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Early LNG cargo signals difficult months ahead for Argentina

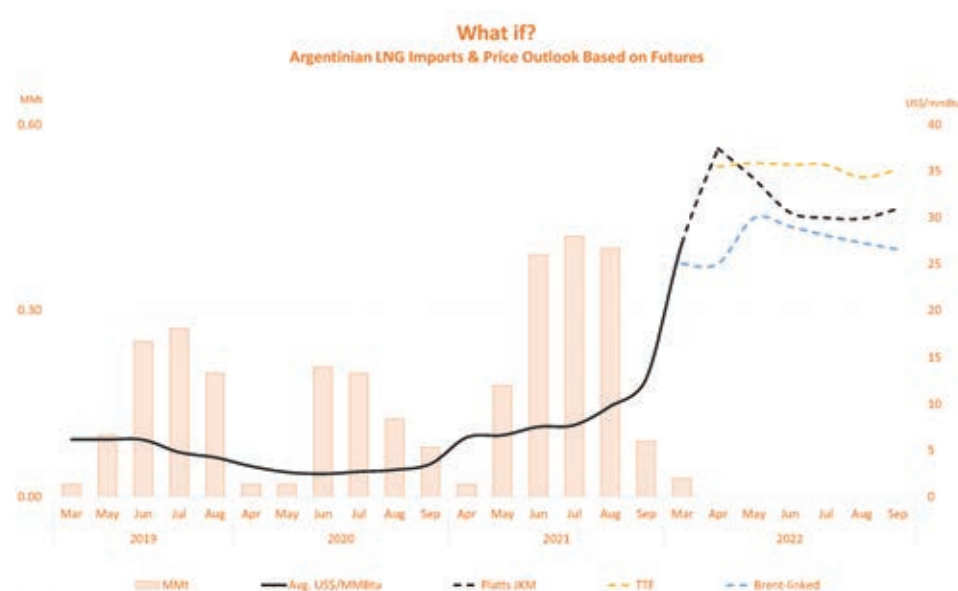
Argentina is facing headwinds for its annual LNG purchasing due to stiff market competition at a time when it needs to ratify extensive debt restructuring with the IMF, our Markets Editor Alexander Wilk reports.

The delivery of an LNG cargo to Argentina in mid-March carries significance beyond its unseasonal timing. At a price more than three times the average landed price last year, which was reflective of a generally tight market at the time of purchase in early February, Argentina needs to brace for a much-inflated gas bill in the coming Southern Hemisphere winter. This additional price pressure comes at a time when the country is keen to ratify a debt restructuring deal with the IMF.

Early cargo

Argentina received an LNG delivery in mid-March, a rare occurrence at this time of year. Imports of LNG throughout the country typically slump following the Southern Hemisphere's winter months of June, July and August and are normally nonexistent from October to April. The Argentinian government – through state-controlled oil and gas company Integración Energética Argentina (IEASA) – typically begins sourcing LNG cargoes by March for deliveries to begin by mid-May to bridge a seasonal supply shortfall of natural gas.

In line with this schedule, IEASA also issued a tender for agency, pilot and tug services at the Escobar and Bahia Blanca ports in February, which is an indication of a planned FSRU charter for the coming months. It remained unclear, however, whether any negotiations had begun at the time of writing. Last year, IEASA chartered the Exceleste-owned Exemplar between mid-May and early September. The vessel had previously operated the Bahia Blanca LNG terminal from 2008 until late 2018. If Argentina were to lease an FSRU once more, it may be the Exemplar again. The vessel has seen almost no trading activity since



Source: IEASA, LNG Journal, CME

September last year and was waiting empty off Kingston in Jamaica, our data showed.

Argentina's early cargo was shipped by EG LNG in Equatorial Guinea aboard the 2020-built Vivit Americas LNG, our data show. The carrier is currently working on a term charter with Swiss commodities trading firm Vitol, according to the vessel's owner TMS Cardiff. The Vivit Americas LNG discharged roughly two thirds of its 0.07mmt cargo at Petrobras' Salvador FSRU before arriving at Argentina's GNL Escobar terminal, according to our data and calculations. Notably, draught restrictions in the Escobar port area mean conventional LNG carriers cannot approach the LNG terminal fully laden.

Expensive supply

EconoJournal, an Argentinian news agency specializing in energy and mining, reported the cargo to have been purchased in early February and priced at US\$27.24/mmBtu. The reported purchase price was still considerably below the LNG Japan/Korea Marker (Platts) and Dutch TTF futures for May,

which stood at US\$34.17/mmBtu and US\$35.88/mmBtu, respectively, at the time of writing. Whilst it may thus be below what comparative spot cargoes are likely to cost over the coming months, it was nonetheless more than three times Argentina's average landed price of US\$8.37/mmBtu in 2021, according to data by IEASA. In 2020, the average price was just US\$2.96/mmBtu, half of the average of US\$5.92/mmBtu in 2019.

The reported price of last week's spot cargo invites an outlook into the market environment Argentina is likely going to face between April and September this year. IEASA data shows Argentina paid just over US\$1 billion for LNG in 2021. Assuming a similar level of imports in volume terms as well as the same ratio of HenryHub-, Brent- and spot-linked prices compared to the previous year, Argentina could face an LNG bill of around US\$2.8 billion this year. This scenario relies considerably on portfolio traders such as Gunvor fulfilling around 40 percent of Argentina's LNG orders through LNG sourced from Qatar – similar to last year – with a Brent price link of roughly 25 percent. Whilst this seems steep

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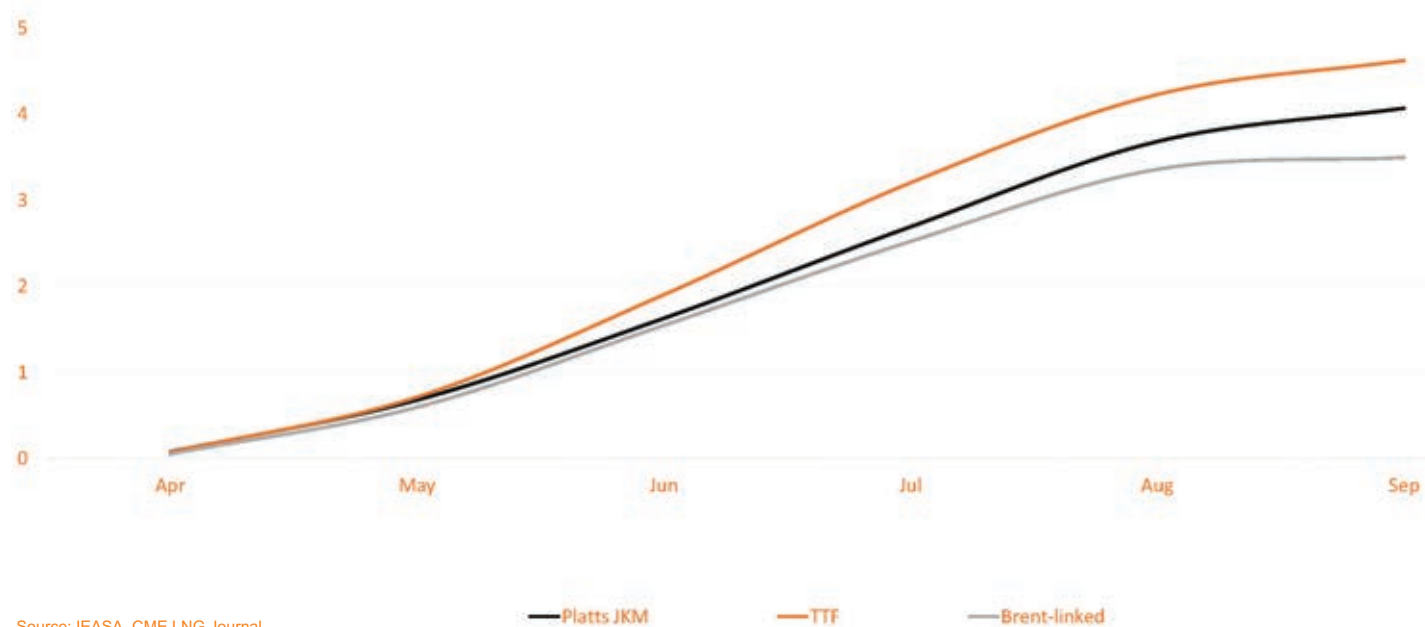
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Potential Argentinian LNG Expenditure, 2022 (Cumulative, Bln. US\$)



compared to an average of 10.73 percent in 2021, Qatar Petroleum supplied a spot cargo at roughly that rate to Pakistan in mid-March. The cargo was sold for US\$25.12/mmBtu, state-controlled gas importer Pakistan LNG Ltd. informed. The cost for Pakistan's spot procurement has since risen to US\$34.67/mmBtu for April delivery by commodities trader Vitol and US\$33.53/mmBtu for May delivery by PetroChina's trading arm. Without Qatar's supply in Argentina's gas mix this year, various price forward curves and our preliminary calculations point to the country's potential annual LNG bill rising to almost US\$3.2 billion and more than US\$4 billion if cargoes from the United States are predominantly taking course for Europe, forcing IEASA to compete directly with European utilities.

Argentina's imports levels of 2021 mean any price movement by US\$1.00/mmBtu would result in a difference of US\$131 million to the country's LNG bill this year.

European competition

An important factor in determining prices in the Atlantic Basin over the coming months is likely to be higher European demand. German news service Deutsche Welle reported in mid-March German Economy Minister Robert Habeck had travelled to Qatar and the United Arab Emirates to explore avenues of increasing Germany's energy security. Germany is among the most prominent importers of Russian pipeline gas but has begun searching for alternative gas supply in the wake of Russia's invasion of Ukraine and the suspension of the new Nord Stream 2 pipeline. Although Argentina's

peak energy demand season does not coincide with Germany's, the latter may have to turn to waterborne gas over the European summer months to meet its target gas storage level of 24 billion cubic metres by the beginning of next winter. Data by Gas Infrastructure Europe showed Germany's gas storage levels at their lowest since 2018 at the end of March. German energy industry association BDEW thus included LNG in its list of potential sources of alternative gas supply, including from Qatar.

