LNG Unlimited

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Mozambique celebrates supply deal for Italian-led floating LNG project

First sales deal with BP is key step in moving towards an investment decision

Our Europe Editor

The southeast African nation of Mozambique said it had signed a 20-year liquefied natural gas sales agreement with BP of the UK, with its project partner Italian energy company Eni, opening the way for progress on a floating LNG project.

Executives of the Mozambican state National Hydrocarbons Company (ENH) said the sales accord with BP was "an important step" in moving towards a final investment decision.

Area 4 Rovuma Basin partners agree BP sales deal

Investment

"Eni and Mozambique should by the end of this year reach a final investment decision on a project to build a floating offshore platform with a capacity to produce 3.3 million tonnes per annum of LNG," ENH said.

The Coral South natural gas field is part of the huge reserves discovered six years ago in the Area 4 concession off the Rovuma Basin offshore Mozambique.

"The agreement has been already approved by the Government of Mozambique and is conditional on the Final Investment Decision of the whole project which is expected within 2016," Eni said of the sales accord with BP.

"Through this agreement the Area 4 partners have achieved another fundamental milestone for the execution of the Coral South development project, following the approval in February 2016 of the plan of development," the Italian company added.

Eni's Coral FLNG project will be located in waters more than 2,000 metres deep and about 80 kilometres offshore the northern Mozambican province of Cabo Delgado.

The Eni plan of development, the very first one to be approved in the Rovuma Basin, foresees the drilling and completion of six subsea wells and the construction and installation of a floating production facility.

The Mozambique authorities have sanctioned the development of the first phase of the Coral FLNG project targeting fields with 5 trillion cubic feet of natural gas.

However, Eni had been reluctant to move forward because of economic uncertainty in Mozambique following a state loans scandal.

Eni is the operator of Area 4 with a 50 percent interest owned through Eni East Africa, which holds a 70 percent stake of Area 4.

The other Area 4 concessionaires are Portugal's Galp Energia, Korea Gas Corp. and ENH.

China National Petroleum Corp.'s PetroChina affiliate owns a 20 percent indirect interest in Area 4 through Eni East Africa.

Huge natural gas reserves have also been discovered in the Area 1 licence block operated by US company Anadarko Petroleum, which expects to eventually proceed with an onshore LNG project.

Shareholders

The shareholders in the Anadarko-led Area 1 licence include three Indian companies, ONGC Videsh, Oil India and Bharat PetroResources as well as Japan's Mitsui & Co. and Thailand's state-owned energy company PTT.

Omar Mitha, the Chairman of state energy company ENH, said recently that his country was heartened by the rising clean-energy profile of LNG as a fuel.

"The positive aspect that underlies the opportunities for Mozambique is that there are large reserves and the country offers security of energy supply to premium markets of East Asia, including new LNG importers," he said.

"Mozambique has a strategic location, has economic advantages and a broad base of stakeholders from India, Thailand, South Korea, China and Japan," Mitha added. ■

UNLIMITED AGENDA

US regulator advances with large-scale LNG project for the banks of Mississippi River

Our North America editor in New York

The US Federal Energy Regulatory Commission has released an update of the environmental review of the export project of Washington-based Venture Global LNG involving a large-scale plant on the banks of the Mississippi River.

The VG Plaquemines project will be located on 630 acres near river mile-marker 55 on the west side of the Mississippi, 30 miles south of New Orleans.

Plaquemines project will be located south of New Orleans

Reviews

The FERC said it was currently reviewing the draft resource reports and consulting with interested stakeholders.

The next step is for Plaquemines LNG and its affiliated Gator Express Pipeline project to submit their formal applications to the regulator after it will start its environmental analysis and issue recommendations for mitigation measures.

The Mississippi river project will produce 20 million tonnes per annum of LNG and will include 20 small-scale liquefaction Trains, four LNG storage tanks and three marine loading berths for ocean-going vessels.

"We are continuing to conduct our review of the planned project based on the information we have received from Plaquemines LNG and Gator Express Pipeline and the comments we have received from stakeholders," the FERC said.

"The companies provided revised draft reports in August 2016 and we are currently reviewing these," the regulator added.

"After they file their formal application, we will issue a Notice of Application and identify the CP Docket number for the Project.

