditors and suppliers.

Board agreed to leave Barcelona office (above) for Madrid

"This decision will not affect the provision of the service or have any labor consequences," GNF emphasized.

The Catalan regional government held a referendum that it said backed independence from Spain. The referendum, rejected by the Spanish government, showed 90 percent support for independence from 2.3 million people who voted, though the turnout was just 43 percent of the electorate.

However, GNF and other companies have said the continuing agitation in the northeast region of Spain was having a negative impact. From its base in Barcelona, GNF operates in more than 30 countries, with over 23 million utility customers and a wide spread of assets.

It also hosts the executive of the International Gas Union, the world body that promotes natural gas and LNG use and technology for economic progress.

Spaniard Luis Bertran, a director of GNF, was appointed to take up the role of Secretary General of the IGU in 2016.

GNF and the Spanish Gas Association host the General Secretariat of the IGU for a period of six years. The IGU headquarters was moved to Barcelona and into the GNF HQ in the run-up to major LNG and gas industry conferences in Washington DC and Shanghai.

On the business front, GNF is one of the six companies that have signed 20-year agreements for Sabine Pass cargoes from its eventual 27 MTPA of capacity from six Trains.

In addition to being one of the buyers of US LNG, GNF is also a main contract holder for cargoes from the Yamal LNG plant being developed in Arctic Russia by natural gas company Novatek and which will start commercial operations in early 2018.

GNF signed a 25-year contract back in 2013 which would see it receiving regular LNG supplies from the liquefaction plant amounting to 2.5 MTPA and worth more than 30 billion euros ($33.4Bln) over the life of the agreement.

Cheniere is also the developer of the Corpus Christi export project on the US Gulf Coast of Texas and GNF is among Cheniere's list of buyers of Corpus Christi cargoes, along with two other Spanish utilities, Iberdrola and Endesa. ■

GNF and Norwegian company Connect LNG complete new jetty-free, ship-to-shore transfer

Spanish liquefied natural gas market participant Gas Natural Fenosa and Norwegian fuel-transfer technology company Connect LNG said they completed a fuel operation in Norway using the small-scale carrier "Coral Energy" and a new system that removes the need for jetty structures.

The LNG ship-to-shore transfer took place at the onshore LNG terminal at Heroya in Norway.

The patented Universal Transfer System (UTS) is described by Connect as a floating solution for transfers between ship and shore that replaces the need for cost and environmental intensive harbour and jetty structures.

"This solution allows for rapid expansion of the value chain and transfer of LNG at locations where it was previously not possible due to environmental and economic constraints," the Spanish and Norwegian companies said after the trial.

"Gas Natural Fenosa, in collaboration with Connect LNG is putting in the market a system to enable rapid expansion of the LNG value chain to allow end users to access cheaper and cleaner energy," they added.

GNF is Spain's largest LNG market participant. The utility has volumes booked from plants such as Sabine Pass in the US state of Louisiana and will also import cargoes from the new Russian plant on the Yamal Peninsula in Siberia when it comes on stream.

The UTS cargo-transfer system is a floating platform which can connect to any LNG carrier. The fuel is then transferred from the platform to the onshore terminal through floating flexible pipes.

"We started an innovation journey and here we are with a game-changing solution that is revolutionary for the LNG industry," said GNF.

"From now on, we have a market-ready system that opens a world of possibilities in the LNG small-scale business," the Spanish company added.

The Norwegian company said its system was ideal for "cost-efficient marine transfer of LNG" as well as other fluids such as liquefied petroleum gas, where safety requirements are similar.

"Connect LNG's patent-pending solution comprise a uniquely designed platform, transfer lines, process equipment and mooring systems for safe and efficient connection of transfer lines between a ship and a terminal," the Norwegian company said.

"The ship is kept in position during operations, for instance by a conventional multi-buoy mooring system," it added. ■

UK firm makes gas discovery in Morocco

SDX Energy, the UK-listed exploration and production company, said it had made a natural gas discovery in Morocco, the North African kingdom that is a net importer of energy and is preparing to join the ranks of global LNG importers.