However, as we reported last month, Qatar's Minister of Energy and President and CEO of Qatar Petroleum, Saad al-Kaabi, had quickly rebuffed notions that his country could replace Russian pipeline gas deliveries to Europe. At a Gas Exporting Countries Forum in February, he pointed out that "there is no single country that can replace that kind of volume", adding that "the majority [of Qatar's LNG capacity] is tied up in long-term contracts."

Europe's supply portfolio is narrow with only five countries providing more than 90 percent of European LNG supply in 2021. The largest share originated in the United States with 22.99mmt, followed by Qatar with 15.72mmt, Russia with 13.79mmt, Algeria with 10.18mmt and Nigeria with 5.82mmt. Whilst Qatar remains the largest supplier to Europe overall since 2017, its market share has decreased significantly since 2020, our data show. US LNG is typically traded out of flexible portfolios controlled by energy majors and commodity traders.

As such, with free Qatari volumes limited, Argentina may well find itself competing with European buyers for

available LNG volumes from Qatar and the United States. A few additional cargoes may also come from West African producers, but their prime focus has also historically been set on Asia and Europe.

Economic woes

Another complicating factor has been uncertainty surrounding the level of Bolivian gas exports to Argentina. Natural gas has been one of Bolivia's major export commodities and the mainstay of the Bolivian economy over the last two decades, with its main markets in Argentina and Brazil. However, production has declined by a cumulative 26 percent since 2014, according to Reuters citing government data, whilst the Bolivian government is keen to meet domestic demand first. Although the government has announced additional exploration blocks and state-controlled hydrocarbons producer YPFB is looking to fast-track a new gas find into production by June this year, any delay could once again impact gas exports to Argentina. Compared to LNG in 2021 and 2022 to date, Bolivian pipeline gas is priced competitively at around US\$7.30/mmBtu, according to EconoJournal. The LNG Journal could not reach the website of Bolivia's Ministry of Hydrocarbons and Energy for a data update at the time of writing.

Debt restructuring

The spectre of energy cuts comes at a crucial time as the IMF and Argentinian authorities have reached a staff-level agreement on an Extended Fund Facility to provide Argentina with additional

liquidity. A staff-level agreement means that the respective negotiating teams of the IMF and Argentina have been able to agree on terms, but which remain to be presented to the IMF Executive Board for approval. This, however, will only happen once Argentina's Congress has approved the agreement. However, the amended AML/CFT Legislation (Law 25.246) was only scheduled to be submitted to Congress in May, according to the government's timeline in March.

The Agreement provides for additional liquidity to the tune of US\$45 billion 'to provide Argentina with balance of payments and budget support to address the country's most pressing economic challenges', the IMF stated. At a futures price of US\$34.81/mmBtu for May deliveries, Argentina's LNG bill for 2022 could quadruple from its 2021 equivalent and thus entrench the economic challenges the IMF deal was supposed to help alleviate, including aiding investment in infrastructure and the hydrocarbon sector.

Should it not be able to secure sufficient gas supplies, the Argentinian

government may have to resolve to impose restrictions on gas consumption. Domestic supply for heating can be expected to be given priority, but this would then starve the country's industry of energy. A higher LNG bill will thus eat into the trade surplus of US\$15 billion reached in 2021, which, according to the government's submission to the IMF, was powered by the industrial manufacturing sector.

Additionally, the government has pointed out to the IMF that persistent high inflation remains a problem due to a 'combination of higher world commodity prices, rising domestic demand, and difficulties in anchoring inflation expectations'. Headline inflation rose to 50.9 percent year-on-year at end of 2021, up from 36 percent year-on-year at the end of 2020, the government also reported.

As a result, the Argentinian authorities may have to bring forward a medium-term plan to further reduce energy subsidies and improve the efficiency of Argentina's energy matrix, while ensuring affordable energy access for more vulnerable households.

Higher LNG expenditure could therefore quickly erode the government's fiscal position despite initial achievements in securing firm net financing for the first 12 months of the arrangement. In its letter to the IMF in early March, the government confirmed it had secured 'firm net financing commitments' amounting to US\$2.6 billion for the first year of the envisioned IMF programme. These commitments include multilateral support from the World Bank and the Inter-American Development Bank as well as bilateral net financing from China.

These pressures have resulted in concerns within Argentina's important hydrocarbon sector. A consultation by Argentinian newspaper *Energía Online* in January this year indicated widespread uncertainty over potential currency restrictions resulting in difficulties to acquire and service private debt abroad that is necessary to fund industry growth. The Central Bank is building a foreign currency reserve floor of US\$5 billion as requested by the IMF.

Concluding thoughts

By issuing a tender for a single cargo ahead of time, the Argentinian government has effectively tested the market. At a price more than three times that of an equivalent cargo in 2021, the result cannot have been received positively in Buenos Aires. Meanwhile, various price futures point to Argentina having to pay several billion dollars more this year if imports are maintained at 2021 levels. The Argentinian government now finds itself between a rock and a hard place as it prepares for crucial debt restructuring with the IMF. LNG is an important part of the country's energy mix and a shortage due to high prices this year could dampen industrial output necessary to generate foreign currency reserves. This would have negative knock-on effects on investment in its hydrocarbon sector. Whilst there is a silver lining in a new gas find in Bolivia, which is currently fast-tracked for production by June, even if additional production were to reach Argentina in time, it is only to maintain already agreed trade and would not compensate for fewer LNG imports. ■



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Europe can boost LNG imports by two-thirds 'at best'

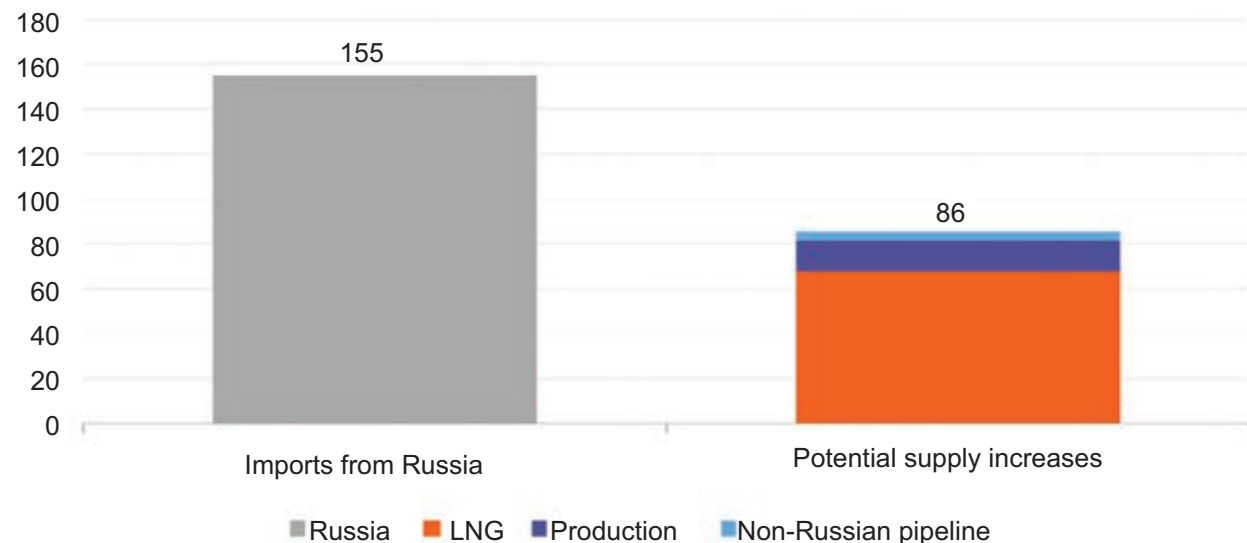
The European Union is struggling to offset Russian gas supplies due to import capacity constraints, with the Dutch investment bank ING estimating EU countries could increase LNG imports by about 68 billion cubic meters (bcm), or 63 percent this year, in a 'best-case scenario'. But that is far short of the 155 bcm imported from Gazprom in 2021 – hence a quick shift to green power sources is essential; our markets editor Anja Karl finds.

Today, Europe's annual regasification capacity stands at 204 bcm, excluding Turkey. Utilisation rates have increased drastically from just 47 percent last year to near full capacity since the start of this year. So, there is not much room for importing more LNG to Europe even though gas prices at the benchmark Dutch TTF hub trade at a premium to Asia's JKM.

"When we take into consideration domestic production rising by 14 bcm from Norway, the Netherlands and the UK, along with increased pipeline flows from non-Russian sources of 4 bcm, Europe will only be able to meet around 55 percent of Russian pipeline flows," analysts warn. Therefore, ING bank reckons "we would need to see fuel switching when it comes to power generation, along with the potential for demand destruction from other users in order to ensure adequate supply."

EU countries in 2021 relied on Russia to cover 52 percent of total gas imports of 296 bcm, while 32 percent was covered by LNG and the remaining 16 percent by supply from Azerbaijan and North Africa. But lower Russian gas flows into Europe since the start of the heating season, and fears Gazprom may reduce or halt deliveries in retaliation to Western sanctions make it questionable if the EU will have enough gas going into next

Increasing supply from elsewhere is still not enough to offset a loss in Russian gas imports (bcm)



Source: Rystad, IEA, Eurostat, GIE, ING Research

winter. TTF gas prices consequentially rallied to record levels of €345 per MWh recently and had soared more than 400 percent at one stage this year.

Scrambling for spot cargoes

LNG will be key to reduce Europe's dependency on Russian pipeline gas, but the continent cannot just assume that all necessary LNG cargoes can be diverted. Analysts at ING warned Europe "will need to compete fiercely with Asia for LNG," and buyers might fight over supply

"even more aggressive given the limited spare capacity in the market."

If European buyers could snatch up all the new LNG volumes coming onstream in 2022 in the Atlantic basin, and attract additional cargoes previously routed to Asia, an increase of 32 bcm to 45.5 bcm "could realistically happen," according to Rystad Energy calculations. Global gas liquefaction and export capacity could rise by 22.6 million tons this year, most of which supplied by the United States. At best, Europe could secure around 12 mt of that, as most volumes are already locked

into long-term supply deals to Asia.

Moreover, around 70 percent of LNG trade is done under long term contracts and a large part of these volumes have strict destination clauses. "This does significantly reduce the amount of available LNG that could make its way into Europe," analysts warn, pointing at just 30 percent of LNG trade done on spot or short-term contracts.

