

LNG Transition

LNG AS A TRANSITION FUEL

3rd Quarter 2025

LNG emerges as 'fuel of choice' as orderbook tonnage rises

Classification society DNV has reported a sharp rise in the gross tonnage for LNG-powered vessels ordered in the first half of the year, as demand for alternative fuels rises.

The organisation identified 19 orders for alternative-fuelled vessels in June alone, and notes that orders for alternative-fuelled vessels reached 19.8 million gross tonnes in the first half of the year

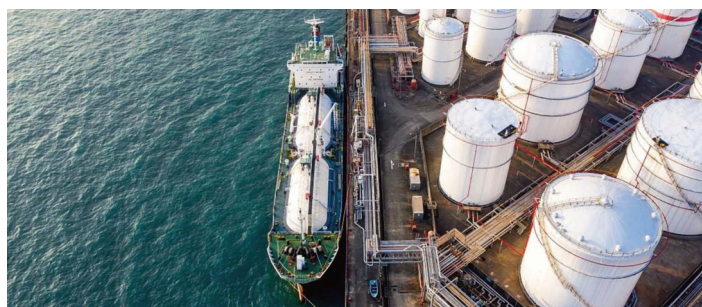
"Overall, it is fascinating to see how the alternative-fuelled market has continued to go from strength to strength in the first half of 2025," Jason Stefanatos, Global Decarbonization Director at DNV said, noting that this was "continuing a clear trend which has been evident since the middle of 2024".

Alongside the strong showing for LNG, there was evidence of rising demand for methanol ships with a total of four orders added for methanol-fuelled vessels in June. This was complimented by a further two hydrogen vessels and two LPG vessels.

Operationally complex

The latest data was published via DNV's Alternative Fuels Insight (AFI) platform and shows that LNG-fuelled container vessels make up the vast majority of alternative-fuelled ships on order.

"This concentration suggests



LNG feeder at terminal

that some of the industry's most commercially exposed and operationally complex segments are now leading the charge, reinforcing the view that alternative fuels are no longer a fringe strategy, but a mainstream investment decision," a spokesperson for DNV said.

Despite the exceptional rise in gross tonnage, the number of new vessels on order actually declined with just 151 ships in the first half of this year, as compared to 179 in the same period of 2024, indicating the increase in size per vessel.

"This data reflects a sector that is actively recalibrating, balancing optionality, compliance readiness, and long-term fuel strategy into its investment outlook... despite an overall slowdown

of the newbuild market in the face of global economic and political uncertainty," Stefanatos adds.

Fuel of choice

LNG emerged as the 'clear fuel of choice', accounting for 87 of the new order, accounting for a total of 14.2 million gross tonnes in the first half. This looks set to ensure the fuel remains dominant in the container segment, with a current 13.6 million gross tonnes. Methanol in contrast has only 4.6 million gross tonnes ordered across the container, RoPax, tanker, offshore, and car carrier segments.

"We're seeing a broader shift take hold across the industry. The energy transition is no longer driven solely by first movers, it's now being shaped by a second wave of shipowners who are integrating alternative fuels and technologies into their core strategies. Even in a slower newbuild market, fuel choices are diversifying, and decarbonization is becoming embedded in everyday decision-making. We expect that fuel choices and energy efficiency investments will accelerate as the regulatory framework becomes clearer over the next 4-10 months," Knut Ørbeck-Nilssen, CEO Maritime at DNV, concluded.



Fortescue Green Pioneer

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Canada's LNG renaissance drives energy transition

Energy giant Petronas has successfully dispatched its first LNG cargo from the newly operational Kitimat facility in Canada, as the nation eyes new fuel exports to drive the energy transition.

Operated by industrial joint venture LNG Canada, the Kitimat facility aims to offer a direct and efficient shipping corridor to key North Asian markets, including Japan, South Korea, and China. Strategically located on Canada's west coast, the site is backed by Shell and Petronas amongst others, and represents a multibillion-dollar investment.

"Petronas' first cargo sail away is the culmination of years of perseverance to realise our vision for Canadian LNG exports to the Asia Pacific region," Datuk Adif Zulkifli, CEO of Gas and Maritime at Petronas, said. "We are privileged to commemorate this moment with LNG Canada, our other joint venture partners, the Haisla Nation, Kitimat community, and

Canadians at large. Petronas is honoured to be a part of this first-of-its-kind project in Canada."

Petronas holds a 25% equity stake in the project, through its wholly owned entity North Montney LNG.

LNG supports political shift

The inaugural shipment, sailed from Kitimat for Japan aboard the 174,000-cubic-metre *Puteri Sejin-jang* LNG vessel and was hailed as a symbolic event in Canada's shift to increase energy exports. Kitimat now lies at the heart of this ambition as the government reassesses the nation's role in global energy markets.

The strategic push for LNG exports comes at a critical juncture,

as Canada navigates the complexities of international trade dynamics influenced by US President Donald Trump's tariffs. Tariff announcements and strained relations have disrupted traditional trade flows and threatened Canadian jobs and industries, prompting a reassessment of Canada's energy strategy. In response, Prime Minister Mark Carney has pledged to turn Canada into an "energy superpower" by leveraging its abundant fossil fuel resources and reducing reliance on US markets.

"When I talk about being an energy superpower I always say in



Kitimat LNG facility

both clean and conventional energies," Carney commented. "We're asking for nation building projects and we are going to move as rapidly as possible on as many of them as possible."

This shift marks a significant departure from the previous administration's focus on climate action, blocking many oil and gas projects. ■

Seaspan completes landmark LNG bunkering at Long Beach

Canadian shipping line Seaspan Energy has completed milestone LNG bunkering operations at the Port of Long Beach, California, helping to solidify the fuel's use at the port.

The refuelling operation was carried out by the bunker vessel Seaspan Baker in June, with LNG transferred to the pure car and truck carrier (PCTC) *Plumeria Leader*. Operated by NYK Line, the *Plumeria Leader* was the first LNG-fuelled PCTC to be bunkered at the port.

"We are extremely proud to achieve this significant milestone as the first company to complete a ship-to-ship LNG bunkering of a pure car carrier in the Port of Long Beach," Harly Penner, President of Seaspan Energy, said. "This accomplishment is a testament to the hard work and collaboration of our team, NYK, and the Port of Long Beach."

LNG adoption

The Port of Long Beach remains one of the busiest and most significant ports in the US and has had a complex relationship with LNG. In 2007, plans for an LNG import terminal were terminated due to safety concerns and opposition from public officials, however more recently authorities have thrown support behind LNG as a transport fuel.

"The role of low-carbon or clean marine fuels is pivotal," a spokesperson commented in the Port of Long Beach recent Clean Air report. "LNG, a frontrunner among these, burns cleaner than traditional marine fuels, producing fewer sulphur oxides and particu-

late matter."

The latest milestone, refuelling the first PCTC, was achieved at the start of June, less than a month after Seaspan completed the first ship-to-ship LNG bunkering of a tanker in Long Beach in mid-May.

Bunker fleet

Seaspan Energy now operates three LNG bunkering vessels on the West Coast of North America. All three sister were designed by Canadian naval architects Vard Marine and measure 112.8 metres in length, 18.6 metres in width, 5 metres in draft, with capacity for 7600 cubic metres of LNG.

"Collaborating with partners

such as Seaspan Energy allows us to advance low-carbon fuel solutions and deliver on our environmental goals while ensuring operational excellence," Kaori Takahashi, General Manager, Fuel Group, at NYK LINE, said, noting the "strong commitment to decarbonising the maritime sector."