"This Notice of Application will outline how interested parties can become intervenors and how persons can continue to comment on the project," the FERC explained.

VG is also planning to produce 10 MTPA of LNG at another Louisiana project being developed at Calcasieu Pass.

The company has acquired a 1,000-acre site for the Calcasieu Pass plant to be located at the intersection of the Calcasieu Ship Channel and the Gulf of Mexico.

The VG development company was founded by a banker and a lawyer.

The two are Michael Sabel, an equity fund manager and venture capitalist, and Robert Pender, a former partner at Hogan Lovells, a global law firm.

Both are now joint chief executives and co-chairmen of the VG LNG company.

In February 2016, VG signed a sales and purchase agreement with Shell North America for 1 MTPA of LNG from the Calcasieu Pass plant.

The accord with Shell is for 20 years with the cargoes being supplied on a free-on-board basis, whereby the Anglo-Dutch company supplies the ships, for a purchase price indexed to the monthly Henry Hub price plus a facility fee indexed to inflation. ■

Driftwood LNG of Ex-Cheniere CEO set for public meetings ahead of draft EIS report

The US Driftwood liquefied natural gas export project of former Cheniere Energy Chief Executive Charif Souki is now the subject of an environmental impact inquiry by regulators to minimize its effects on four districts in the state of Louisiana.

The Driftwood export facility is proposed for the west bank of the Calcasieu River near Carlyss in Calcasieu Parish, along with related pipeline projects.

The US Federal Energy Regulatory Commission said it was preparing an environmental impact statement that will discuss the potential effects of the venture during and after its construction on the Louisiana parishes of Calcasieu, Jefferson Davis, Acadia and Evangeline.

Comments on the scope of the EIS are due by November 4, 2016. Under the planning schedule put forward by Driftwood, construction of the plant could start as early as the second quarter of 2018.

The first of five liquefaction Trains to produce a total of 26 million tonnes per annum will be on stream by 2022 and the building project for all the facilities will last until 2025.

The initial FERC process invites interested parties, including members of the public, to provide specific comments or concerns about the venture.

"Comments should focus on the potential environmental effects, reasonable alternatives and measures to avoid or lessen environmental impacts," the FERC said.

The regulator has organized three public meetings in the Louisiana towns of Kinder, Sulphur and Eunice on October 25, October 26 and October 27 respectively.

"Commission staff will be available to answer your questions about the environmental review process.

"Public comments will be recorded individually by a stenographer and placed into the Commission's administrative record," said the FERC in explaining the procedure at the meetings.

Driftwood is aiming to match the capacity of Cheniere's Sabine Pass LNG plant, whose development was masterminded by Souki only for him to leave the company because of policy differences before the plant started shipping its first cargoes in February 2016.

The Driftwood developers have already told the FERC they would partner with US engineering firm Bechtel to construct the plant and had selected Chart Industries for liquefaction technology.

In addition to having a liquefaction plant similar in size and scope to that currently in operation at Sabine Pass, the Driftwood facility will also comprise three LNG storage tanks, each of around 250,000 cubic metres capacity, three berths for the largest LNG tankers as well as three compressor stations and associated pipelines and laterals.

Souki's LNG development company, Tellurian Investments, has recently hired two former Cheniere executives. The latest is Keith Teague, brought in as Executive Vice President and Chief Operating Officer. ■

UK-based Amec FW final stages Ichthys work

Amec Foster Wheeler, the UK-based LNG and energy engineering company, was awarded a consultancy contract by Inpex Corp. for the Ichthys LNG export project in Australia that has entered the final year of first-phase construction at a cost of $US37.5 billion.

Inpex is developing the liquefaction plant at Bladin Point near the port of Darwin in Australia's Northern Territory in a joint venture also involving French energy company Total.

The Japanese-led project is set to come on stream between July and September 2017, about nine months behind schedule.

"The scope of work involves Amec Foster Wheeler providing a team of production and maintenance assessors to carry out competency assessments for the Ichthys Operations and Maintenance teams across all project assets," Amex FW said.

"This includes the Central Processing Facility, Floating Production Storage and Offtake vessel and the Bladin Point LNG onshore processing plant," Amex FW explained.