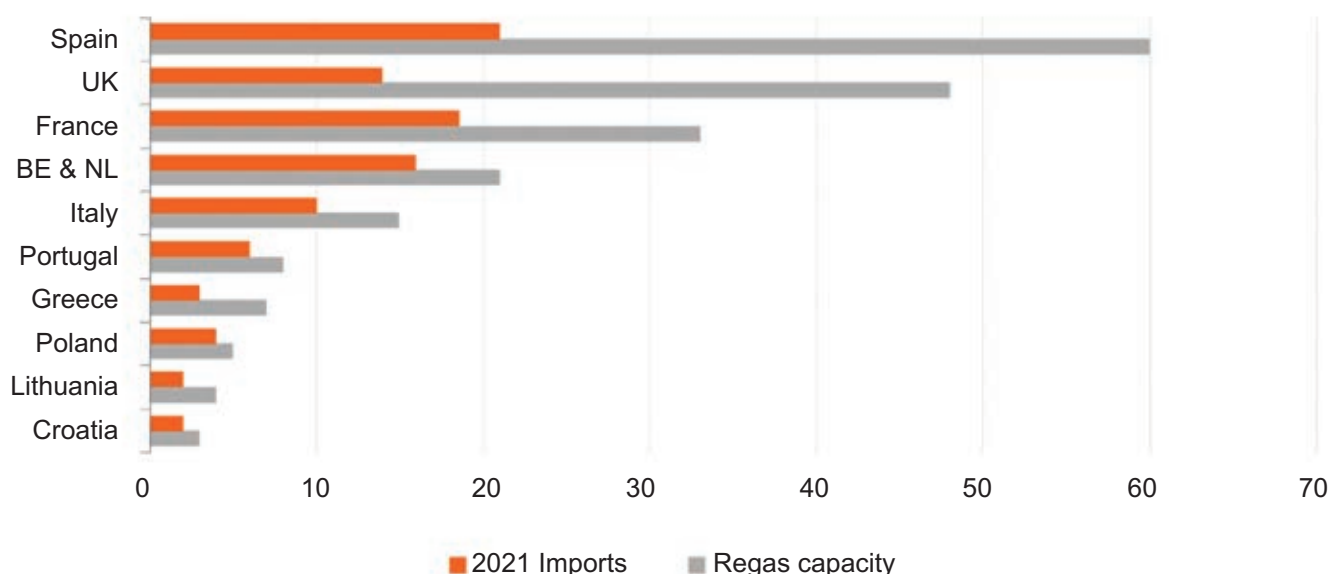
Minimizing take-or-pay offtake

The International Energy Agency (IEA) advises minimizing offtake under take-or-pay contracts would cut 30 bcm – out of a total 155 bcm of Russian supply. Adding 35 Terawatt-hours (TWh) of new renewable energy projects in 2022 would lower gas-burn by a further 6 bcm.

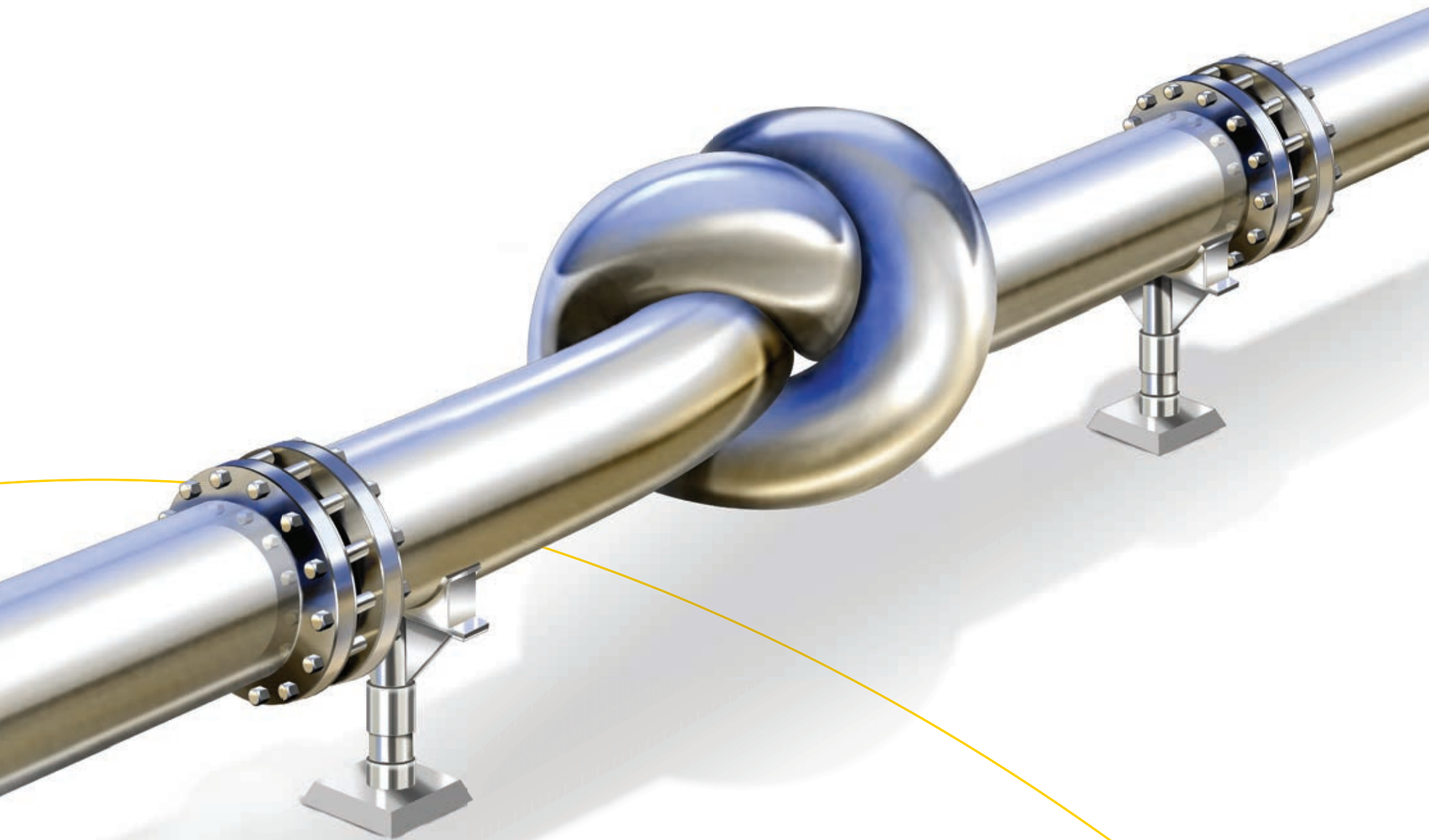
More than 15 bcm per year of gas import contracts with Russia's Gazprom are set to expire by the end of 2022, and contracts covering close to 40 bcm per year are due to expire before 2030. The IEA urges European decision makers to enter "no new gas supply contracts with Gazprom" and buy alternative pipeline gas and LNG instead.

The EU could theoretically increase near-term LNG inflows by some 60 bcm, and increase non-Russian pipeline imports by up to 10 bcm from 2023, the IEA estimates. But all importers are fishing in the same pool for supply, so this would mean "exceptionally tight global

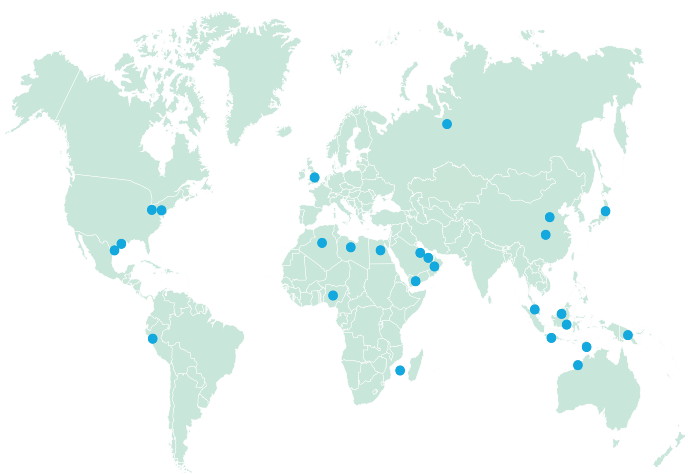
European regasification capacity vs. 2021 imports (bcm)



Source: GIE, Government data, Various reports, ING Research



Using unproven LNG technology can really tie up production.



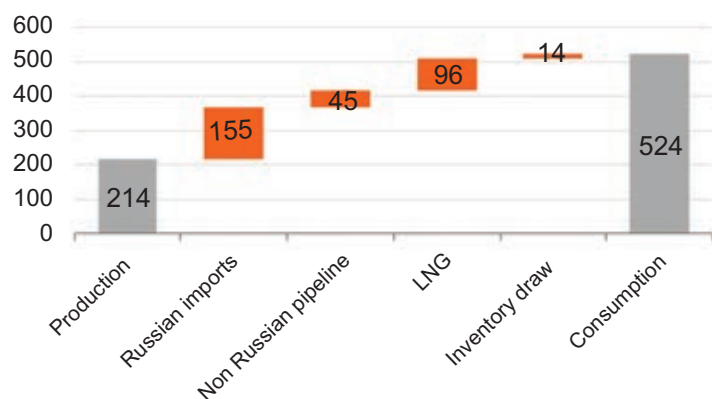
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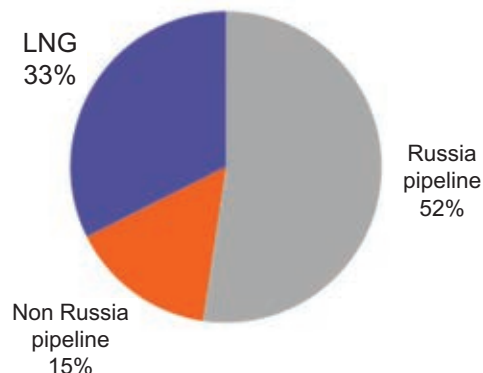
European gas balance & imports

2021 European gas balance (bcm)



Source: Rystad, IEA, Eurostat, GIE, ING Research

European gas imports (%)



gas markets and very high prices,” analysts warn.