Morocco does produce some amounts of its own oil and natural gas, though these volumes are not sufficient to cover its needs.

SDX said it made its Moroccan discovery at its onshore KSR-14 development well covered by the Sebou permit in which it has a 75 percent interest.

The discovery is part of a 135 square kilometres concession located in the Rharb Basin between the coastal cities of Tangier and the capital Rabat

"The KSR-14 well was drilled to a total depth of 1,830 meters and encountered 20 meters of net conventional natural gas pay in the Guebbas and Hoot formations over four intervals," said SDX.

"The initial results have exceeded pre-drill estimates, and work is currently underway to further evaluate the well's accurate recoverable volume estimate," the company said.

SDX said that once the drilling rig has left the location, the company expects that the well will be connected to the existing infrastructure and produced.

"The well is anticipated to be on production in approximately 30 days," the company added.

SDX, whose headquarters are in London, has a working interest in two producing discoveries in Egypt's onshore Eastern Desert region.

Japanese spot LNG prices rise by $1.20 per MMBtu to $6.90/MMBtu

Japanese government figures show that the average contracted price of spot liquefied natural gas cargoes for Japan in September soared by $1.20 per million British thermal units compared with a year ago to $6.90 per MMBtu.

The contracted spot price last month had risen from the $5.70 per MMBtu logged in September 2016.

Shipments for Japan are more expensive than a year ago

Arrivals

The August figure had been $5.80 per MMBtu for contracted spot cargoes and $5.60 per MMBtu for shipments that arrived during the month.

The government said spot cargoes that arrived in Japan in September 2017 had an average price of $5.80 per MMBtu, while no corresponding trades were registered in September 2016.

The spot cargo numbers come from the commerce division of the Japanese Ministry of Economy, Trade and Industry and are only issued if a minimum number of two trades are recorded.

The ministry emphasizes that "spot LNG" refers to fuel traded on a cargo-to-cargo basis and does not mean shipments under contracts on a short-term, medium-term or long-term basis. The statistical accounting of the spot prices started in March 2014.

"Subjects of these statistics are companies which are end-consumers of spot LNG. In order to avoid double counting, companies that mediate transactions (for example trading companies) are excluded from subjects of these statistics," the Ministry noted.

Overall Japanese shipments including long-term volumes dropped 6 percent in August as cargo costs continued to rise and volumes from Australia and the spot market were favoured over Asian and Middle East volumes.

LNG shipments in August amounted to 7.26 million tonnes compared with 7.72MT in August 2016.

The cargoes cost 345.7 billion yen (3.10Bln), 27.4 percent more than the 271.3Bln yen ($2.43Bln) paid for the shipments in the year-ago period, according to the latest trade figures released on September 20 from the Japanese Finance Ministry.

Thermal coal imports jumped 23.5 percent in August to 10.12 million tonnes as this fuel was preferred and more economic for power generation. July thermal coal imports had surged 13.6 percent to 10.59MT.

Stolt-Nielsen of Norway posts higher profit and raises Sardinia LNG stake

Stolt-Nielsen, the Norwegian-listed shipping and storage company with small-scale LNG project plans on the Italian Island of Sardinia and in Scotland, posted a 19 percent rise in third-quarter net profits as revenues also increased.

The company, listed on the Oslo stock exchange and with operational offices in London and elsewhere, reported net profit of $18.5 million versus $15.6M in the year-ago quarter and revenues of $513.8M versus $500.8M in the same three months of 2016.

Net profit for the first nine months was $49.2M compared with $90.3M in 2016, while revenues amounted to $1.49 billion versus $1.41Bln in the first nine months of last year.

The Stolt-Nielsen gas division is one of the company's smallest units and is currently being developed, while its main business remains tankers, containers and fuel terminals.

"SNG continues to focus on the development of small-scale LNG storage and distribution supply chains to serve locations lacking access to LNG pipelines," said the earnings statement.