Headquartered in Vancouver, British Columbia, Seaspan Energy provides LNG fuelling services and energy transformation opportunities across the marine sector. It is a subsidiary of Seaspan Corporation, the world's largest independent charter owner and operator of containerships, which has its main headquarters in Hong Kong. ■

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GTT, Hudong-Zhonghua collaborate to optimise LNG operations

LNG storage specialist GTT has announced a strategic partnership with Hudong-Zhonghua Shipbuilding in China to jointly develop technology for next-generation LNG bunkering vessels.

The duo launched a collaborative initiative to enhance operational efficiency and reduce operating costs through a design-led approach.

“At the core of this project is the increase of the effective pressure in LNG tanks using GTT’s Mark III Flex membrane containment system,” a spokesperson for GTT said.

New pressure limits

The current industry standard for effective pressure in LNG tanks sits at 0.7 bar gauge (barg) and the partners now aim to develop solutions capable of reaching 1 barg. To achieve this the firms, expect to leverage various approvals already received from Class Societies for this pressure.

It is envisaged that an increase in operating pressure will bring numerous benefits for operators, most notably extended flexibility and improved energy efficiency. The ability to load LNG at higher temperatures will speed up LNG delivery while lower use of sub-cooler systems will reduce overall power consumption.

“This collaboration between a technology leader and a top-tier shipyard promises tangible advancements in LNBV capabilities,” Ali Hasan Rizvi, Marine Superinten-



Hudong-Zhonghua shipyard

dent at Bernhard Schulte Shipmanagement, said. “As demand for LNG as a marine fuel grows, efficient and cost-effective bunkering infrastructure is paramount. Optimizing the core vessel design is a crucial step forward.”

2 barg goal

As a longer-term goal, researchers will also evaluate the technical feasibility of increasing design pressure up to 2 barg, potentially bringing even greater benefits in future.

“This collaboration reflects the shared commitment of GTT and Hudong-Zhonghua Shipbuilding to drive continuous innovation and support the maritime industry’s energy transition,” a spokesperson

for the partners said.

All design work will be conducted to meet evolving environmental regulations, including AFNIR recommendations on cold-ironing. The anticipated operational upgrades made possible by this research are also expected to improve regulatory compliance as holding time is also increased.

Headquartered in Saint-Rémy-lès-Chevreuse in north-central France, GTT is one of the largest manufacturers of membrane containment systems for the storage and transportation of marine LNG fuel. The group’s tanks and technologies are used in LNG carriers, floating terminals, onshore storage tanks and multi-gas carriers worldwide. ■

NEWS NUDGES

Jiangnan secures Shanghai bunker vessel contract

Jiangnan Shipbuilding and the Shanghai International Port Group have inked a deal to build a new LNG bunkering vessel for the Port of Shanghai.

The vessel will be designed by CSSC subsidiary Shanghai Merchant Ship Design and Research Institute and aims to significantly enhance the port’s bunkering capabilities. Equipped with intelligent systems for cargo management, crew safety, and maintenance, the vessel will adhere to the China Maritime Safety Administration’s guidelines for intelligent ship monitoring.

The new vessel will boast a total cargo capacity of 20,000 cubic meters and feature an electric propulsion system with two azimuthing thrusters. It will also incorporate technology to reuse boil-off gas from the cargo tanks as fuel for its engines, promoting efficiency and sustainability.

Jiangnan Shipbuilding is a subsidiary of China State Shipbuilding Corporation (CSSC). ■



GTT, Hudong-Zhonghua signing ceremony

UECC backs LNG in fleet expansion

Short sea shipping line United European Car Carriers (UECC) has added further support for LNG as a transport fuel in the eastern Mediterranean, with the addition of the new LNG Pure Car and Truck Carrier (PCTC) *Blue Heritage* to its fleet.

This 200-meter vessel, with capacity for 7,000 car equivalent units (CEUs) across 12 decks, is the sister ship to the *Blue Aspire*, which was also previously taken under operation by UECC.

“We are expanding our fleet with operation of an additional eco-friendly Pure Car and Truck Carrier (PCTC) that will enhance cargo-carrying capacity and flexibility for our clients on this major route, while further reducing the carbon footprint of their logistics,” Per Christian Mørk, UECC COO, said.

Enhanced capacity

The *Blue Heritage* is equipped with dual-fuel LNG engines that can also run on liquefied biomethane, offering significant emissions savings and supporting UECC's commitment to sustainability.

“The addition of the *Blue Heritage* will increase to seven the number of UECC vessels traversing

this busy route, which means we will be able to offer a sailing frequency of 4.5 days from Turkey to Northern Europe - the highest in the market,” Mørk adds.

The *Blue Heritage* will be deployed on the North-South route spanning the Mediterranean and Northern Europe. This route has also been extended with the inclusion of the Turkish port of Yarmıca for regular calls, in addition to Efesan and Autoport in Turkey.

North-South trading network

Four of the decks on the *Blue Heritage* are hoistable, adding further support for High & Heavy (H&H) cargoes. It will be one of three vessels on a port rotation that includes: Flushing, Zeebrugge, Cuxhaven, Vigo, Yarmıca, Efesan, Autoport and back to Flushing. Another four vessels will run on the port rotation of Cuxhaven, Bremerhaven, Zeebrugge, Portbury,



The *Blue Heritage*

Vigo, Sagunto, Livorno, Piraeus, Autoport and back to Cuxhaven.

“Our North-South service is the largest loop we operate and as such absorbs also the largest number of vessels. By adding capacity, this enables us to add ports in co-operation with our customers to tailor-make services,” Mørk explains, noting that the flexible deck configurations provide “versatility in handling a wide range of cargoes - from vehicles to rolling H&H and breakbulk equipment”.

The firm also notes that its investment in LNG-fuelled vessels has meant that it is already run-

ning a surplus in relation to Fuel EU Maritime, enabling it to eliminate surcharges for customers. Its fleet has a C-rating or above under the IMO's Carbon Intensity Indicator (CII) and this has also significantly reduced its exposure to the EU Emissions Trading System (EU ETS).

“Through proactive investments in fleet development and alternative fuels, UECC is steadily minimising its carbon footprint towards the goal of net-zero by 2040 and thereby reducing Scope 3 emissions for our customers in alignment with their sustainability goals,” Mørk concludes. ■

Somtrans orders LNG vessel from CIMC SOE

Belgian shipping firm Somtrans has ordered a new LNG bunker vessel from China's Nantong CIMC Sinopacific Offshore & Engineering (SOE).

The new vessel is an inland tanker barge and will feature capacity for 20,000 cubic metres of LNG. It is the sixth vessel of similar type ordered by Somtrans from CIMC SOE. Somtrans is reported to have simultaneously signed a contract for a further optional unit.

Based in Wijnegem, Somtrans is

a family-owned business, established in 1975. The new vessel is expected to significantly enhance Somtrans' capabilities, aligning with the company's commitment to innovation and growth in the LNG sector.

The latest newbuild will be the largest vessel in Somtrans fleet

and is scheduled for delivery in September 2027. An earlier order for a separate 20,000-cubic-metre vessel is scheduled for delivery in April 2027.

The latest deal was brokered by Dutch firm Rensendriessen Shipbuilding & Shipbrokers.