Persuading Asia to use more coal

The International Group of Liquefied Natural Gas Importers (GIIGNL) reckons it is “challenging” to source enough additional LNG to meet the Commission’s RePowerEU targets to replace 112 bcm of Russian gas imports by end-2022. Without sufficient LNG, it will be near-impossible to replenish gas stocks prior to the winter to the targeted 90 percent storage capacity by October 1st.

Getting Asia to burn more coal for power generation could free up around 50 bcm of LNG for diversion to Europe, which would partly cover the Commission’s planned cuts in Russian supply. But critics argue it would be cheaper if Europe’s power generators switched from gas to coal and nuclear instead.

“Persuading Asian buyers to use coal and free up LNG,” could help, Wood Mackenzie advises, as would maximising Europe’s indigenous gas production and pipeline imports. “But this would only be a temporary solution to get through the summer and would leave Europe with perilously low storage volumes going into winter 2022/23 and the risk of demand disruptions. Winter prices next year could be higher than 2021/22,” principal gas and LNG analysts Kateryna Filippenko warned.

Japan offers to divert cargoes

Diverting LNG cargoes, initially destined for Asian markets, could give hard-pressed European buyers access to about 15 bcm of extra LNG from April through October – provided enough import

capacity is kept available.

Japan is considering diverting additional LNG cargoes to Europe from April, government officials said after a meeting in Brussels. Having discussed the impact that Russia’s invasion of Ukraine has on global energy markets, the EU energy commissioner Kadri Simson underlined: “We count on Japan as an ally in our efforts to stabilise the gas and oil markets and help Europe end its dependency on Russian fossil fuels. In this context, we are particularly grateful for their cooperation on LNG.”

In March, Japan is understood to have diverted several hundred thousand tons of LNG to Europe and promised additional cargoes for April – much needed relief for the tight EU gas and power market. “Considering the severe shortage of LNG in Europe, we’ve decided to offer our cooperation following a request from the United States,” Japan’s trade minister Koichi Hagiuda told reporters. “We will ensure there will be stable supply in Japan, and offer the surplus to Europe.”

More US LNG in the offing

The United States has promised to deliver at least 15 bcm of LNG to the EU this year to support the bloc’s energy security and reduce dependence on Russian gas imports. US President Joe Biden said American LNG exporters would ship additional volumes to Europe this year, with increases beyond 20 bcm possible in the years ahead.

In return, European counties will accelerate review and permit procedures for LNG import infrastructure to be able to source alternative gas supplies for industry and power generators. European Commission President Ursula von der Leyen said she will work with EU gas

market operators to pool demand through a newly established EU Energy platform to ensure a large, stable market for additional US LNG in until at least 2030.

Investment in new regas capacity is forthcoming – two terminals are planned in Germany and one in Italy – but construction and start-up will take some time so these projects will not help in the event of any immediate shortfalls in Russian pipeline gas supplies.

The German government is supporting two LNG regas terminals in Brunsbüttel and Wilhelmshaven to come online by 2024, discussions with US LNG exporters as well as Norway and Algeria are underway with a view to increasing supplies. Shell just agreed with German LNG Terminal to book a substantial part of the capacity at the Brunsbüttel regas terminal for the long-term. But Fitch analysts warned that plans by the US and UK to ban or phase out Russian oil imports will increase global LNG demand, as well as prices.

“Cargoes diverted from Japan and US LNG will provide some relief.”

Dispute over ban on Russian supplies

EU leaders are at loggerheads over the phase-out date for Russian energy imports – some say 2030, some suggest

2027, others want it now. Rebuking calls for an outright ban on Russian oil and gas imports, the German chancellor Olaf Scholz underlined Europe has “deliberately exempted” supply from Gazprom from sanctions as there are no short-term alternatives. Stopping gas imports now without knowing if this can be sustained next winter would mean that deliveries from Russia may have to resume at the end of the year, he argued, warning: the meantime, prices for gas would skyrocket.

The European Commission wants to wean Europe off Russian fossil fuels “well before 2030.” The proposed plan REPowerEU seeks to gradually remove at least 155 bcm of natural gas – equivalent to the volume imported from Russia in 2021. Nearly two-thirds of that reduction is meant to be achieved before year-end. A daunting task, considering the EU in 2021 imported over 380 mcm per day of gas by pipeline from Russia which amounted to around 140 bcm per year – and on top of that came some 15 bcm of Russian LNG.

Surprisingly, the Commissions’ REPowerEU policy package does not suggest to substitute gas with nuclear power. Analysts at Fitch Rating say this reflects the continued division in the EU: while the German government vetoed proposals for life extension of its remaining operational reactors beyond the mandated closure date of end-2022, state leaders in France, Finland and Poland rush to build new nuclear power plants.

“This may mean increased dependence on thermal coal power generation in Germany and other countries to provide baseload supply in the face of gas pressures and rising renewable deployment,” Fitch said noting: RWE, Poland’s PGE, and the Czech CEZ have been increasing the dispatch of coal-fired power stations in recent months in response to rising gas prices and constrained supply.

Rapid build-out of renewable power sources, combined with energy storage, are hailed as “freedom energies” capable to end Europe’s dependency on Russian energy imports. But the green energy transition will require substantial investment, raw materials and engineering efforts at a time when supply-chains are interrupted due to repercussions of the ongoing military conflict in Ukraine and sanctions against Russia. ■

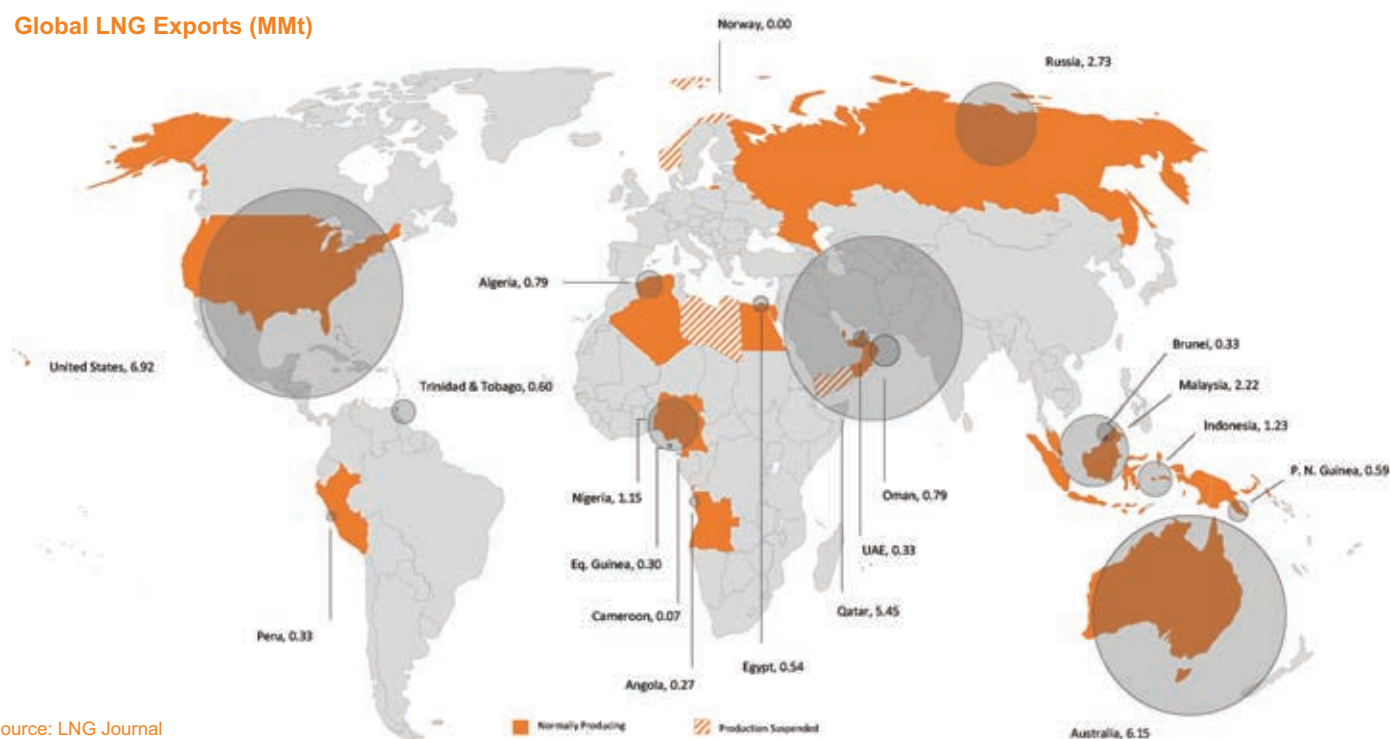
March trade returned to net growth from February slump

Our March data indicate an increase in LNG flows as the United States and Indonesia boosted exports alongside net demand growth in all three Basins, our Markets Editor Alexander Wilk reports.

On 30 March, our preliminary data showed global LNG trade had increased by 1.17mmt (4 percent) compared to February. However, the shipped amount of 30.79mmt remained below the 32.69mmt shipped in March 2021. The overall increase was led by the Atlantic Basin with month-on-month trade growth of 0.86mmt as exporters in the United States, Africa and Russia increased output levels. Notably, however, our preliminary data also indicated Qatar's output growth was comparatively modest in March – it trailed that of Russia – and thus could not compensate for reductions elsewhere in the Middle East.

Meanwhile, March's global LNG demand was shaped to a large extent by the Far East and Europe as South Korea and Taiwan alone grew offtakes twice as fast as the whole of Europe. Nevertheless, the United Kingdom, France and Poland gave demand in the Atlantic Basin a boost and compensated for a slump in Turkish offtakes. LNG imports in the Middle East

Global LNG Exports (MMt)



Source: LNG Journal

remained seasonally low but had embarked on a monthly growth trajectory at the time of writing.