"On September 29, subsequent to the quarter-end, Stolt-Nielsen Gas invested $5.6 million in Higas Srl, increasing SNG's ownership to 66.25 percent," Stolt-Nielsen said.

It was referring to the Livorno, Italy-based private company behind the Sardinia LNG project.

"Higas was formed to develop shore-based storage, regasification and distribution in the port of Oristana, Sardinia, to supply local industry with LNG," explained Stolt-Nielsen.

"Further investments are planned subject to securing additional off-take contracts," the company added.

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NEWS NUDGES

India-Japan LNG accord

The Indian government of Prime Minister Narendra Modi approved the signing of a Memorandum of Cooperation between India and Japan on establishing a liquid, flexible and global LNG market. "The MoC will promote bilateral relationship between India and Japan in the energy sector. It will contribute to the diversification of gas supplies for India. This will strengthen our energy security and lead to more competitive prices for consumers," an Indian statement said. Japan is the world's largest LNG importer, receiving more than 83 million tonnes in 2016, while India is the fourth-largest buyer with just over 18MT of imports last year.

Australian exports fall

Australian LNG exports fell last month to 4.2 million tonnes (63 cargoes) from 5.1MT (76 cargoes) in the previous month of August, according to monthly estimated from consultants EnergyQuest. Western Australia's plants shipped 2.4MT in September, down from 3.4MT in August, due in particular to lower Gorgon and North West Shelf output. "Notwithstanding political pressure to reduce exports, Queensland LNG projects shipped two cargoes more than in August with a total of 1.8MT," said EnergyQuest.

US prices and output

The US government short-term energy outlook expects growth in LNG exports and domestic natural gas consumption in 2018 will contribute to a rise in the Henry Hub natural gas spot price from an average of $3.03 per million British thermal units in 2017 to $3.19 per MMBtu in 2018.

US LNG based on shale-gas resources and ship owners face French bank ban

Our Europe editor

BNP Paribas, France's largest stock exchange-listed bank, will stop representing global LNG shipping companies in bonds sales and project financing as well as developers of US LNG export projects under the bank's new environmental investment policies.

BNP said it would stop investment in unconventional and Arctic oil and gas resources, including LNG and shale gas, as the French National Assembly upheld a government plan engineered by its radical Environment Minister to ban oil production.

French Minister Hulot leads way with ban on oil

'Unstoppable'

"France is on an unstoppable path to scrapping fossil fuels," said Nicolas Hulot, the green activist and agitator who is Environment Minister, after the recent vote to ban oil output.

BNP in a move that coincided with the government ban on oil issued a long list of hydrocarbon projects it would not be involved in or would be withdrawing from.

The bank, in which the government holds no stake, stated that there would be "no financing of LNG terminals that predominantly liquefy and export gas from shale" and there would be no financing of pipelines that "primarily carry oil and gas from shale" and the bank would have "no business relations" with companies that derive the majority of their revenue from these activities.

"The BNP Paribas Group will no longer do business with companies whose principal business activity is the exploration, production, distribution, marketing or trading of oil and gas from shale and/or oil from tar sands," it said.

BNP and its investment banking unit are also ceasing the financing of projects that are primarily involved in the transportation or export of oil and gas from shale or oil from tar sands.

"These new measures complement the Group's previous decisions to reduce its support for coal mines and coal-fired power generation, to increase its total financing for renewable energy to 15 billion euros ($17.8Bln) by 2020," the bank stated.

The French bank has been a regular representative in bond sales by LNG shipping companies for newbuild financing and has been retained by several LNG development projects on the US Gulf Coast of Louisiana and Texas, committed to using shale-gas at their liquefaction plants.

Norway's Statoil chooses French-led firm to fuel LNG-powered oil tankers

Norwegian energy company Statoil has chosen a joint venture comprising French energy company Engie and two Japanese partners to supply LNG marine fuel in the Dutch port of Rotterdam for four crude oil shuttle tankers.

The four Statoil dual-fuel vessels with LNG capability are scheduled to enter service in early 2020 and will operate Northwest European waters within an Emission Control area.