Fleet expansion

The addition of the new vessel will take the firm's fleet of inland tanker barges to 25, which include capacities ranging from 7,800 cubic metres to 20,000 cubic metres.

Nantong CIMC Sinopacific Offshore & Engineering Co., Ltd. (CIMC SOE) is a prominent international

engineering company renowned for its expertise in high-end equipment manufacturing, including liquefied gas carriers, liquid cargo systems, and offshore modules.

Established in 2006 and acquired by CIMC Enric in 2017, CIMC SOE has become a cornerstone of the CIMC Group's “Energy, Chemical, and Food Equipment” sector. Since then the shipyard has delivered 48 gas carriers, 419 type C tanks, and 68 offshore modules.

The Somers family, which controls Somtrans, has rapidly expanded its position in the bunkering market since acquiring Bomin Belgium in 2018. The deal saw the firm expand into LNG bunkering and since then its fleet has grown. ■



Artist's rendition of CIMC SOE LNG bunker vessel

EU mulls alternative models for LNG in energy transition

The European Commission's recent Affordable Energy Action Plan (AEAP) has sparked a debate over the next steps for European LNG, with some suggesting a move towards the 'Japanese model' may bring benefits.

The AEAP, released in February, is a comprehensive strategy aimed at reducing energy prices, stabilizing markets, and mitigating future shocks to Europe's energy system and proposes exploring the 'Japanese model' of LNG investment, an approach which would favour boosting direct foreign investment in LNG projects and joint purchasing by European importers.

Sam Reynolds, a Research Lead with the Institute for Energy Economics and Financial Analysis (IEEFA) notes that the AEAP "raises several important questions, particularly around "the costs and risks involved".

Market complexities

While there are clear benefits to implementing an existing, tried-and-tested model the reality is that many aspects of Europe's supply chain are non-replicable and challenges remain multifaceted.

"Japan's LNG investment approach is highly complex and costly, involving substantial public support and numerous players

throughout the entire LNG value chain," Reynolds notes, pointing out that Japan's strategy has evolved over more than seven decades, integrating policy directives, financial levers, and energy security incentives.

Rather than a single, unified blueprint, Japan's approach to LNG investment is a complex amalgamation of policy directives, financial mechanisms, and energy security incentives and as such is unique to the challenges of Japan's islands.

Supply stabilization

The AEAP in contrast seeks to address the root causes of high energy costs by developing a cohesive framework for new policy. As part of the Commission's broader Clean Industrial Deal, it is designed to support cheaper renewable energy and energy efficiency alternatives.

"Long-term LNG contracts are a key tool in stabilizing supply and reducing price volatility, which is why it's important to encourage market participants to engage in



European Commission headquarters, Brussels

such agreements," a spokesperson for the International Association of Oil & Gas Producers (IOGP), says. "Ensuring diversification, including LNG, from multiple sources will help reduce vulnerabilities associated with dependence on a limited supply base."

In Japan, public financial institutions, such as the Japan Bank for International Cooperation (JBIC), are substantially different from Western counterparts and play a

crucial role. JBIC, for instance, operates under statutory mandates to ensure domestic energy security through LNG financing, underlining the immense financial support needed to drive development.

"In addition to spending on LNG value chain development, [Japan] paid US\$41 billion for LNG imports in 2024, up from US\$30 billion in 2016," Reynolds states. "Long-term LNG purchase contracts help insulate Japan from volatility in spot markets. However, customs data shows that the country's LNG import bill still increased to over US\$64 billion in 2022 following the Russian invasion of Ukraine, leading to a record trade deficit. As a result of high LNG dependence, Japan's household electricity prices are reportedly more than double the average across Asia."

Europe may similarly face challenges in marketing LNG overseas as its own demand falls, with volatility in markets spurring further disruption. While the Japanese model of LNG investment offers a potential pathway for some of Europe's LNG sector it is unlikely to scale across all the various risks associated with the continent's energy transition and as Europe navigates its own energy transition, it seems most likely that it will need to develop its own bespoke solution.



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Hong Kong achieves milestone SIMOPS LNG bunkering

In a landmark operation, infrastructure developer CLP Power (CLPe) has partnered with global energy group CNOOC to complete Hong Kong's first LNG bunkering with simultaneous cargo handling.

This pioneering operation took place on 5 June at Kwai Tsing Container Terminals and marked a significant step in Hong Kong's journey to becoming a green marine fuel hub.

“Conducting bunkering during cargo operations – and with the bunkering of green maritime fuel which reduces carbon emissions – truly delivers a synergistic effect where one plus one is greater than two,” Secretary for Transport and Logistics Ms Mable Chan said, predicting it would encourage more services for vessels using LNG and other green maritime fuels.

The operation involved supplying approximately 10,000 cubic meters of LNG to the container vessel *Hanoi Express*, operated by the German shipping company Hapag-Lloyd AG.

Rapid turnaround

This milestone not only represents the largest single LNG bunkering operation in Hong Kong to date but also showcased capabilities to integrate bunkering and cargo operations at speed.

The integrated process allowed the *Hanoi Express* to be refuelled with LNG within 24 hours while

simultaneously loading and unloading cargo, significantly reducing the port turnaround time and setting a new benchmark for operations.

“This pioneering collaboration between CLPe and CNOOC not only advances Hong Kong's development as a world-class green marine fuel bunkering hub but also strengthens our ties with CNOOC, a key energy supplier to the mainland maritime industry. This cooperation will help accelerate the green transformation of the national shipping industry and enhance the entire ecosystem,” T. K. Chiang, CEO of CLP Holdings, said.

Largest LNG bunkering vessel

The LNG bunkering operation was carried out by CNOOC subsidiary, CNOOC Guangdong Water Transport Clean Energy Company, and utilised the supply vessel *Haiyang Shiyou 301*, a state-of-the-art vessel measuring 184.7 meters in length and 28.1 metres in width.

As the first domestically built LNG bunkering vessel in mainland China, it boasts both LNG transportation and bunkering capabilities. With a storage capacity of 30,000 cubic meters and a refu-



Haiyang Shiyou 601

elling rate of 1,650 cubic meters per hour, the *Haiyang Shiyou 301* is the largest LNG bunkering and transport vessel in the world.

“We will strengthen collaboration with Hong Kong's maritime industry, deepening cooperation in key areas such as green shipping hubs and high-value-added supply chain services,” Wu Wei-hau, deputy director of Guangzhou Municipal Commerce Bureau, explained. “This will help consolidate Hong Kong's position as a global shipping centre and make the Greater Bay Area a strategic anchor in the new development paradigm.”