The Japanese company's plant will produce 8.9 million tonnes per annum of LNG from two processing Trains.

Amec FW said its contract would run until April 2017, with the assessments to be conducted at construction yards in Korea, offshore Western Australia, and at the onshore LNG facility in Darwin.

"We are proud to be involved in the Ichthys LNG project and will utilize our significant global Operations and Maintenance expertise to deliver this important role," said Roberto Penno, Amec FW Group President for all operations outside America.

Royal Boskalis orders tugs to run on LNG fuel in Port of Singapore

Our Europe editor

Royal Boskalis Westminster of the Netherlands has ordered two dual-fuel tugs able to run on liquefied natural gas for towage duties under joint ventures it operates in the Port of Singapore.

Boskalis, based in the Dutch town of Papendrecht, operates two Singapore tug ventures with Keppel Smit Towage and Maju Maritime.

Pushing forward with LNG fuel in newbuild tugs

Delivery

The LNG fuel tugs are expected to be delivered in 2018 and will be capable of running entirely on LNG.

For this reason, the Maritime and Port Authority of Singapore will award a grant of up to S$2 million (US$1.45M) for each tug under its LNG Bunkering Pilot Programme.

Boskalis said the 65-tonne bollard pull Azimuth Stern Drive (ASD) tugs will be built by Keppel Singmarine in Singapore using the shipyard's proprietary design.

"The LNG fuel will be supplied by Shell, for which two Head of Agreements have been signed, and bunkered through FueLNG, a joint venture between Shell and Keppel," the Dutch company said.

"The two LNG-fueled tugs will be the first clients of LNG as marine fuel in the pilot for the development of Singapore into one of the world's main LNG bunkering ports," Boskalis added.

"With a large global fleet, Boskalis is constantly on the lookout for ways to reduce emissions and innovate in terms of sustainability and looks forward to rolling this out in other LNG ports and terminals around the world," it added.

"Boskalis believes that the use of LNG as a marine fuel for harbor tugs will play a viable role in reducing emissions that no other fossil fuel can currently achieve," the Dutch company said.

Keppel Smit Towage was set up as a joint venture in 1991 between Keppel and Smit Singapore, a wholly-owned subsidiary of Boskalis.

That joint venture merged operationally with Maju Maritime, another venture by Keppel and Boskalis, in early 2010.

The two companies have a combined fleet of 68 tugs and provide harbor towage services in Singapore and Diego Garcia as well as in Malaysia, Indonesia, Taiwan and China together with joint venture partners. The two new tugs will be their first to run on LNG.

Skangas forecasts faster growth in Nordic market for marine LNG fuel

Norwegian liquefied natural gas company Skangas said it carried out a successful bunkering operation near the Swedish port of Gothenburg as it forecast faster growth of the marine and industrial LNG fuel market in Northwest Europe.

Skangas, a subsidiary of Finnish natural gas operator Gasum, said it was delivering LNG to customers such as North European Oil Trading using a chartered carrier until its new bunkering vessel arrives.

Skangas has hired the services of the small-scale carrier "Coral Energy", with 15,600 cubic metres of capacity, owned by Dutch shipping line Anthony Veder.

"By using the 'Coral Energy', Skangas provides LNG bunkering to ship owners throughout Northern Europe.

"The bunkering in Gothenburg was performed in close cooperation between Skangas, ship owners Terntank and Anthony Veder, the Port of Gothenburg and the company North European Oil Trading," it added.

Skangas said the Gothenburg bunkering operation had several historic firsts for the company.

"Not only was it the first ship-to-ship LNG bunkering to the vessel 'Ternsund', it was the first ship-to-ship bunkering to be executed by companies Skangas and Anthony Veder and the first to take place in the Gothenburg area," Skangas said.

The company explained that the Gothenburg operation means the LNG bunkering market in Northern Europe has advanced as re-fueling had previously been done at ports using trucks or alongside onshore terminals.

It noted that it will soon take delivery of its own LNG bunkering vessel in early 2017.

The new Skangas bunker vessel is named "Coralius" and will have a capacity of 5,800 cubic metres.

"We are very proud to be one of the first in the world to bunker LNG ship-to-ship," said Tor Morten Osmundsen, Chief Executive of Skangas.