The LNG fuel agreement is the second major contract secured by Engie for its LNG joint venture also involving Japanese shipping line Nippon Yusen Kabushiki Kaisha (NYK) and the trading house Mitsubishi Corp., a company with assets along the LNG value chain.

The first customer of the Engie-led bunkering joint venture was United European Car Carriers (UECC) for several LNG-powered vessels it operates.

Engie and its partners will use the newbuild LNG bunkering vessel "Engie Zeebrugge", a 5,000 cubic metres capacity fueling ship, to fulfil current and future contracts in the area of the ports of Rotterdam and Zeebrugge, the home port of the vessel.

The "Engie Zeebrugge" carried out its first trial bunkering operation at Zeebrugge in April 2017 and has since bunkered vessels for UECC. Engie, Mitsubishi and NYK have set up a marketing company called Gas4Sea to develop the LNG fuel market in northwest Europe and elsewhere.

Statoil has booked fuel from the Gas4Gas venture even as it has supplies of its own from Europe's only baseload LNG production plant at Hammerfest in northern Norway.

The Gas4Gas bunkering vessel was built at the Hanjin Heavy Industries and Construction Co. shipyard in the port of Busan in South Korea and delivered in February 2017.

Third major LNG fuel supply deal signed by Shell is one for transatlantic car vessels

Our Europe editor

Royal Dutch Shell said that two of its fuel subsidiaries signed a long-term agreement with shipping line Siem Car Carriers to supply LNG to fuel two new car-carrying ships being used to transport Volkswagen vehicles from Europe to North America.

The Shell LNG and Shell Western units signed the fuel deals for the vessels, expected to be delivered in 2019.

Customer

They will be among the first car-carrying ships in the world to be powered by LNG and will be among the first LNG-fuelled vessels to operate trans-Atlantic between Europe and the US.

Siem Car Carriers ordered ships powered by clean fuel

Siem Car Carriers is part of an industrial group also involved in the transport of refrigerated cargoes, oil and gas offshore services, shipyard operations and finance and has its headquarters in the Cayman Islands.

Shell plans to refuel the vessels in Northwest Europe and at a second supply point in the US.

The Anglo-Dutch company's LNG bunkering operation currently comprises of one small-scale ship and is based in the Dutch port of Rotterdam.

Shell is a break-bulk cargo operator at Rotterdam's Gate LNG import terminal where shipments are received under long-term contract from nations such as Qatar.

"This agreement is an important development for Shell's growing LNG fuels business," said Lauran Wetemans, Shell's General Manager of Downstream LNG.

"We are pleased to be working with SIEM Car Carriers to provide a cleaner burning fuel and look forward to future opportunities for collaboration," added Wetemans.

Shell noted that more ship owners and operators were choosing LNG fuel over traditional marine fuels to respond to sulphur and nitrogen oxide emissions regulations, including the International Maritime Organization decision to implement a global 0.5 percent sulphur cap from 2020. ■

Shell seals $380M deal to exit Brazilian gas distribution

Royal Dutch Shell completed the sale of its minority interest in Comgas, Brazil's largest natural gas distributor, for cash and shares amounting to $380 million as it continues to offload assets that are not part of the core business.

Brazilian energy conglomerate Cosan SA agreed to pay Shell the sum for its 16.8 percent stake in Comgas by transferring shares equal to 5 percent of Cosan's total equity in Brazilian shares and $168M in cash, including around $70M when the transaction is completed and a further $68M in cash a year later.

Shell said its future share position in Cosan will be managed for "value realization" over time.

Cosan is currently a 63.4 percent shareholder in Comgas.

Comgas had previously been majority-owned by LNG portfolio company BG Group, now part of Shell.

However, in November 2012, BG had completed the sale of over 60 percent of Comgas for $1.7 billion to Cosan.

Comgas has a distribution network covering more than 170 towns and cities in the state of Sao Paulo.

It is the largest piped natural gas distributor in Brazil with more than 14,000 kilometres of pipelines and over 1.7 million customers.