NEWS NUDGES

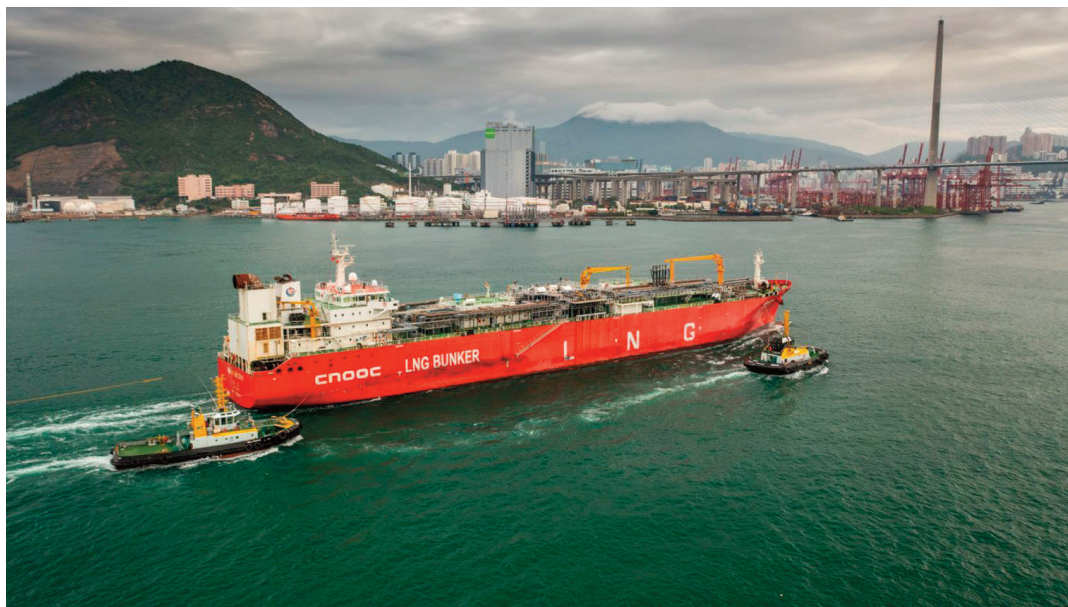
Shanghai, Shenzhen drive Chinese LNG bunker surge

China's leading ports, Shanghai and Shenzhen, significantly ramped up LNG bunkering activities in the first half of the year, as demand for the fuel has soared.

Shenzhen's Yantian port saw an impressive 160% year-on-year increase in LNG bunkering volumes, reaching 310,000 cubic meters from January to June. This volume surpassed the port's entire 2024 figures, with expectations for the port to now hit 600,000 cubic meters by year-end. Shenzhen is further expanding its services across Yantian, Shekou, and Xiaomo ports. By 2030, the city aims to establish a regional gas pricing benchmark and an integrated trading platform settled in Yuan.

Meanwhile, Shanghai port remains at the forefront in China, supplying 384,000 cubic meters of bonded LNG bunker fuel in the first half of 2025, a 57.7% year-on-year increase and the highest volume among Chinese ports.

In contrast, Singapore experienced a 3.1% decline in LNG bunkering volumes during the same period, delivering just 577,306 cubic meters.



CNOOC and CLPe completed the bunkering in Hong Kong

NYK finances shift in LNG transition

Japanese shipping line NYK Group has taken a proactive stance on LNG in recent years, integrating a variety of LNG solutions into its fleet, but as alternative fuels grow in popularity its future roadmap is becoming increasingly complex.

While LNG has been a cornerstone of NYK's strategy to transition towards cleaner energy sources, the company recognises the need to diversify is essential not only to comply with tightening global regulations but also to address the varying needs of different shipping routes and cargo types.

"In addition to the core strategy of transitioning from LNG to ammonia fuel, NYK is proactively introducing various alternative fuels such as LPG, methanol, and biofuels in collaboration with shippers and other stakeholders as a step tailored to match the needs of cargo for transport," a spokesperson for the firm said.

Transition bonds

In early April, NYK issued transition bonds for the fourth time, marking another step in their commitment to decarbonisation and sustainable finance. These bonds, part of their 49th Unsecured Bond

issuance, raised funds for projects that support a low-carbon society, particularly focusing on long-term transition strategies such as investments in LNG-fuelled vessels.

Since pioneering the world's first green bonds in the shipping industry in 2018 and Japan's first transition bonds in 2021, NYK has been at the forefront of sustainable finance to fund initiatives such as their "vessel fuel conversion scenario towards 2050" scheme.

The bonds, with a maturity of 5 years and a maximum issue amount of 20 billion yen, involved key players such as DNV Business Assurance Japan for the second-party opinion and lead managers including Nomura Securities, Mitsubishi UFJ Morgan Stanley Securities, and Daiwa Securities.

Al Tuwar naming ceremony

The firm also held a naming ceremony for a new LNG carrier in



The Al Tuwar

April, on behalf of operator QatarEnergy. Developed by a joint venture company comprising NYK, Kawasaki Kisen Kaisha, Ltd., MISC Berhad, and China LNG Shipping, the vessel was named *Al Tuwar* after the name of a hill in Al Wakrah, a Major city in Qatar.

The first of a series of 12 LNG carriers that the joint venture company will build for QatarEnergy, one of the world's largest LNG producers, the new vessel symbolises the growing investment by the sector into LNG shipping.

Equipped with an X-DF 2.1 iCER engine, a highly fuel-efficient dual-fuel engine, it also features

reliquefaction to effectively utilise surplus boil-off gas, reducing the environmental impact. With a cargo capacity of approximately 174,000 cubic metres, it is one of the latest generation of large-scale LNG carriers and a core part of NYK Group's medium-term management plan, "Sail Green, Drive Transformations 2026".

This roadmap is centred on efforts to strengthen NYK's carrier business, by leveraging the experience, know-how, and networks the NYK Group has cultivated as one of the world's largest LNG carrier-owning and management companies. ■

HD Korea orders LNG membrane containment systems

HD Korea Shipbuilding & Offshore Engineering (HD KSOE) has placed an order for the design of six new cryogenic LNG tanks for a series of vessels under construction.

The deal will see French technology group GTT design tanks for six LNG-fuelled container ships, on order by ship-owner Capital Maritime & Trading.

"Each vessel will be equipped with a tank offering a capacity of 8,000 cubic metres, incorporating

GTT's Mark III Flex membrane containment system," a spokesperson for GTT said.

Headquartered in Saint-Rémy-lès-Chevreuse in north-central France, GTT is one of the world's largest manufacturers of membrane containment systems for the

storage and transportation of marine LNG fuel.

Enhanced design

The tanks will be built to the latest specifications from GTT, featuring their '1 barg' design which allows an operational pressure of up to 1 barg, significantly higher than the current industry standard of 0.7 barg.

"This enhanced design increases LNG holding time and facilitates compliance with upcoming regulatory requirements related to cold ironing, a form of shore-power connection during port calls," a spokesperson for GTT explains.

Delivery of the six vessels is scheduled between the second quarter of 2027 and the first quarter of 2028.

Growing orderbook

Greek shipping group Capital Maritime has announced plans to ramp up its LNG-fuelled fleet recently, placing an order for 18 container ships in April this year with HD Hyundai. The vessels will be constructed across the Korean firm's shipyards and the deal is valued at US\$1.26 billion.

In July, Capital Maritime added a further two 8,800-TEU new-builds to take its orderbook to 20 ships, and the deal value to US\$1.6 billion.

Led by Evangelos Marinakis, Capital Maritime is a key player in global shipping and has a long history of involvement in the LNG sector, operating several specialised LNG carriers to transport liquefied natural gas. ■



HD Korea shipyard

Italian bunkering guidelines drive regional LNG growth

Authorities in Italy have taken a significant step forward in supporting LNG in the maritime sector, with the publication of new guidelines for ship-to-ship bunkering.

The framework was published by the Italian Ministry of Infrastructure and Transport, in partnership with the National Fire Brigade, national port authorities and trade associations. The guidelines establish standardized national rules for LNG and Bio-LNG bunkering across all its ports, setting a new benchmark for maritime decarbonization efforts.

"The present guidelines provide the general criteria that must be adopted by local maritime authorities for the drafting of local port regulations aimed at the refuelling of LNG ships in port applicable to LNG and Bio-LNG bunkering operations," a spokesperson from the ministry said.