Exports

Our preliminary data for March data show

global exports increased by 1.17mmt (4 percent) month-on-month at the time of writing, noticeably higher than the month-on-month reduction recorded in February. The export increase by volume was led by the Atlantic Basin, where overall shipped volumes were up 0.86mmt (8 percent) over February. Concurrently, Pacific Basin shipments were up by 0.48mmt (4 percent) month-on-month. Middle Eastern exports, however, still saw negative growth as March exports continued to decrease by 0.17mmt (-2 percent). This, in turn, translated to global full-month exports of 30.79mmt in March compared to 29.62mmt in February. Nevertheless, our preliminary data pointed to March's LNG shipments still coming in 1.90mmt (-6 percent) below their year-on-year equivalent.

Pacific Basin

Our data just before the end of March showed Pacific exports had reached 11.82mmt, coming in above February's full-month volume of 11.34mmt by 0.48mmt (4 percent). Consequently, annualised capacity utilisation stood at 88 percent at the time of writing.

Australia

In line with overall export growth, the Basin's most significant exporter by installed capacity – Australia – increased exports slightly by 0.13mmt from 6.02mmt in February to 6.13mmt in March. Our preliminary data indicated export growth

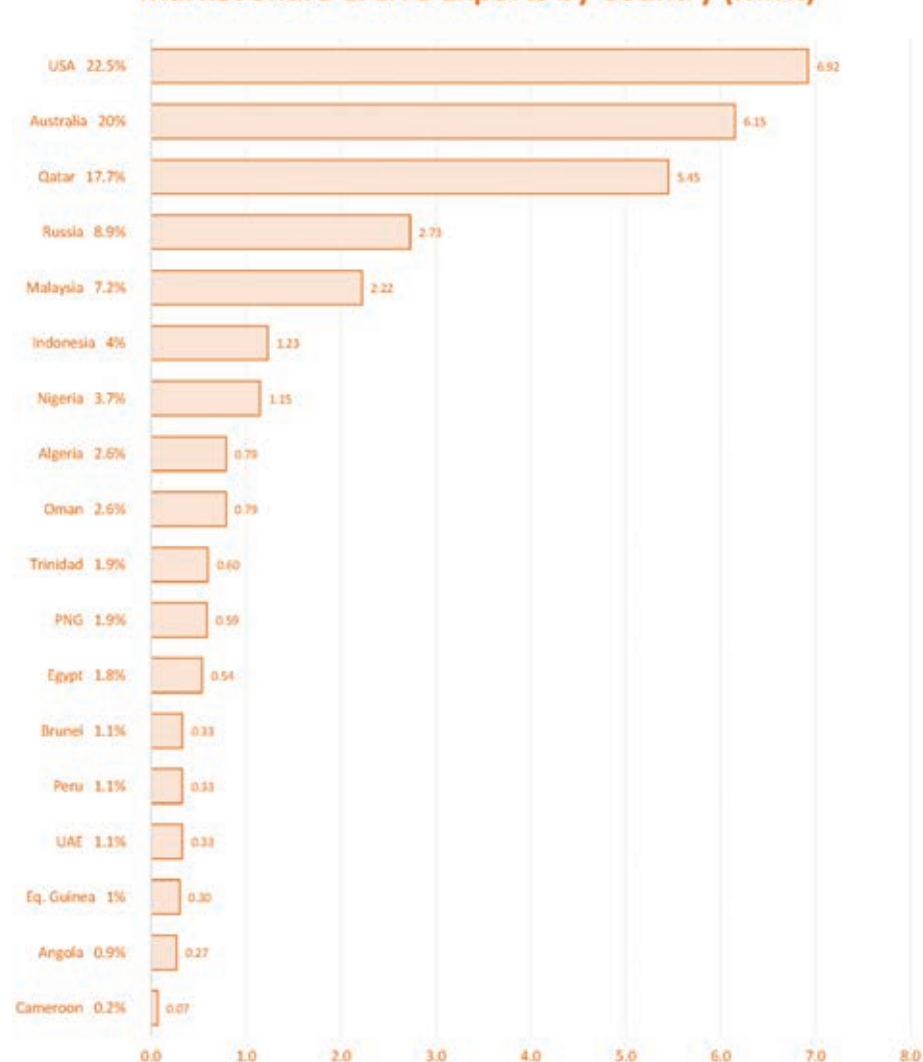
of 0.20mmt (21 percent) at NWS LNG was a leading factor in March. NWS LNG exported 1.13mmt compared to the 0.93mmt recorded in February. Exports from Gladstone LNG, meanwhile, increased by 0.10mmt (24 percent) from 0.42mmt to 0.52mmt. This was followed by Gorgon LNG, where at 1.29mmt shipments were up by 0.07mmt (6 percent) from 1.22mmt in February. Pluto LNG, meanwhile, increased exports more moderately by 0.02mmt (5 percent) to 0.44mmt in March, respectively. There were also broadly stable exports in volume terms from Darwin LNG and Ichthys LNG. As such, export reductions totalling 0.22mmt (-10 percent) at Australia Pacific LNG, Queensland Curtis LNG and Wheatstone LNG could only temper overall export growth in Australia at the time of writing on 30 March.

Shell's Prelude FLNG barge, meanwhile, was again not seen in the market, having last exported LNG in November. Our data and calculations indicated the facility had operated at around 63 percent of annualised capacity at the time. Following a power issue at the facility, Shell was again forced to suspend production and evacuate staff whilst the plant was in the process of increasing exports.

Southeast Asia

North of Australia, Papua New Guinea's PNG LNG saw month-on-month shipments decrease by 0.08mmt

Market Share & LNG Exports by Country (MMt)



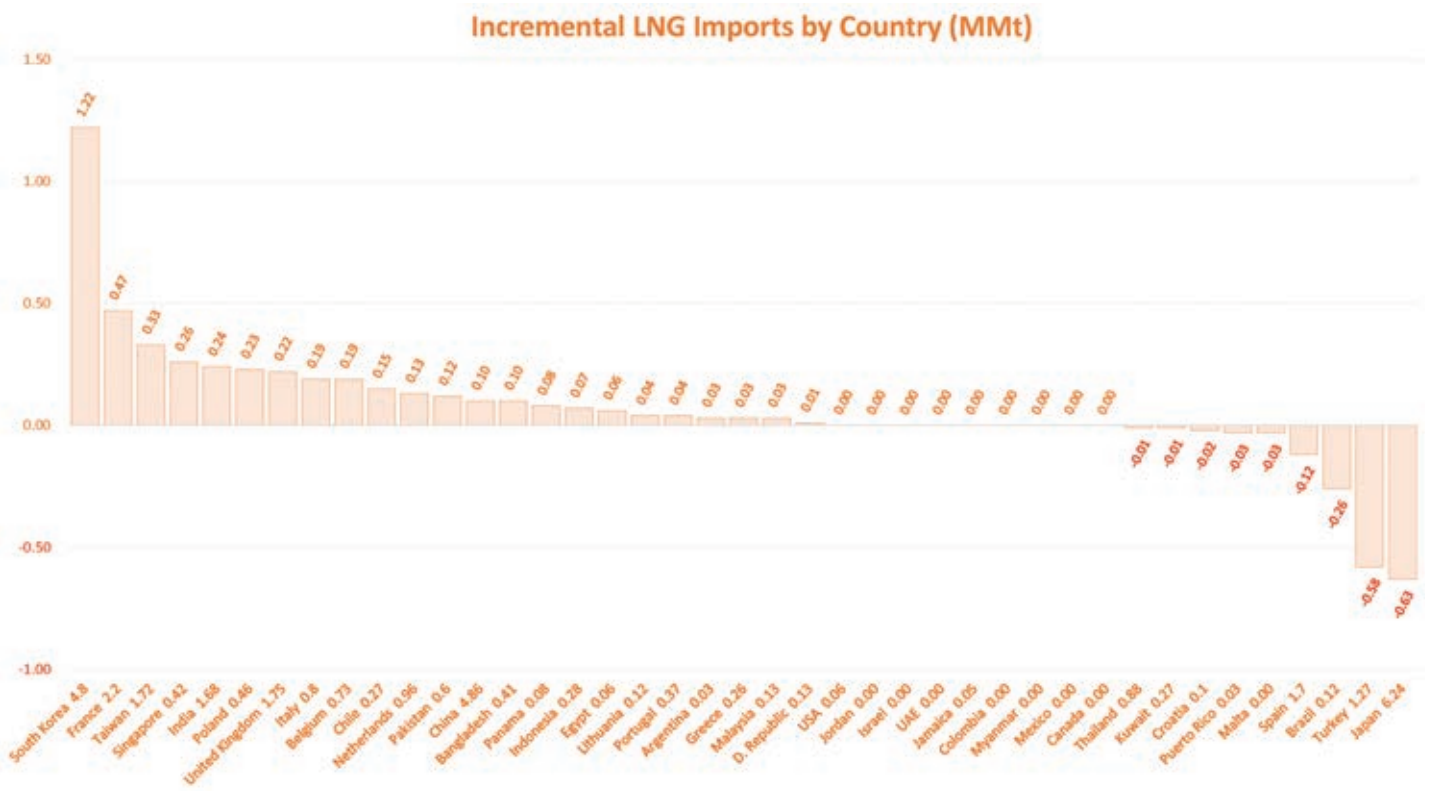
Source: LNG Journal

(-12 percent) to 0.59mmt in March compared to 0.67mmt in February. PNG LNG lost market share in Japan due to a demand slump there, which was only partially compensated by additional exports to South Korea and Taiwan. Shipments to China had remained broadly steady as of 30 March. At 104 percent, however, the plant continued to operate at above nameplate capacity, our calculations show.

In neighbouring Indonesia, however, the amount of LNG shipped had shot up by 0.42mmt (52 percent) to 1.23mmt in March from the 0.81mmt recorded in February. Notably, the Tangguh plant had boosted output to 0.64mmt, having exported only 0.31mmt in February. The Bontang LNG facility also increased shipped LNG volumes by 0.10mmt (29 percent) from 0.34mmt to 0.44mmt. However, the Donggi-Senoro plant decreased shipments by 0.01mmt (-6 percent) to 0.15mmt from 0.16mmt in February.