Cosan is one of Brazil's largest companies on the nation's stock exchange in Sao Paulo and focuses on investments on strategic industries such as agribusiness, fuel and natural gas distribution and logistics.

US Gulf Coast Express pipeline will boost Permian supplies for LNG

Our Europe editor

US pipeline operator Kinder Morgan and two other companies have signed an accord to develop the Gulf Coast Express Pipeline Project as an outlet for increased natural gas production from the Permian Basin for LNG export plant developers in Texas and for the Mexican pipeline market.

Kinder Morgan Texas Pipeline (KMTP), a Kinder subsidiary, will work on the Gulf Coast Express (GCX Project) with DCP Midstream and Targa Resources.

"The participation of the three parties involved with the GCX Project is subject to negotiation and execution of definitive agreements among KMTP, DCP Midstream and Targa," they said.

Permian oil and gas fields are in Texas and New Mexico

Expanse

The Permian oil and gas fields stretch over 75,000 square miles from West Texas into southeast New Mexico.

They are split into two zones, the Delaware Basin in the west and the Midland Basin to the east, both with huge oil and natural gas resources in place.

"As part of the definitive agreements, Targa and DCP Midstream would commit significant volumes to the proposed project, including certain volumes provided by Pioneer Natural Resources Company, a joint owner in Targa's WestTX Permian Basin system and one of the largest producers in the Permian," the companies explained.

The capacity of the GCX Project is expected to be approximately 1.92 billion cubic feet per day (Bcf/d) and would include a lateral into the Midland Basin, consisting of approximately 50 miles of 36-inch pipeline and associated compression to serve gas processing facilities owned by Targa, as well as facilities owned jointly by Targa and Pioneer.

Kinder currently operates 84,000 miles of pipelines and 155 terminals in North America.

Denver-Colorado-based DCP owns and operates more than 60 plants and 64,000 miles of natural gas pipelines.

The expected in-service date of the Gulf Coast Express continues to be scheduled for the second half of 2019, pending the completion of definitive agreements with shippers and a final investment decision.

Kinder would build, operate and own a 50 percent interest in the project and DCP and Targa would each hold a 25 percent equity interest.

LNG engineering firm WorleyParsons chooses UK for US$240M takeover

Australian LNG and energy engineering company WorleyParsons has put behind it several years of restructuring to pay 182 million pounds (US$240) to expand into the UK North Sea petroleum market with an agreed takeover.

WorleyParsons is acquiring AFW UK Oil & Gas, a provider of engineering and construction services on the UK Continental Shelf after itself being the subject of takeover speculation for several years.

WorleyParsons, whose past projects have included liquefaction plants in Western Australia such as Wheatstone LNG, earlier in 2017 also signed a long-term, multi-regional agreement with Chevron for engineering and procurement services.

The Australians are funding the UK acquisition with a A$322M (US$250M) issue of new shares on the Australian Securities Exchange through a one-for-10 entitlement offer and with existing debt facilities.

Around 24.8 million new WorleyParsons shares will be issued at A$13 per share, an 8.5 per cent discount to its last closing price.

"We are excited to enter the UK North Sea market as a leading player based in Aberdeen," said WorleyParsons Chief Executive Andrew Wood.

WorleyParsons has been a leading designer and builder of Asia-Pacific facilities and in addition to Wheatstone has worked on ventures such as the Northwest Shelf and Pluto LNG production plants in Western Australia in addition to the Singapore LNG import terminal.

The Australian engineering group said the deal to buy AFW UK would accelerate its strategy to build "a world class global maintenance, modifications and operations (MMO) capability".

ExxonMobil shipping survey finds IMO fuel compliance route unclear for LNG and options

Our North America editor in New York

Modern LNG carriers can run on clean fuel too

ExxonMobil, the US major with worldwide volumes from liquefied natural gas production plants in areas such as the Middle East and the Asia-Pacific region, said a shipping industry survey it conducted found that the route to compliance with the International Maritime Organization 2020 global sulphur cap of 0.5 percent is unclear for many vessel operators.