Regulatory alignment

This move aligns Italy's maritime fuel regulations with the latest technological advances and safety practices required by modern LNG logistics as the country aims to expand availability and ease of access for the fuel across the region.

Key provisions of the guidelines include comprehensive safety protocols, stringent vessel requirements, and detailed operational procedures. Safety and risk assessments are also mandated, including compatibility studies and hazard identification in accordance with ISO 20519.

Under the new framework,

companies must further obtain authorisation to conduct bunkering operations, with the guidelines specifying that "the request, to be able to carry out the LNG refuelling in port, must be submitted to the maritime authority via PEC, anticipating it via e-mail."

Mediterranean growth prospects

The impact of these guidelines on the sector is expected to be substantial as Italy aims to build on its strategic position as a major Mediterranean player in bunkering and maritime logistics. Significant developments are already underway, with engineering group Edison completing the first LNG bunkering operation in the Adriatic Sea last year, and Italian energy giant Eni signing a charter agreement for the LNG bunker vessel *Avenir Aspiration* with Avenir LNG, expanding its activities in the small-scale LNG bunkering market in the Mediterranean Sea.

Regulatory support, such as these latest LNG guidelines, are expected to help lift the Italian LNG bunkering market substantially over the next few years, with a compound annual growth rate of 41.1% over a forecast period from 2024 to 2031. In a significant development underscoring Italy's role in the international LNG



Ministry of Infrastructures and Transport headquarters in Rome

landscape, Argentine state-owned energy company YPF announced will meet with Italian Prime Minister Giorgia Meloni to sign an investment contract with Eni.

President and CEO of YPF, Horacio Marín emphasized the importance of this collaboration, stating, "Eni is our strategic partner; they have a wealth of knowledge about offshore operations, and they have been working with this company, so it was a planetary alignment, as they say."

The collaboration with Eni is part of a broader initiative by YPF, the Argentine state-owned energy company, to enhance its Vaca Muerta gas export policy. At the 2025 Energy and Production Meeting in Bariloche, Marín announced that YPF will bring in the two largest LNG tankers in the world.

These tankers, each weighing 6 million tons, are the largest being built globally and were linked to a contract for 50 million cubic meters of exports.

NEWS NUDGES

K Line receives new LNG car carrier

Japanese shipping line Kawasaki Kisen Kaisha (K Line) has taken delivery of a new LNG-powered car carrier, Tethys Highway.

Constructed by Shin Kurushima Toyohashi Shipbuilding, the vessel has capacity for 6,900 vehicles and features a length overall (LOA) of 200 meters, a beam of 38 meters, a depth of 38 meters, and a draft of 9 meters. With a gross tonnage of 75,259 tons and a speed of 19 knots, the vessel is classified by ClassNK and flies the Japanese flag.

"In K Line's Environmental Vision 2050 - Blue Seas for the Future - it has set the 2030 interim target of improving CO2 emissions efficiency by 50% compared with 2008... Furthermore, it sets its new target for 2050," a spokesperson for K Line said. "As an action plan, it will continue to work on the introduction of new fuels which have a low environmental impact and take on the challenge of achieving the targets it has established."



Adriatic LNG Terminal

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Axpo completes first LNG bunkering in Sines

Energy trading group Axpo has carried out the first ship-to-ship LNG refuelling operation at the Port of Sines in Portugal.

The milestone bunkering operation was completed on behalf of French shipping line Mediterranean Shipping Company (MSC), with fuel transferred to its container vessel *MSC Togo*.

“During this landmark operation, we safely bunkered 2,700 metric tons of LNG to *MSC Togo* under SimOps conditions — concluded smoothly and with the highest standards of safety,” Daniele Corti, Head of Small Scale LNG at Axpo, said.

Close collaboration

The group hailed the collaborative effort involved in meeting this bunkering milestone and the professionalism of all involved parties. Close coordination with bunkering specialist Avenir LNG as well as Administração dos Portos

de Sines e do Algarve (APS) ensured that all timelines and safety protocols were adhered to.

“This milestone was only possible thanks to excellent collaboration and professionalism from all involved,” Corti added. “We look forward to continuing our mission to enable cleaner shipping across Europe!”

The partners also worked closely with logistics and infrastructure specialist Erhardt, local agent Wilhelmshaven Port Services and MSC to carry out the fuel transfer.

“We transferred around 5,400 cubic metres of LNG, equivalent to 2,376 tonnes, while the ship was at the Sines Container Terminal,” a spokesperson for APS said. “Natural gas is a key transition fuel in the decarbonisation process, and the maritime transport

sector places orders for new LNG-powered container ships with increasing frequency”

Headquartered in Baden, Switzerland, Axpo is owned by the cantons of Northeastern Switzerland and was founded in 1914. The group is focused on production, trading, and sale of energy, with a growing portfolio of renewable energy sources. Alongside the generation and distribution of electricity and natural gas, Axpo's core business includes energy services and project development.

Iberian growth

Axpo has focused on growth in the Iberian peninsula in recent months



MSC Togo bunkering in Sines

and sees the region as critical to its long-term LNG business. The bunker operation at Sines follows similar ship-to-ship bunkering earlier in the year at the Port of Málaga and the Port of Algeciras in Spain.

“At Axpo, we’re deeply committed to expanding the availability of LNG as a marine fuel in more ports across Europe, supporting the meaningful decarbonization of the maritime transport sector,” Corti added. ■

LNG Toscana launches new refuelling service

Energy developer OLT Offshore LNG Toscana has successfully launched its new small-scale LNG service at the FSRU Toscana terminal, marking the first time such a service has been offered in Italy.

The new service now enables small LNG carriers to load fuel directly at the FSRU terminal in central Italy. Testing was completed with bidirectional transfer of LNG between the terminal and the small LNG carrier *Avenir Aspiration*, operated by Axpo.

“With the conclusion of the Small Scale LNG commissioning, our Terminal is ready to offer a service that concretely meets the needs of decarbonization of maritime and land transport,” Giovanni Giorgi, CEO of OLT Offshore LNG Toscana, said. “I would like to thank the operators of the Termi-

nal and all the companies that contributed to the construction of this new part of the plant.”

Strategic significance

The launch of the SSLNG service comes at a crucial time, following the designation of the Mediterranean Sea as a Sulphur Emission Control Area (SECA) at the start of May this year. This regulation requires ships to use low-sulphur marine fuel throughout the Mediterranean. LNG, as a cleaner alternative, significantly reduces emissions of carbon dioxide, sulphur oxides, nitrogen oxides, and particulate matter, making it an ideal fuel for both maritime and heavy road transport sectors.

“We are particularly proud to have actively participated in OLT's testing activities and remain confident about the pivotal role that small scale can bring to the Country's energy supply and security,” Corti, Head of Small Scale LNG at

Axpo Group, said. “Ours is a pioneering commitment in a sector whose potential in the Mediterranean is set to grow steadily, starting in the coming months.”

Giorgi also emphasised the importance of new LNG bunkering capacity in achieving the country's climate goals, noting that “this project is a demonstration of how existing infrastructure can evolve to support the energy transition, encouraging the use of alternative fuels such as LNG and, in the future, also bio-GNL, both in the transportation sector and for industrial and civil uses in areas not connected to the national gas grid.

Operational flexibility

The FSRU Toscana Terminal, located 22 km off the coast between Livorno and Pisa, is connected to the national grid through a 36.5 km pipeline operated by Italian gas operator Snam. With a maximum authorized re-

gasification capacity of 5 billion standard cubic metres per year, the terminal plays a vital role in Italy's energy infrastructure.