"We strongly believe that LNG will rapidly become the fuel solution for forward-thinking ship owners," he added.

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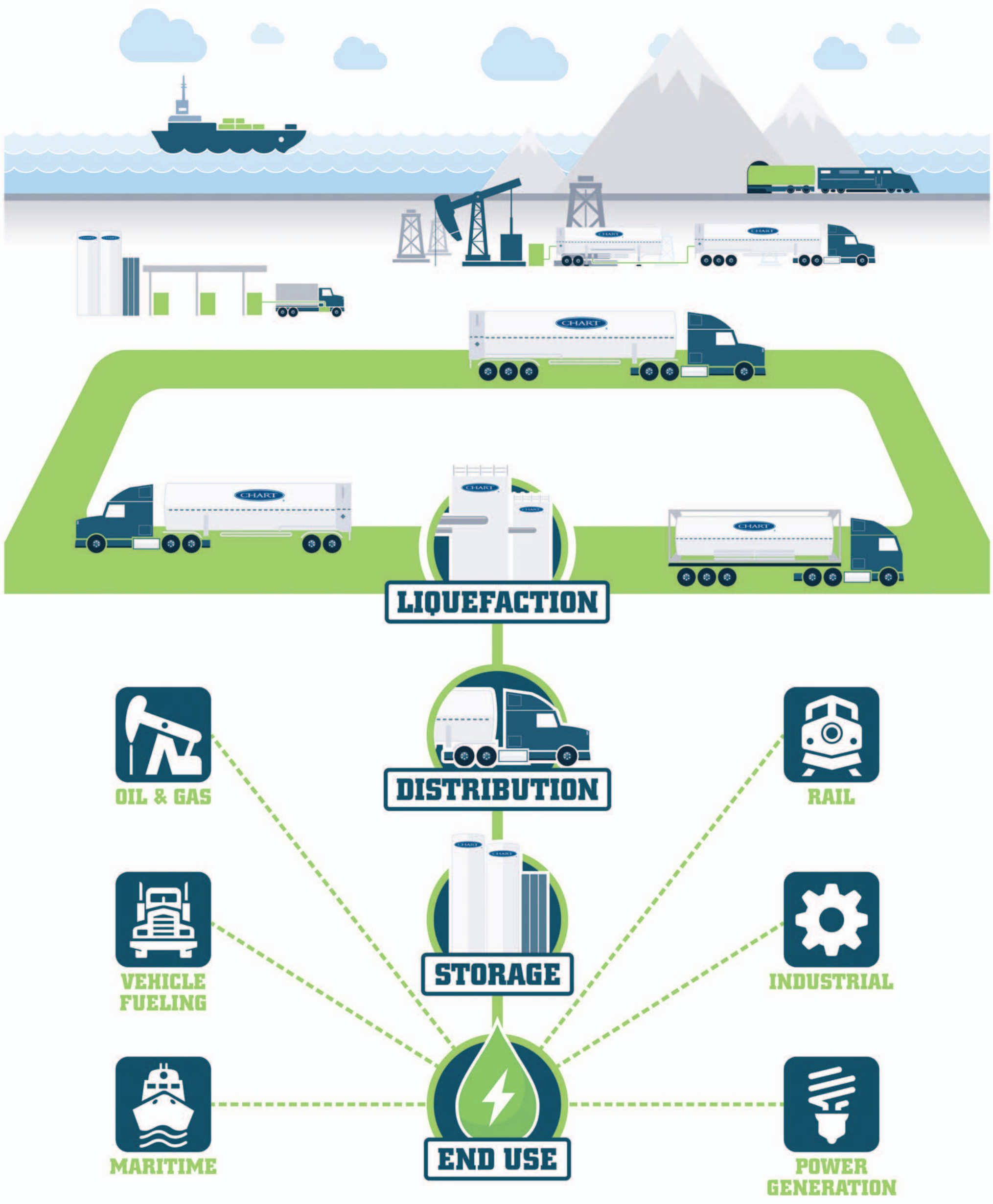

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NEWS NUDGES

Jera backs US project

Jera Co. Inc., the Japanese LNG procurement and project joint venture of utilities Tokyo Electric Power and Chubu Electric, has registered a letter of support with the US Federal Energy Regulatory Commission for the stalled Jordan Cove export project in the northwest state of Oregon. The Jordan Cove project was rejected by the US regulator for lack of market support and subsequently signed two Japanese supply agreements, one with Jera and another with Itochu Corp., the Japanese trading house. Veresen Inc., the Canadian-based developer of Jordan Cove, is currently undergoing a FERC re-hearing process for its project.