ExxonMobil, a main partner in the Qatar production of 77 million tonnes per annum of LNG some of which could be directed to LNG-fueled ships to meet the new IMO standards, said the survey results highlight an ongoing sense of confusion and lack of preparedness.

Deadline concern

According to 70 percent of respondents, the shipping industry was not yet ready for the deadline which would require maritime fuels such as LNG or alternatives with close to zero sulphur.

"The make-up of the marine fuel mix in 2020 and beyond is a clear area of concern, with wide-ranging views from the industry on how the landscape will evolve," said ExxonMobil in its analysis of the findings.

Many shipping company people who answered the survey are expecting the development of new low-sulphur fuels.

A further 45 percent of respondents forecast increased investment in abatement technologies such as scrubbers

"Thirty-two percent of those surveyed predict that a combination of heavy fuel oil, marine gas oil and fuels and blends will be used, while 69 percent believe the cap will lead to the development of new low sulphur fuels," said the US major.

"At ExxonMobil we expect that new 0.5 percent fuel formulations will emerge, based on low sulphur refinery streams, in addition to novel fuel blends," said Iain White, Global Marine Marketing Manager at ExxonMobil.

"As a result, it's likely we will see increased compatibility and stability problems, which will make purchasing fuels from a trusted supplier more important than ever," added White.

The cost implications of the cap were also highlighted as a potential challenge, with 53 percent of respondents predicting an increase in fuel spend.

"When asked about the uptake of LNG, 31 percent of respondents believe there will be a growth in its adoption as a marine fuel.

"These findings align with ExxonMobil's '2017 Outlook for Energy: A View to 2040', which predicts that by 2040 global LNG consumption will rise to more than two and a half times the 2015 level," the company stated.

ExxonMobil said 45 percent of respondents forecast increased investment in abatement technologies such as scrubbers, marine exhaust gas cleaning systems that remove sulphur oxides from ship's engine as well as other exhaust gases and pollutants.

"However, only 11 percent said they were actively looking to install a scrubber before 2020, with 40 percent citing a lack of economic clarity as a reason for forgoing investment," said ExxonMobil.

"The results of this survey show that we are heading to a multi-fuel future and that there is not one obvious fuel solution that will apply to all vessels," said White.

"To avoid the pitfalls that may lie ahead, it's vital that operators work closely with trusted fuel suppliers to ensure that they select the best route to compliance for their vessel's needs," he stated. ■

French class society issues revised rules for FSRUs operating as carriers or terminals

French maritime classification society Bureau Veritas has issued new rules on Floating Storage and Regasification Units (FSRUs) in response to industry demands to set out technical requirements for the vessels carrying out different operations.

"These requirements span demand for units that may operate as a floating terminal for one or more decades to FSRUs that may be required for much shorter periods and whose operators may want the option of trading as an LNG carrier," said Bureau Veritas in announcing the measures, known as Rule NR645."Demand for FSRUs is growing. They are a fast, cost effective route to meet growing demand for LNG as a clean and cost competitive energy source," the class society explained.

"The new BV rules enable the classification of all types of floating storage and regasification assets in a comprehensive and pragmatic manner by building on Bureau Veritas's extensive experience in the LNG sector," it added.

The rules set out technical requirements to address the technical and operational issues of FSRUs

They address this range of needs while applying a unified approach to safety and design challenges and providing "clarity in terms of classification requirements" by offering two distinct class notations.

They are the "Liquefied Gas Carrier - FSRU notation" and the "FSRU notation".

For the "Liquefied Gas Carrier" rules, this enables gas trading in addition to floating storage and regasification terminal operations.

"The notation provides the possibility for exemptions from the traditional class survey regime, such as five-year, dry-docking survey requirements, when the vessel is in use as an FSRU," Bureau Veritas said.

"For units dedicated to pure gas storage and regasification terminal operations and not intending to trade - the FSRU notation - this provides full optimization for site conditions and a class survey regime as applicable to permanent units with continuous operation requirements.

"No dry-docking would be required and some exemptions from IGC Code requirements compared to typical LNG carriers are allowed. ■