Small scale users now have several options for procuring LNG, providing operational flexibility and expanding the scope of shipping in the region. The primary method remains direct delivery via a scheduled bunkering but operators can also purchase either tanks or at the flange from other regasification users. Additionally, users can access the virtual liquefaction service, which allows the small LNG carrier to refuel with an amount of LNG equivalent to that delivered to the PSV by the user. This option also includes the use of certified bio-LNG, providing a more sustainable fuel alternative.

Operators of the FSRU Toscana Terminal now aim to strengthen its position as a hub for next-generation energy logistics in the Mediterranean. ■



FSRU Toscana

Ningbo-Zhoushan achieves milestone in LNG filling volume

Ningbo-Zhoushan Port has announced a new record in LNG volumes, supplying more than 100,000 cubic metres of the fuel for the first time.

The record volume was reported as of the end of May and comes as Chinese investment in LNG infrastructure has soared this year. The port's accumulated LNG filling volume was hailed as 'a significant milestone' in the green transformation of ship fuel supply.

"With robust support and guidance from local governments and port management departments, Ningbo-Zhoushan Port has efficiently expanded its LNG bunkering services to the core port areas of Chuanshan and Daxie," a spokesperson for the port authority said.

The port has steadily developed LNG services under its "Seaport Fuel Supply" brand, achieving remarkable progress since completing the first LNG bunkering business in Zhejiang Province at Meishan Port District in June 2023.

Monthly record

As the global shipping industry accelerates its decarbonisation process and the International Maritime Organization (IMO) continues to upgrade its carbon emission reduction regulations, Ningbo-Zhoushan Port is rising to the challenge of low-carbon transformation in international shipping.

The port has also successfully obtained the Zhoushan anchorage filling qualification, gradually building a normalised refuelling network, and this year, achieved hit new records for the number of monthly LNG bunkering as well as the volumes on a year-on-year basis.

A spokesperson from Ningbo-Zhoushan Port Authority stated, "Behind the data jump, there are many parties working together with the port, forging a 'green password' for 'internal strong management, external expansion co-operation.'"

Strategic partnerships

Leveraging the resource advantages and increasingly mature service system of the world's largest port, Ningbo-Zhoushan Port has forged partnerships with international shipping giants such as Mediterranean Shipping, CMA CGM, Hapag-Lloyd, and Messen Steamship.

In May, following a memorandum of cooperation signed with Taiping Shipping, Ningbo-Zhoushan Port efficiently completed its first order bunkering operation, demonstrating the port's capability to deliver immediate results



STS LNG refuelling

post-contract signing. The spokesperson further added, "We took only three days to efficiently complete the first order bunkering operation, and to achieve 'immediate port efficiency' showcasing the powerful efficiency of cross-industry collaboration."

With the support of all parties, the port has integrated key resources such as terminals, tugs, and pilotage to seamlessly automate process, including "pilot priority scheduling, real-time tug response, and precise docking of refuelling," all of which have significantly enhanced operations.

In a parallel development, China's first 'smart' inland waterway container ship, the "Zhiyi," certified by the China Classification Society (CCS), commenced regular operations at the port in June, marking a significant advancement in maritime technology. With a tonnage of nearly 1,000 tons and a capacity of 64 TEUs, the "Zhiyi" is equipped with advanced systems for remote control and autonomous navigation. It features a digital integrated system console and six LCD screens, providing real-time data on channel conditions and speed. Operated remotely from Qixing Wharf in Nanhu District, the ship's autonomous navigation is highly effective in waters wider than 70 meters, thanks to its advanced perception system with lidars and multiple cameras. ■

NEWS NUDGES

WEF endorses LNG as a 'destination fuel'

The World Economic Forum (WEF) has endorsed LNG as a 'destination' rather than merely a 'bridge' fuel in the energy transition, highlighting its potential for long-term integration into global energy infrastructure.

"With a growing focus on meeting the security aspect of the energy triangle, LNG's role in the global energy mix is being redefined," a WEF spokesperson stated. "While detractors question if the world should move to another fossil fuel, another perspective is emerging: that LNG isn't a bridge but a destination fuel."

The WEF notes a significant surge in demand for LNG during 2024 and 2025, particularly in Asia and Europe, as nations sought alternatives to pipeline gas from Russia. Despite a slowdown in global supply growth to 2% in 2024, the organisation predicts that new projects will drive a rebound to nearly 6% in 2025.

Furthermore, the WEF points to innovations in technologies such as carbon capture, which promise to further reduce LNG emissions. ■