JGC wins Gulf contract

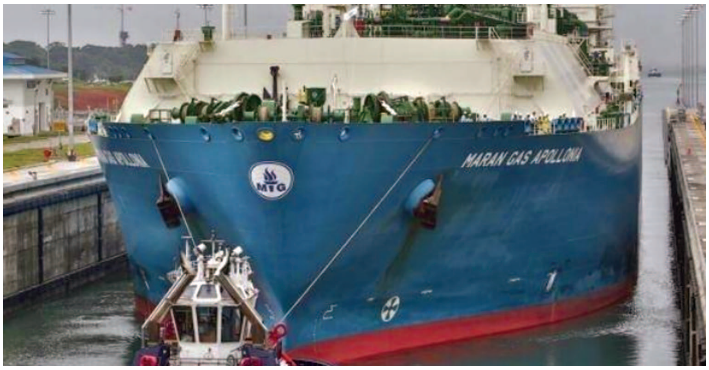
JGC Corp., the Japanese LNG and energy engineering company based in Yokohama, said its Middle East subsidiary JGC Gulf International was awarded a contract for a gas pipeline and storage tank construction project at Awali in the kingdom of Bahrain, planned by Bahrain National Gas Expansion Co. The contract covers engineering, procurement, construction and commissioning services and is scheduled for completion in September 2018. The value of the lump-sum turnkey contract is just less than $100 million.

Vitol given $8Bln loan

Vitol S.A., the Swiss-based global commodities trading company with growing LNG interests, said it had signed a syndicated revolving credit facilities of $8 billion. Vitol extended by 12 months the maturity date of an existing three-year $7Bln loan and refinanced a maturing loan of around $1Bln.

LNG carriers slow in take-up of expanded Panama Canal transits

Our Americas editor



First US cargo for China via expanded Canal in July

Since the expanded Panama Canal started operating a total of 13 LNG carriers had transited the waterway by the end of September 2016. Of these there were eight ships carrying cargoes.

Several of these cargoes were delivered to Chile from Cheniere Energy's US Sabine Pass plant and to Mexico and Japan from the Atlantic LNG export facility at Point Fortin in Trinidad.

Traffic

Since the start of July when the expansion formally opened to commercial traffic just one cargo had been shipped to Asia from the plant at Sabine Pass. That cargo was shipped to China.

It was carried on the "Maran Gas Apollonia" that transited the waterway on July 25 and delivered to the Chinese Dapeng import terminal in the southern province of Guangdong.

Of the five other LNG carriers that have used the Canal route, they had travelled with ballast.

Some traders noted that LNG carrier operators were still opting for the "long way" to Asia, while others expressed difficulties in scheduling ships through the Canal.

The Canal tolls are seen as a significant extra cost in the current environment of low charter rates.

On the safety front, the Canal Authority noted that a Chinese container ship had struck a wall on July 21, causing minor damage and there have also been some minor traffic incidents.

The Canal expansion work included two new lock complexes with a total of 16 gates, eight on the Pacific side and eight on the Atlantic side.

The use of the expanded Canal by LNG carriers, rather than the longer voyage around the tip of South America, cuts cargo carriage to Asia from the US Gulf coast by more than 7,500 nautical miles.

Panama's plan behind the expansion is to triple the $1 billion in revenues it currently gets from Canal shipping fees.

The optimum length of an LNG carrier for transiting the waterway and to take advantage of the economics is around 172,000 cubic metres capacity.

Shipping analysts said they expected the expansion to add about 15 daily crossings from all ship categories to the 35 to 40 the Canal now sees each day. ■

Ivory Coast expects to begin LNG imports with FSRU by mid-2018

The West African state of the Ivory Coast has signed an agreement to create a consortium headed by French energy company Total as it moves ahead with plans for a liquefied natural gas import facility that could begin receiving cargoes by mid-2018.