Meanwhile, Malaysia saw a significant, if more modest, increase in monthly shipments, which was led by a 0.11mmt (183 percent) increase to 0.17mmt from 0.06mmt at PFLNG Satu. Concurrently, Petronas' Bintulu LNG complex raised LNG output marginally by 0.02mmt (1 percent) to 1.92mmt. This growth was only tempered by Petronas' FLNG facility PFLNG Dua cutting cargo loadings by 0.01mmt (-7 percent) to 0.13mmt in March. Accordingly, Malaysian LNG shipments grew by 0.12mmt (6 percent) to 2.22mmt in March from 2.10mmt in February. Notably, Petronas has been reported to have warned buyers of a supply impasse potentially lasting into March 2022. Having issued downward

Global LNG Imports (MMt)



Source: LNG Journal

quantity tolerance (DQT) notices and following an interlude of negative growth in February, Malaysia's LNG shipments have returned to month-on-month growth. Meanwhile, Brunei curtailed monthly LNG exports by 0.11mmt (-25 percent) to 0.33mmt from 0.44mmt.

Russia & Peru

Elsewhere in the Pacific, Russia's Sakhalin-2 LNG returned to growth in shipped LNG, albeit marginal. The plant's exports amounted to 0.97mmt March, up by 0.01mmt (1 percent) from 0.96mmt in February. The plant's March performance was due to significantly more market share in Taiwan and China. Notably, the plant thus continued to operate considerably at above nameplate capacity, which pegged its annualised utilisation at 121 percent at the time of writing.

Sanctions and business cancellations in relation to Russia's invasion of Ukraine had thus not affected Sakhalin's LNG exports in March. Meanwhile, Peru's Pampa Melchorita kept exports broadly steady in volume terms in March as shipments were down by 0.01mmt (-3 percent) to 0.33mmt from 0.34mmt in February.

Atlantic Basin

Concurrent to export growth in the Pacific, the Atlantic Basin's overall shipped LNG had increased by 0.86mmt (8 percent) month-on-month to 11.86mmt in March from 11.00mmt in February. This translated into annualised export capacity utilisation of 76 percent.

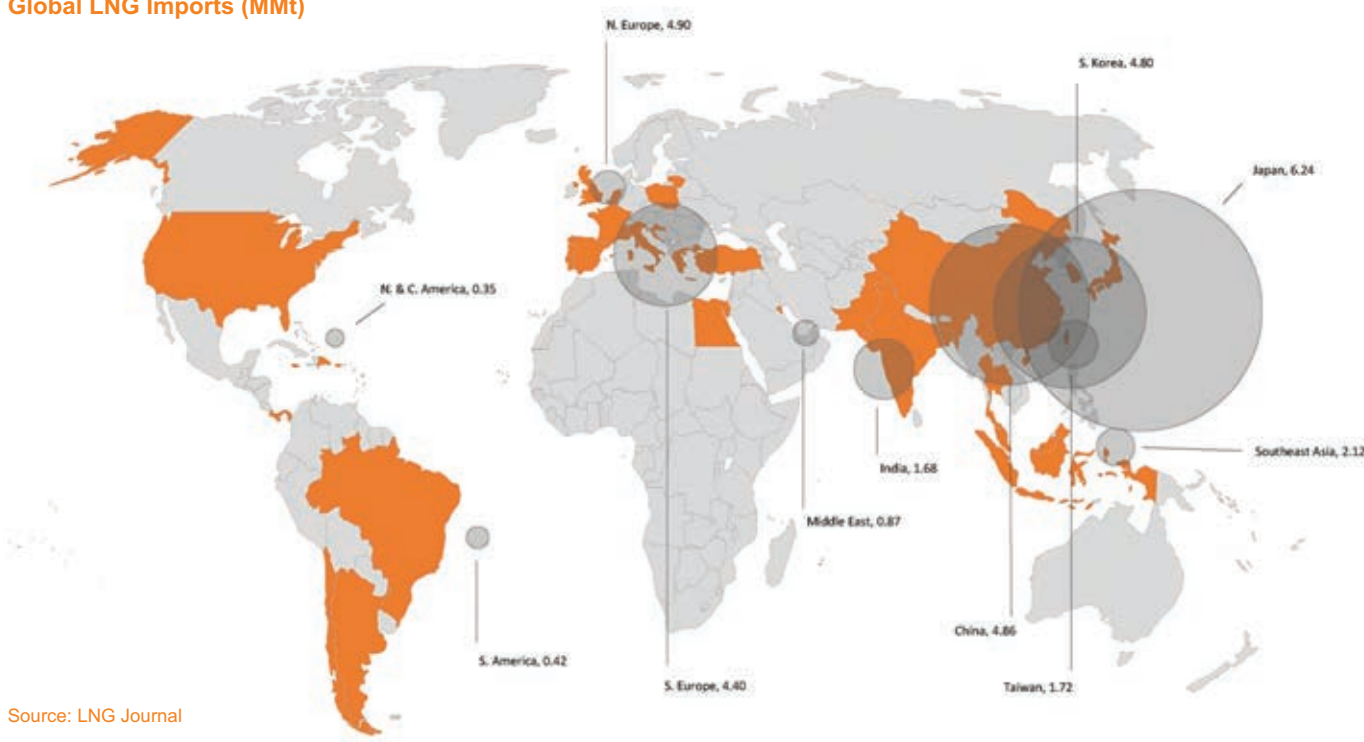
North Africa & Europe

The overall amount of LNG exported within the north-eastern part of the

Atlantic Basin – comprising the European Union, Russia and North Africa (and not including re-exports) – increased by 0.34mmt (15 percent) to 2.55mmt in March from 2.21mmt in February. This was even as the ongoing outage at Snøhvit LNG in Norway still weighed on the north-eastern Atlantic's overall exports. North-eastern Atlantic exports had benefitted from a significant increase of 0.23mmt (41 percent) in Algeria at the time of writing on 30 March. Whilst Skikda increased LNG exports by 0.06mmt (38 percent) month-on-month to 0.22mmt, output from Arzew grew stronger by 0.17mmt (40 percent) to 0.57mmt. Monthly shipments from Russia's Yamal LNG had also increased by 0.11mmt (7 percent) in March as a continued significant downturn in exports to the Far East was compensated by significantly higher exports that were broadly headed for the Atlantic Basin at the time of writing.

West Africa

Meanwhile, West African exports were down slightly by 0.05mmt (-3 percent) as of 30 March. Nigeria curtailed shipments in March, having exported only 1.21mmt in March following exports of 1.52mmt in February. Apart from in Nigeria, West African exports also fell in Cameroon, where we recorded decreases of 0.06mmt (-14 percent) from 1.21mmt to 1.15mmt and of 0.07mmt (-50 percent) from 0.14mmt to 0.07mmt, respectively. Accordingly, the region's overall negative growth was only cushioned by higher exports from Angola and Equatorial Guinea, where shipments were up by



Source: LNG Journal

0.06mmt (29 percent) to 0.27mmt from 0.21mmt and by 0.02mmt (7 percent) from 0.28mmt to 0.30mmt, respectively. West African exports benefitted from significant demand growth in Europe, the Middle East and South America, but which could still not compensate for demand reductions for its LNG in Asia.

Americas

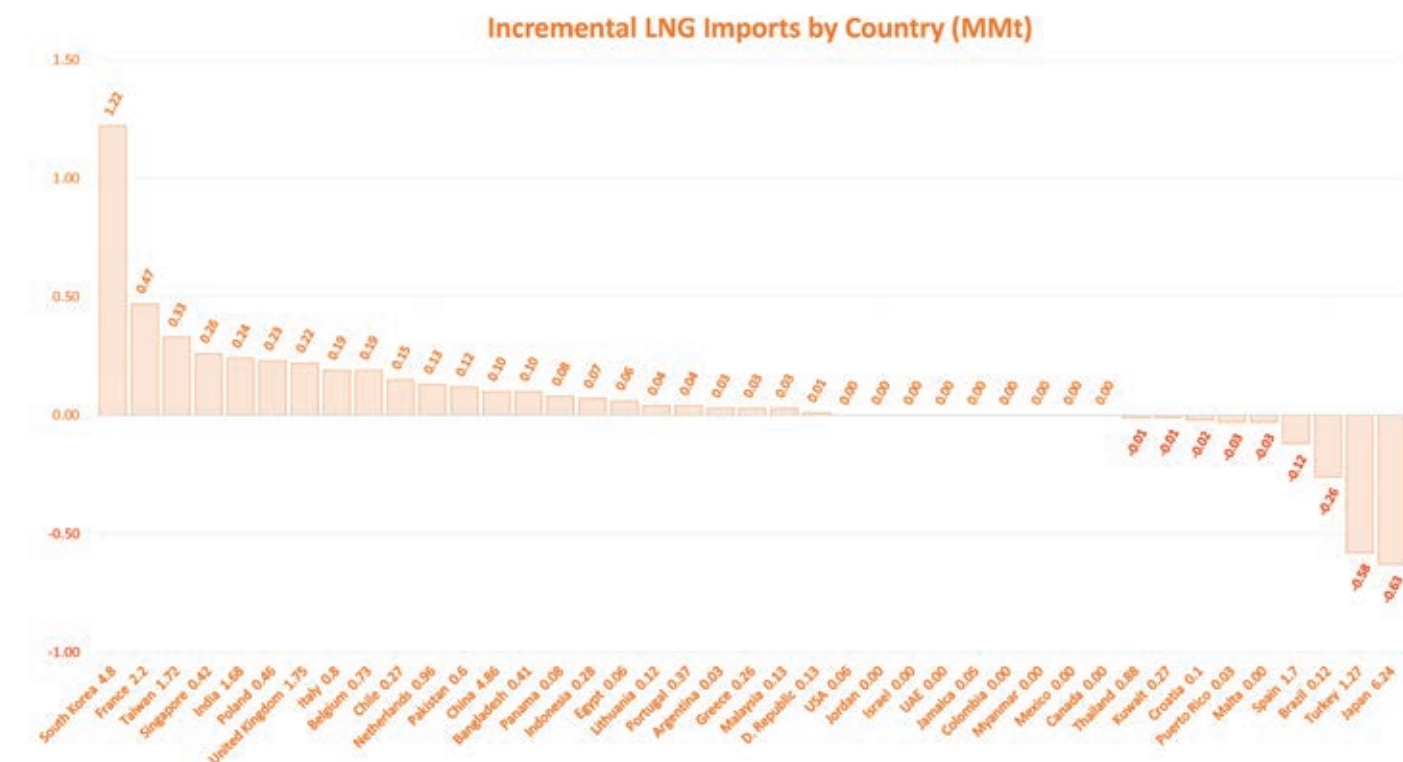
Exports from the US Gulf Coast saw a significant overall increase of 0.62mmt (10 percent) to 6.92mmt in March from 6.30mmt in February. Our data indicated the export increase was mainly due to considerably higher exports by 0.54mmt (26 percent) to 2.61mmt at Sabine Pass LNG. Together with an export increase of 0.20mmt (22 percent) to 1.12mmt at Freeport LNG and the first shipments totalling 0.35mmt leaving Calcasieu Pass LNG, this compensated for a combined export decrease of 0.47mmt (-14 percent) at Corpus Christi LNG, Cove Point LNG, Cameron LNG and Elba Island LNG.