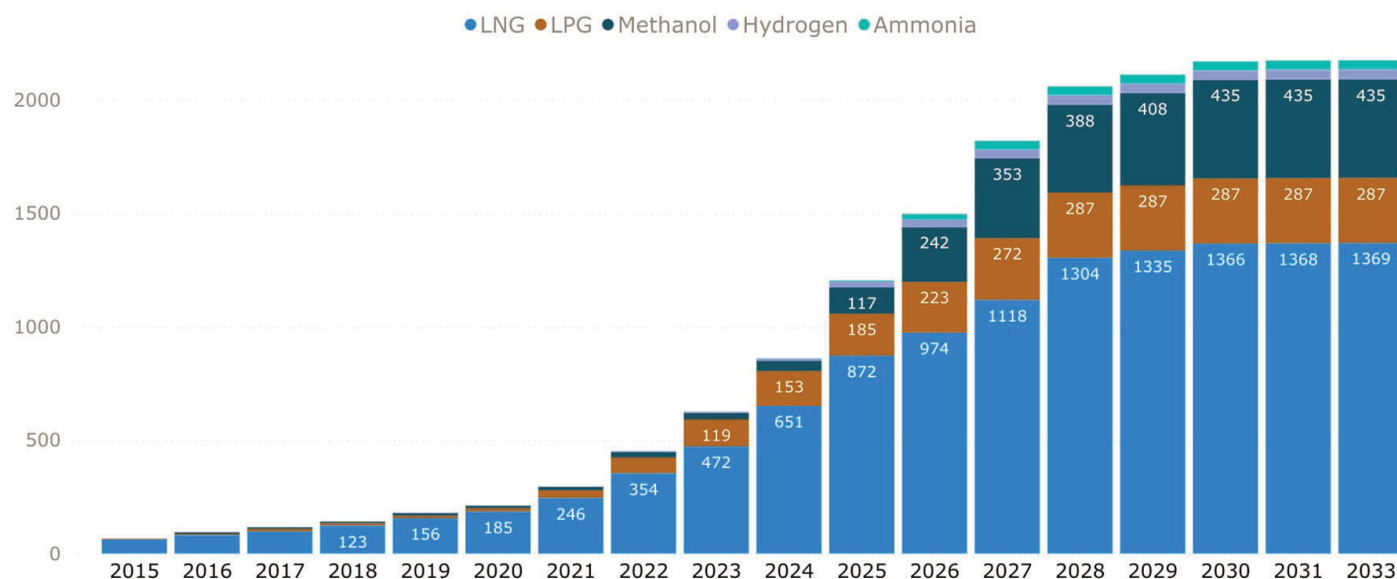
LNG bunkering at Ningbo-Zhoushan Port

WORLD SMALL SCALE LNG FLEET*

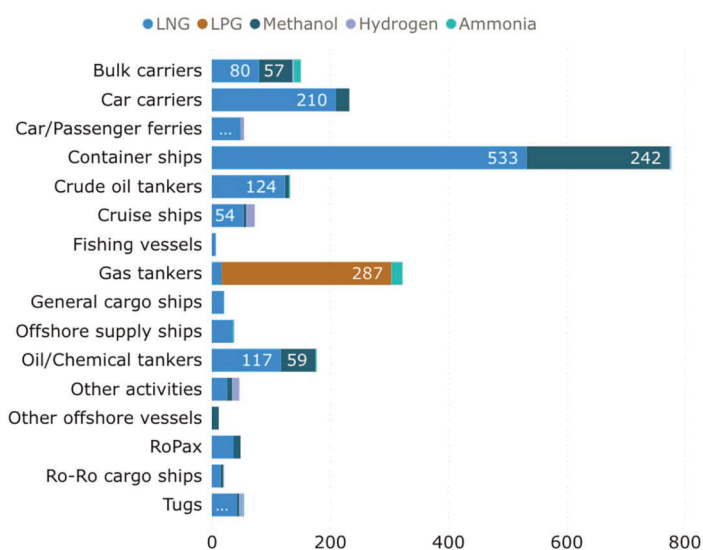
Built	Name	CBM	Cargo Type	Trading Area	Trading in LNG?	Ship Owner / Operator
1974	Seagas	187	LNG	Sweden	Yes	AGA
1988	Kayoh Maru	1,517	LNG	Japan	Yes	Daiichi
1993	Aman Bintulu	18,928	LNG	Malaysia - Japan	Yes	Perbadanan/NYK
1996	Surya Aki	19,475	LNG	Indonesia - Japan	Yes	MCGC
1997	Aman Sendai	18,928	LNG	Malaysia - Japan	Yes	Perbadanan/NYK
1998	Pelita Energy	18,800	LNG	Malaysia - Japan	Yes	Perbadanan/NYK
2000	Triputra	23,096	LNG	Indonesia - Japan	Yes	MCGC
2003	Pioneer Knutsen	1,100	LNG	Norway	Yes	Knutsen
2003	Shinju Maru No.1	2,540	LNG	Japan	Yes	Shinwa
2005	North Pioneer	2,500	LNG	Japan	Yes	Japan Liquid Gas
2007	Sun Arrows	19,531	LNG	Malaysia - Russia - Japan	Yes	Mitsui
2008	Kakurei Maru	2,536	LNG	Japan	Yes	Hogaki Zosen
2008	Shinju Maru No.2	2,540	LNG	Japan	Yes	Shinwa
2009	Coral Methane	7,551	LNG/LPG/Ethylene	Northwest Europe/Baltics	Yes, sometimes	Anthony Veder
2010	Coral Favia	10,000	LNG/LPG/Ethylene	Worldwide	No	Anthony Veder
2010	Coral Fraseri	10,000	LNG/LPG/Ethylene	Worldwide	No	Anthony Veder
2011	Coral Furcata	10,000	LNG/LPG/Ethylene	Worldwide	No	Anthony Veder
2011	Coral Fungia	10,000	LNG/LPG/Ethylene	Worldwide	No	Anthony Veder
2011	Akebono Maru	3,556	LNG	Japan	Yes	Chuo Kaiun
2011	Titan Vision	12,000	LNG/LPG/Ethylene	Europe	No	Titan LNG
2011	Titan Unikum	12,000	LNG/LPG/Ethylene	Europe	No	Titan LNG
2012	Coral Energy	15,600	LNG	Northwest Europe/Baltics	Yes	Anthony Veder
2013	Coral Antheia	6,500	LNG/Ethylene			Anthony Veder
2013	JX Energy TBN	2,500	LNG	Japan	Yes	JX Energy
2013	Kakuyu Maru	2,500	LNG	Japan	Yes	Tsurumi Sunmarine
2015	JS Ineos Ingenuity	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2015	JS Ineos Insight	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2015	JS Ineos Intrepid	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2015	LNG Barge TBN	3,000	LNG	US Coast	Yes	LNG America
2015	PetroChina TBN	30,000	LNG	China		PetroChina
2016	Hai Yang Shi You 301	30,000	LNG	Bali FSU	Yes	CETS (CNOOC)
2016	Clean Jacksonville	2,200	LNG	US Coast	Yes	CME
2016	JS Ineos Indepence	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2016	JS Ineos Innovation	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2016	JS Ineos Inspiration	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2016	LNG Prime	2,250	LNG	Northwest Europe	Yes	Veka Deen LNG
2017	Coralius	5,800	LNG	Northwest Europe/Baltics	Yes, for Skangas	Anthony Veder
2017	Coral EnergiCE	18,000	LNG	Northwest Europe/Baltics	Yes	Anthony Veder
2017	Coral Encanto	30,000	LNG	China	Yes	Anthony Veder
2017	JS Ineos Invention	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2017	JS Ineos Intuition	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2017	Oizmendi	600	LNG	Spain	Yes	Itsas Gas
2017	LNG-Gorskaya TBN	7,300	LNG	Russia	Yes	LNG-Gorskaya
2017	LNG-Gorskaya TBN	7,300	LNG	Russia	Yes	LNG-Gorskaya
2017	LNG-Gorskaya TBN	7,300	LNG	Russia	Yes	LNG-Gorskaya
2017	Green Zeebrugge	5,000	LNG	Northwest Europe	Yes	NYK
2017	New Frontier 1	6,500	LNG	Northwest Europe	Yes	Shell
2018	Kairos	7,500	LNG	Baltic	Yes	Bernhard Schulte
2018	LNG London	3,000	LNG	Northwest Europe	Yes	Shell
2018	Shell Bunker Barge TBN 2	6,500	LNG	Northwest Europe	Yes	Shell
2018	Shell Bunker Barge TBN 3	6,500	LNG	Northwest Europe	Yes	Shell
2018	Bunker Breeze	1,200	LNG	Barcelona	Yes	Suardiaz Energy Shipping
2018	HUA XIANG 8	13,720	LNG	China	Yes	Zhejiang Huaxiang
2019	Blue Whale	7,500	LNG	Korea	Yes	Korea Line
2019	Gas Agility	18,600	LNG	NWE	Yes	MOL
2019	Flexfueller 001	1,480	LNG	Amsterdam	Yes	Titan LNG
2020	Avenir Advantage	7,500	LNG	Mediterranean	Yes	Avenir LNG
2020	Avenir Accolade	7,500	LNG	Mediterranean	Yes	Avenir LNG
2020	Avenir Aspiration	7,500	LNG		Yes	Avenir LNG
2020	Kaguya	3,500	LNG	Japan	Yes	CLS
2020	CNTIC VPOWER Global	28,000	LNG	Myanmar	Yes	Dalian Inteh Group
2020	Ecobunker Tokyo Bay	2,500	LMG	Japan	Yes	Ecobunkers
2020	Optimus	6,000	LNG	NWE	Yes	Elenger
2020	FueLNG Bellina	7,500	LNG	Singapore	Yes	FueLNG