The LNG facility will be part of the African nation's Songon gas-to-power project.

"The arrival of LNG in the Ivory Coast will open a new era in the production of electricity," said Ivory Coast Energy Minister Adama Toungara at a Songon project signing ceremony in Abidjan.

The French-speaking Ivory Coast has the region's largest economy after Nigeria and produces a surplus of gas-fired electricity from its own resources which it exports to its neighbours.

However, a lack of new domestic natural gas discoveries has raised concerns about future supplies.

The natural gas reserves of the Ivory Coast were estimated at around 1 trillion cubic feet in 2015.

The Total-led project aims to deploy a floating storage and regasification unit and associated infrastructure costing an initial $200 million.

"We intend to bring this project to fruition and have set ambitious targets," said Laurent Vivier, head of Total's natural gas division.

A statement said Total would be the project operator and the consortium would also include Royal Dutch Shell, Ivory Coast state oil company Petroci, Azerbaijan's Socar and Norwegian FSRU provider Golar LNG.

Also part of the Songon project is Houston, Texas-based Endeavor Energy, an independent power development and generation company focused on Africa.

Songon is a greenfield development venture consisting of combined-cycle gas-fired power generation, featuring pipeline infrastructure and an FSRU.

The project has already significantly advanced in terms of obtaining the coastal site and starting the environmental approvals process with the Ivory Coast government. ■

Qatar signs 20-year LNG agreement with Pakistan linked to growth of its facilities

Our Asia-Pacific editor

Qatargas, the world's largest liquefied natural gas producing company, has signed a firm 20-year agreement to supply Pakistan with LNG cargoes as the Asian nation continues to develop import infrastructure around the port of Karachi.

Executives of the owner of the sole Pakistani import facility at Port Qasim, near Karachi, Global Energy Infrastructure Ltd (GEIL), signed the Sale and Purchase Agreement at a ceremony in Islamabad hosted by Pakistani Prime Minister Nawaz Sharif.

Delegation

The Qatari delegation was led by Saad Sherida Al Kaabi, the President and Chief Executive of Qatar Petroleum, which is the main shareholder of Qatargas as well as the other Qatari production company RasGas. The Islamabad event was also attended by the Chairman and CEO of Qatargas, Khalid bin Khalifa Al Thani, and other company officials.

Qatar and Pakistan complete LNG supply accord with some flexibility for extra import capacity

Pakistan's first LNG import facility, the floating storage and regasification unit "Exquisite", began operations in April 2015 at Port Qasim, located on a channel of the Indus River east of Karachi.

The regasified LNG is delivered directly to a pipeline of the Pakistani regional utility, Sui Southern Gas Co.

The single LNG facility has helped alleviate some of the huge energy shortages in the south of the country since being commissioned, though officials have said more import terminals are planned.

The Qatari delegation was welcomed by Prime Minister Sharif, along with federal ministers and senior Pakistani officials.

Under the terms of the agreement, Qatargas will supply 1.3 million tonnes per annum of LNG to Pakistan, with provisions allowing the volume to increase to 2.3 MTPA once Pakistan expands its import infrastructure.

The LNG will be supplied from the Qatargas 2 operation at Ras Laffan, where two Trains each produce 7.8 MTPA.

Qatargas said the first cargo was expected to be delivered to Pakistan in 2018 by a Qatargas-chartered Q-Flex vessel.

Qatar Petroleum CEO Al Kaabi thanked the Pakistani PM for hosting the signing of the long-term LNG supply deal with GEIL.

"The agreement with GEIL reinforces our confidence in Pakistan as a promising energy market. ■

Malta joins Med LNG club as converted ship delivered

The Mediterranean island of Malta has seen the arrival offshore of a floating storage unit that will serve as a liquefied natural gas import facility moored next to a gas-fired power station.

The vessel "Armada LNG Mediterrana", a former Japanese-built conventional LNG carrier, was converted at the Keppel Shipyard in Singapore and left the Asian city state on September 11.

The FSU is being moored in Malta's Marsaxlokk Bay and will then be commissioned during October to deliver regasified LNG to the new Delimara Power Station.

The vessel, which was converted at the Singapore yard over a 17-month period, will store LNG until it is ready to be regasified when required.