In South America, Atlantic LNG in Trinidad & Tobago had seen exports decrease by 0.05mmt (-8 percent) to 0.60mmt in March compared to the 0.64mmt we recorded in February. Atlantic LNG shipments continued their focus on Europe and the Caribbean whilst decreasing shipments to North America and Asia. Exports to the United States and the Far East, decreased by 55 percent to just 0.13mmt.

Middle East

In contrast to higher month-on-month Pacific and Atlantic Basin exports, shipments from Middle Eastern plants had once more decreased at the time of writing on 30 March. However, the reduction indicated by our preliminary data was not as steep as the 1.96mmt (-21 percent) drop in February. Instead, exports decreased only slightly by 0.17mmt (-2 percent) from 7.28mmt in February to 7.11mmt in March. Accordingly, our data showed the Basin's overall utilisation of operational export capacity (i.e., excluding Yemen) to stand at 81 percent by the end of March, down 2pp from 83 percent in February.

Unlike in February, month-on-month export growth in the region was not led by exports from Egypt, although the country did grow shipped LNG in March. Shipments by the country's Idku LNG plant were up 0.10mmt month-on-month. They thus had increased by 42 percent from 0.24mmt to 0.34mmt. Neighbouring Damietta LNG, however, had decreased



Source: LNG Journal

exports by 0.08mmt (-29 percent) to 0.20mmt from 0.28mmt. Overall, Egypt had thus grown exports only moderately in volume terms by 0.02mmt (4 percent) to 0.54mmt at the time of writing in March.

Concurrently, Qatar had increased exports by 0.11mmt (2 percent) to 5.45mmt compared to 5.34mmt in February. Notably, the month-on-month increase was despite fewer shipments to the Far East and Southeast Asia. These exports were down by 0.35mmt (-12 percent) as exports to China slumped by 0.32mmt (-25 percent) and shipments totalling 0.47mmt to Thailand in February had not materialised in March at the time of writing. Although our data indicated there were still 0.41mmt of Qatari LNG volumes at sea broadly headed to destinations in the Pacific, these may change the composition of destinations but not the total shipped amount. Concurrently, Kuwaiti imports of Qatari gas decreased by 0.20mmt (-77 percent) to just 0.06mmt. This was compounded by less Qatari LNG finding its way to terminals in Italy and the United Kingdom.

Nevertheless, there was a significant increase in imports from Qatar by 0.87mmt in South Korea, Taiwan, Bangladesh and India, Pakistan as well as Belgium and Spain. There were also five cargoes totalling 0.35mmt still headed for the Atlantic Basin. Together, these higher exports compensated for the above-mentioned decreases at the time of writing.

The country's fellow Persian Gulf producers in Oman and the UAE had seen overall monthly exports decrease by 0.30mmt (-21 percent) from 1.42mmt to 1.12mmt at the time of writing on 30

March. This reduction was split equally as Oman curtailed exports by 0.15mmt (-16 percent) to 0.79mmt to 0.94mmt and the UAE's Das Island plant also decreased shipments by 0.15mmt (-31 percent) to 0.33mmt from 0.48mmt. Lower exports to Japan and India weighed on higher imports in China and Kuwait as South Korea and Taiwan kept offtakes from Oman and the UAE broadly steady.

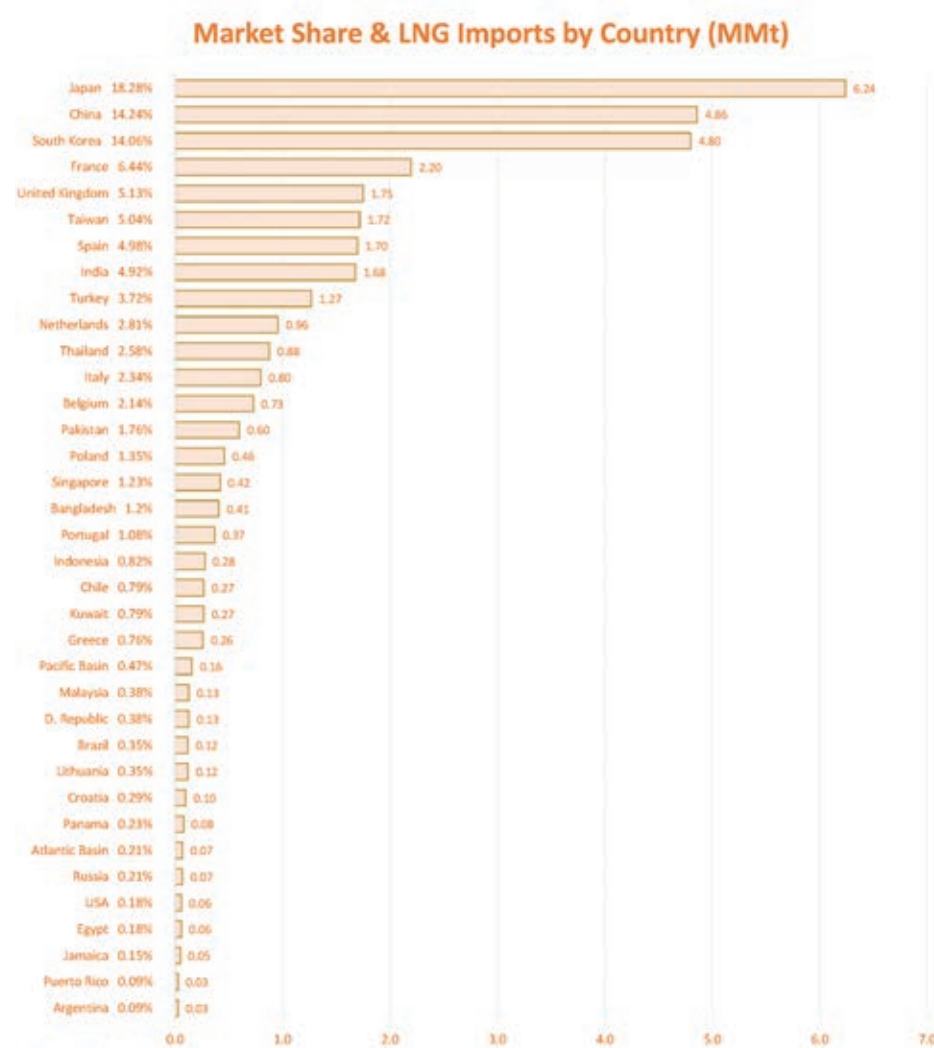
Imports & Domestic Trade

Global LNG imports grew by 2.95mmt (9 percent) in March. Significantly higher

demand in the Pacific Basin was leading the month-on-month increase whilst there was also significant demand growth in the Atlantic Basin. Although more moderate in volume terms, there was also a notable demand increase in the Middle East.

Pacific Basin

Month-on-month Pacific Basin imports had increased considerably by 1.85mmt (9 percent) in March as South Korea, Taiwan and India grew offtakes by 1.79mmt (28 percent) to 8.20mmt overall.



Source: LNG Journal

This was followed by a modest demand growth of 0.10mmt (2 percent) to 4.86mmt in China and a robust increase in percentage terms of 0.07mmt (33 percent) to 0.28mmt in Indonesia. Meanwhile, Malaysia had also increased imports by 0.03mmt (8 percent) to 0.13mmt at the time of writing in March. This only left Japan with a month-on-month demand decrease of 0.63mmt (-9 percent) to 6.24mmt.

In line with the Pacific's net demand increase, the roster of smaller Pacific buyers in volume terms – including

Bangladesh, Thailand, Chile, Mexico, Singapore and Myanmar – collectively saw imports increase by 0.50mmt (34 percent) at the time of writing on 30 March. This was primarily due to Singapore boosting imports by 0.26mmt (162 percent) alongside an increase of 0.15mmt in Chile and 0.10mmt in Bangladesh. These increases were only tempered by a minor reduction of 0.01mmt (-1 percent) in Thailand and a lack of LNG demand in Mexico and Myanmar. The former had not imported a cargo via the Energia Costa Azul terminal

since December whilst the latter had not been seen in the market since July last year, our data showed.

Atlantic Basin

LNG imports in the Atlantic Basin increased by 0.62mmt (6 percent) to 11.22mmt in March from 10.60mmt in February, with annualised capacity utilisation at 49 percent.

A significant net increase in European offtakes was a primary factor in the Basin's overall demand growth – led by France, Poland and the United Kingdom

– which together had grown imports by 0.92mmt (26 percent) to 4.41mmt. In addition, other European importers comprising Italy, Belgium, the Netherlands, Lithuania, Greece and Portugal took in 0.62mmt (31 percent) more in March. However, these increases were tempered by offtake reductions totalling 0.75mmt (-20 percent) to 3.07mmt in Turkey, Croatia, Spain and Malta.

As to demand in the western Atlantic, importers in the Caribbean and South America – including Brazil, Jamaica, Puerto Rico and the Dominican Republic – saw monthly net LNG demand decrease by 0.17mmt (-28 percent) to 0.44mmt in March from 0.61mmt in February. Brazil remained the region's key importer in March, even as the country decreased offtakes by 0.12mmt (-68 percent) to 0.12mmt from 0.38mmt in February. March also saw negative demand growth of 0.03mmt (-50 percent) to 0.03mmt in Puerto Rico whilst Colombia resumed its market absence following a rare import of 0.06mmt in January, our data showed at the time of writing. However, unlike in previous months, Argentina was again seen in the market with a 0.03mmt import in March, having last imported LNG in September. Moreover, the Dominican Republic and Panama showed combined LNG demand growth of 0.09mmt in the Caribbean in March whilst Jamaica had kept monthly offtakes steady at 0.05mmt at the time of writing. Finally, LNG demand remained steady in the United States with overall offtakes of 0.06mmt. Canada had not imported LNG in March at the time of writing.