Built	Name	CBM	Cargo Type	Trading Area	Trading in LNG?	Ship Owner / Operator
2020	SM Jeju LNG2	7,500	LNG	Korea	Yes	Korea Line
2020	Q-LNG 4000	4,000	LNG	US Coast	Yes	Q-LNG Transport / Harvey Gulf
2020	Flexfueller 002	1,480	LNG	Antwerp	Yes	Titan LNG
2021	Avenir Ascension	7,500	LNG		Yes	Avenir LNG
2021	Hai Gang Wei Lai	20,000	LNG	China	Yes	SSES
2021	Bergen LNG	850	LNG	Norway	Yes	Bergen Tankers
2021	Dmitry Mendeleev	5,800	LNG	Russia	Yes	Gazprom Neft
2021	JMU TBN	2,500	LNG	Japan	Yes	JMU
2021	Ravenna Knutsen	30,000	LNG	Mediterranean	Yes	Knutsen OAS
2021	Brassavola	12,000	LNG	Singapore	Yes	MOL
2021	Gas Vitality	18,600	LNG	Mediterranean	Yes	MOL
2021	TG TBN	500	LNG	Korea	Yes	Trans Gas
2021	Titan Hyperion	8,000	LNG	Benelux	Yes	Titan LNG
2022	Xin Ao Pu Tuo Hao	8,500	LNG	China	Yes	ENN
2022	Coral Nordic	30,000	LNG	Worldwide	Yes	Anthony Veder
2022	Avenir Achievement	20,000	LNG	Worldwide	Yes	Avenir LNG
2022	Haugesund Knutsen	5,000	LNG	Spain	Yes	Knutsen OAS
2022	Clean Cañaveral	5,400	LNG	USG	Yes	PNE
2022	K.Lotus	18,000	LNG	Korea	Yes	K Line
2023	Cryopeak TBA	4,000	LNG	West Canada	Yes	Cryopeak
2023	Levante LNG	12,500	LNG	Spain	Yes	Knutsen OAS
2023	SM Jeju LNG3	7,500	LNG	Korea	Yes	Korea Line
2023	New Frontier 2	18,000	LNG	USG	Yes	Shell
2023	Krios	4,200	LNG	Benelux	Yes	Titan LNG
2023	Alice Cosulich	8,000	LNG	Mediterranean	Yes	Fratelli Cosulich
2023	Kanfer TBN	6,000	LNG	Worldwide	Yes	Kanfer Shipping
2023	Kanfer TBN	6,000	LNG	Worldwide	Yes	Kanfer Shipping
2023	Clean Everglades	5,500	LNG	USG	Yes	PNE
2023	FueLNG Venosa	18,000	LNG	Singapore	Yes	FueLNG
2023	LNG Erasmus	8,000	LNG	NWE	Yes	Shell
2023	Energy Stockholm	8,000	LNG	NWE	Yes	Shell
2024	Coral Evolution	30,000	LNG	Australia	Yes	Anthony Veder ?
2024	Progress	12,000	LNG	US Coast	Yes	Crowley Maritime
2024	CNOOC TBN	12,000	LNG	China	Yes	CNOOC
2024	TBN	12,500	LNG	Worldwide	Yes	???
2024	Keys TBN	3,500	LNG	Japan	Yes	Keys Bunkering West Japan Co
2024	Seaspan Garbaldi	7,600	LNG	Panama	Yes	Seaspan ULC
2024	Paolina Cosulich	8,000	LNG	Mediterranean	Yes	Fratelli Cosulich
2024	Huaihe Nengyuan Qihang	14,000	LNG	China	Yes	Anhui Changjiang LNG
2024	Keys Azalea	3,500	LNG	Japan	Yes	Keys Bunkering West Japan
2024	Seaspan Lions	7,600	LNG	Canada	Yes	Seaspan ULC
2024	Hai Yang Shi You 302	12,000	LNG	China	Yes	CETS (CNOOC)
2025	Axpo TBN	7,500	LNG	Italy	Yes	Axpo
2025	Seaspan Baker	7,600	LNG	Canada	Yes	Seaspan ULC
2026	Avenir TBN	20,000	LNG	Worldwide	Yes	Avenir LNG
2026	ScaleGas TBN	12,500	LNG	Spain	Yes	ScaleGas
2026	Vitol TBN 1	12,500	LNG	Worldwide	Yes	Vitol
2026	Total TBN	18,600	LNG	Worldwide	Yes	Total Energies
2026	Vitol TBN 3	20,000	LNG	Worldwide	Yes	Vitol
2027	Avenir TBN	20,000	LNG	Worldwide	Yes	Avenir LNG
2027	Vitol TBN 2	20,000	LNG	Worldwide	Yes	Vitol
2027	Peninsula TBN	18,000	LNG	Europe	Yes	Peninsula
2027	Fuzhou Wuyang TBN	12,000	LNG	China	Yes	Fuzhou Wuyang Refined Oil Trading
2027	Equatorial Marine TBN	20,000	LNG	China	Yes	Equatorial Marine
2027	Somtrans TBN	20,000	LNG	Europe	Yes	Somtrans
2027	SIPG Energy TBN	20,000	LNG	China	Yes	SIPG Energy
2027	Ibaizabal TBN 1	18,000	LNG	Europe	Yes	Ibaizabal
2027	Ibaizabal TBN 2	18,000	LNG	Europe	Yes	Ibaizabal
2027	Somtrans TBN 2	20,000	LNG	Europe	Yes	???
2027	Somtrans TBN 3	20,000	LNG	Europe	Yes	???
2028	Fuzhou Wuyang TBN	12,000	LNG	China	Yes	Fuzhou Wuyang Refined Oil Trading
2028	Evalend Shipping TBN 1	18,000	LNG	Europe	Yes	Evalend Shipping
2028	Evalend Shipping TBN 2	18,000	LNG	Europe	Yes	Evalend Shipping
2028	Evalend Shipping TBN 3	18,000	LNG	Europe	Yes	Evalend Shipping
2028	Evalend Shipping TBN 4	18,000	LNG	Europe	Yes	Evalend Shipping

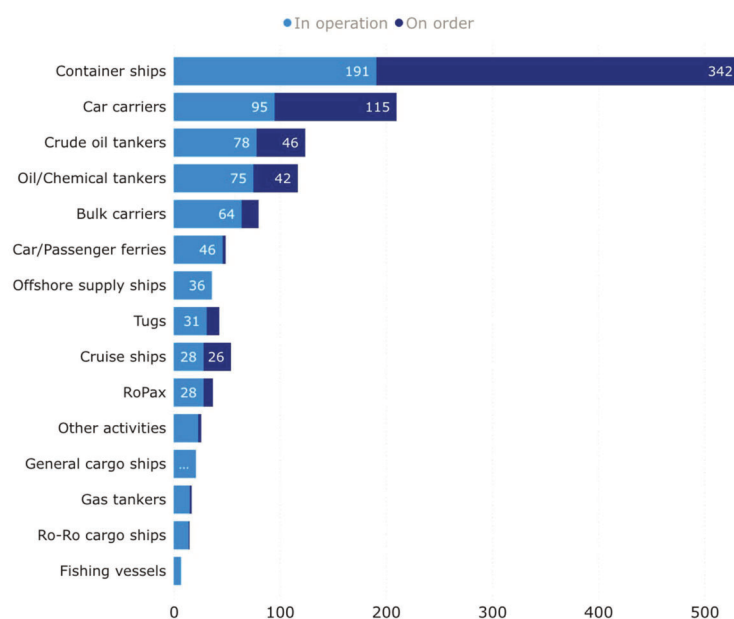
Growth of alternative fuel uptake by number of ships



Alternative fuel uptake by ship type



LNG-fuelled fleet by ship type



Location of LNG bunkering facilities worldwide

Source: SEA-LNG