The "Armada LNG Mediterrana" was previously named the "Wakaba Maru" and built in 1985.

It is owned by Malaysian offshore energy services company Bumi Armada Navigation and has been taken on long-term charter by Electrogas Malta.

The FSU has been converted so that it can be used on a continuous basis, without dry-docking interruption, during a period of up to 20 years feeding LNG for regasification and use by the 400-megawatt Delimara power plant.

Malta will also allow the FSU "Armada LNG Mediterrana" to fly the Maltese flag as an exception to that rule that makes ships older than 25 years ineligible.

This followed a full inspection and testing of the ship by Transport Malta.

■

CEO who built up shale-gas assets Pacific Northwest project step down

Our North America editor in New York

Pacific Northwest LNG Chief Executive Michael Culbert, who lined up more than 60 trillion cubic feet of resources for the project, is stepping down from his roles with Petronas, including his post as CEO of Progress Energy, the Canadian company acquired by the Malaysians five years ago for its shale-gas assets.

The Petronas CEO of Upstream, Anuar Taib, said Culbert was stepping down from his day-to-day responsibilities as President and CEO from October 31 as he prepares for retirement.

Prominent

The Malaysian company said Culbert would continue to serve as a director on the boards of both Progress and Pacific Northwest. His replacement at Progress was named as Mark Fitzgerald.

Petronas is still considering its next move on the Pacific Northwest LNG joint venture after it was given regulatory approval by the Canadian federal government.

However, the approval includes 190 mitigation measures and for the first time in a Canadian energy venture the imposition of a maximum cap on greenhouse gas emissions. These will add extra costs.

Petronas has said it would conduct a total project review along with other shareholders over the coming months before announcing the next steps for the venture aimed at building a liquefaction plant at Lelu Island, near the port of Prince Rupert.

The other partners are India Oil Corp., Japan Petroleum Exploration Co., China's Sinopec and Petroleum Brunei.

Petronas paid US$1.7 billion for its Progress Energy stake back in June 2011 to develop its British Columbia shale-gas holdings in the Montney region. Culbert was President and CEO at the time and stayed on as his company became a Petronas subsidiary.

"On behalf of Petronas I want to thank Mr Culbert for his years of leadership with Progress," said Taib.

"He was instrumental in developing the joint venture partnership with Petronas and the subsequent acquisition, while also significantly growing the company's production of natural gas in British Columbia," Taib added.

"Mr Culbert has also led and supported Pacific NorthWest LNG through the federal regulatory process, which recently culminated in the project receiving its environmental certificate," the Petronas executive added.

■

Malaysia expands LNG shipping fleet to meet its future demand

Malaysia International Shipping Corp., the Asian nation's liquefied natural gas and energy fleet owner, has named a new LNG carrier as it progresses with floating and onshore expansion.

The 150,200 cubic metres capacity ship was named "Seri Camellia" in a ceremony at the South Korean shipyard of Hyundai Heavy Industries Co.

The vessel has Moss-type storage tanks and will be chartered by state energy company Petronas for 15 years.

MISC is majority-owned by Petronas and when the ship enters into service the shipping line will have 22 of its 26 LNG vessels on long-term charter.

The "Seri Camellia" is the first of five newbuild contracts previously agreed between Petronas and HHI and taken over by MISC.

All five ships will have Moss-type tanks and the other four are due for delivery in 2017 and 2018.

'Seri Camellia' is first of five newbuilds from South Korea

MISC has chosen to power all five ships with a reheat steam main engine. Many believe this to be old technology and most new carriers are fitted with dual-fuel diesel engines or the new low-speed diesel engine.

The shipping company is looking to boost business and benefit in the medium term from Petronas being at the forefront of FLNG projects being developed for stranded gas fields in Malaysian waters.

Petronas has also expanded its Bintulu onshore LNG production plant in Sarawak and the regasification capabilities of the Malaysia peninsula.

The Malaysian shipping line is additionally being helped by lifting cargoes from the Australian Gladstone coal-seam-gas-to-LNG plant in Queensland, where Petronas is a shareholder.

The new "Seri Camellia" LNG ship will be part of the new generation of the Seri C Class LNG fleet.

■

Order for two LNG carriers gives morale boost to beleaguered Korean shipbuilding

Our Asia-Pacific editor

Samsung Heavy Industries said it won an order to build two new liquefied natural gas carriers, giving a boost to the South Korean shipyard engineering industry in the midst of a downturn.

The SHI contract is with Monaco-based GasLog for two carriers of 180,000 cubic metres capacity and worth $380 million.

Top three

SHI, one of the three world-leading South Korean shipbuilding companies, along with Daewoo Shipbuilding & Marine Engineering and Hyundai Heavy Industries, said it was aiming for more than $5 billion of new orders during 2016.

However, all three companies have been facing financial crises because of their large borrowings and increased completion from China.

Korean yards recorded combined losses of $4.9Bln

For the first quarter of 2016, all three shipyards received only eight orders between them from commercial ship owners.

A global over-capacity of shipping and lower commodity prices have put pressure on charter rates and shipping profits, leading companies to postpone fleet renewals.

The three South Korean shipbuilders recorded combined net losses of $4.9Bln in 2015 and recent earnings have shown little improvement.

The government regards shipbuilding as an important part of the economy and state-run lenders including Korea Development Bank and Export Import Bank of Korea have injected billions of dollars into the shipyards.

Under pressure from the government the three companies have drawn up restructuring programmes in an attempt to stem their losses.

In addition to LNG carriers, the Korean yards also lead the market in building large container ships and oil tankers.

SHI, Daewoo and HHI have said they are seeking to raise $7.3 Bln through asset sales.

They also plan to reduce manufacturing capacity by 20 per cent and their workforces by 30 percent both by 2018.

NYK Line completes transaction to join an expanded Singapore-Japan subsea company

Nippon Yusen Kaisha (NYK Line), the Japanese LNG and tanker fleet owner, has completed its entry into the Emas Chiyoda Subsea company, giving Asia a world-class player in the market.

The existing shareholders in Emas Chiyoda Subsea (ECS), Singapore-based Ezra Holdings and Japanese engineering giant Chiyoda Corp, said that through the acquisition of existing shares from Ezra and Chiyoda, NYK now holds a 25 percent equity interest in ECS.

Ezra and Chiyoda retain respective 40 percent and 35 percent shareholding in ECS. The value of NYK Line's investment was not disclosed.

Chiyoda is one of the world's leading LNG engineering companies, working on projects in Australia, Mozambique, Russia and the US and is responding to consolidation in the industry that saw France's Technip initiate the takeover of Houston, Texas-based FMC Technologies.

Chiyoda's backlog of LNG and natural gas work at the start of 2016 amounted to $8.5 billion.

Emas Chiyoda Subsea was only created in March 2016 as a 50-50 joint venture between Ezra Holdings, the offshore contractor, and Chiyoda.

As part of this earlier Emas Chiyoda transaction, Chiyoda paid Ezra a cash consideration and injected additional capital into the joint venture company.

The venture, marrying Ezra's and Chiyoda's complementary areas of expertise, was created to allow the undertaking of larger and more complex offshore subsea construction projects.

The arrival of NYK Line gives the venture shipping expertise and opens up markets such as Floating LNG projects.

NYK Line President Tadaaki Naito said of the completion of the transaction: "This partnership signifies an important new phase of our business as NYK expands into the offshore oil and gas exploration and development.

"We are confident that the company's long-standing competence in oil and gas shipping will make a positive contribution to this partnership.

Chiyoda Chief Executive Shogo Shibuya said he extended a big welcome to NYK as they joined the ECS family.

"As part of its strategic medium-term plan, Chiyoda has been focusing on expanding its business in the offshore and upstream field to offer seamless subsea developments from concept to execution," Shibuya explained.

The Singapore-based branch of ECS is represented by Ezra group CEO Lionel Lee.

"We are delighted to announce the addition of such a dominant force in the shipping industry, NYK, as a participant in this joint venture, enabling us to tap into the Japanese market.

"NYK's wealth of experience in vessel operations around the world and NYK's investment is a strong testament to the core fundamentals and long-term prospects of our subsea business," Lee stated.

NYK is one of the largest shipping companies in the world with a fleet of about 800 vessels under its control.

However, it also has some existing business in offshore oil and gas through a drillship, a Floating Production Storage and Offloading unit and a shuttle tanker.