Middle East

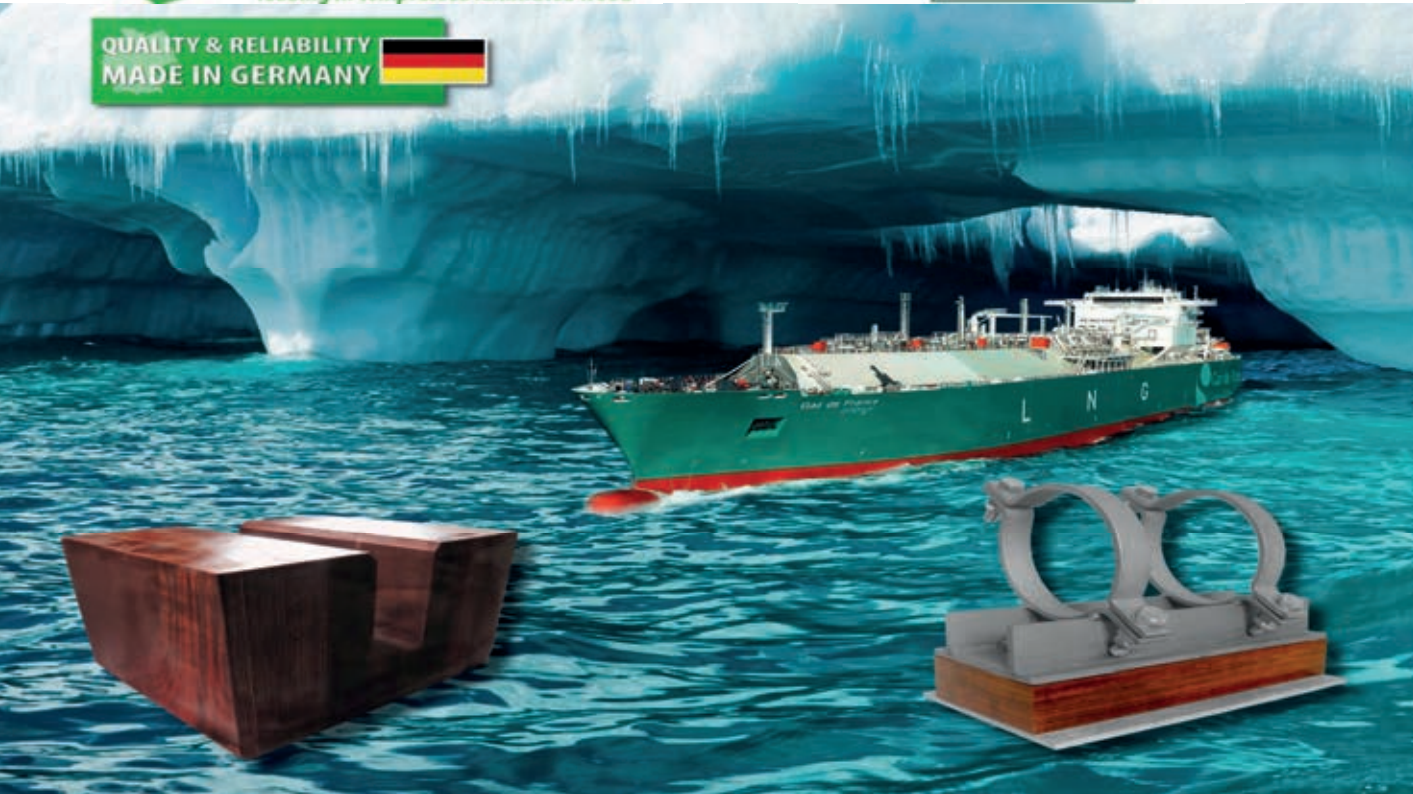
Concurrently, Middle Eastern LNG demand continued at seasonally subdued levels although offtakes were up by 0.17mmt (22 percent) to 0.93mmt in March from 0.76mmt in February. Regional offtakes particularly benefited from higher demand in Pakistan by 0.12mmt (25 percent) to 0.60mmt as well as a rare import of 0.06mmt at Egypt's Ain Sokhna terminal. Meanwhile, Kuwait's Al Zour terminal decreased offtakes slightly by 0.01mmt (4 percent) to 0.27mmt. As was the case in February, Dubai's FSRU was not seen in the market, which also applied to Israel's Hadera FSRU terminal and Jordan's LNG terminal. Accordingly, the Middle East's annualised import capacity utilisation stood at 19 percent in March, up 3pp from February. ■



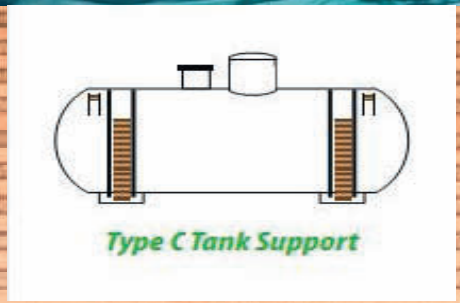
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Fast tracking LNG facilities

With some LNG producing countries now looking to fast track proposed production plants on the back of the Russian/Ukrainian conflict, engineering companies will also be looking to speed up their construction methods to keep pace. Technical Editor, Ian Cochran talks with a leading player.

One company that has already successfully utilised the modular construction concept is Baker Hughes (BH).

A company spokesperson told *LNG Journal* that as long as there is a growing demand for LNG regasification, thus the need for more receiving terminals, an increase might be expected in LNG production plants.

BH has used this method to supply equipment for Venture Global's US Calcasieu Pass plant and has recently won an order to supply turbomachinery for the first phase of its Plaquemines project.

The latest contract concerns a liquefaction train system (LTS) complete with 24 modularised compression trains. BH was recently granted a notice to proceed with the project.

This contract was part of a 70 mill tonnes per year production capacity master equipment supply agreement signed with Venture Global.

BH's LTS is modularised to help lower construction and operational costs with a 'plug and play' approach that enables faster installation.

The manufacturer builds, tests and transports the pre-assembled and fully integrated modular turbomachinery units for Venture Global LNG at its facilities in Italy.

As part of the contract, BH will also provide field services to assist in commissioning of the supplied equipment.

This order follows an award in the fourth quarter of 2021 to provide power generation and electrical

equipment for the comprehensive power island system of Plaquemines LNG.

"We are delighted to continue our strong collaboration with Venture Global LNG. The Plaquemines LNG project is another great example of our extensive experience with modular LNG to provide fully integrated compression and power solutions," said Rod Christie, BH's Executive Vice President of Turbomachinery & Process Solutions speaking at the time of the contract award. "As an energy technology company, Baker Hughes' role is to provide the most efficient and lower carbon technology solutions to meet our customers specific needs, and LNG is a critical part of the energy future. We see a new LNG cycle emerging and expect demand will remain robust in the coming years."

BH supplied a large amount of equipment for Venture Global's Calcasieu Pass LNG terminal in 2019 and in 2021, successfully completing the delivery of the ninth and final block for Calcasieu Pass. All of the shipments were finalised ahead of schedule.

Record construction time

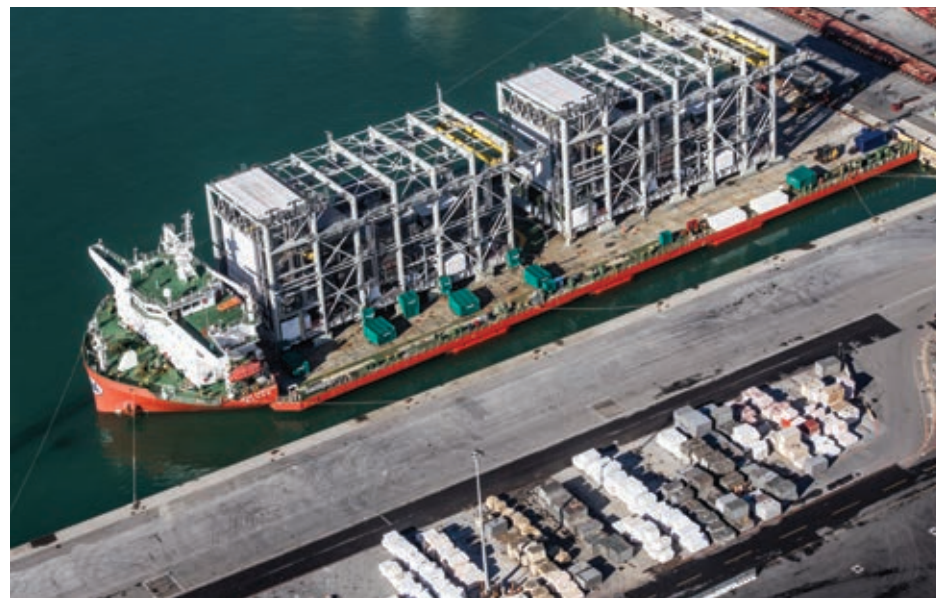
Calcasieu Pass was claimed to be the fastest construction of a large scale greenfield LNG project production site, moving from FID to first LNG in just 29 months.

The first equipment deliveries for Plaquemines are expected to begin in the first half of 2023, BH said.

Explaining the company's 1 mill tonnes per annum modules, BH said that they are a flexible, standardised and scalable solution for zero emission liquefaction offering a faster time to LNG.

The company claimed that the modules allowed construction up to two years faster from conception to operation, including significantly fewer onsite personnel and less site time.

In addition, this system offers lower engineering and construction costs with a fully tested 'plug and play' modules delivered to the site. About 20-30% lower CO2 is also claimed through a zero



Modules being shipped on a specialist heavy lift ship at Carrara

emissions liquefaction process.

The system involves compact liquefaction modules of 1 mill tonnes per annum capacity each, which can be added incrementally to increase capacity, while managing the financial exposure.

Power generation building blocks add to the flexibility and maximise operability between power and liquefaction.

This system is claimed to be ideal for both onshore and offshore LNG plants, small to medium scale resources and those in remote locations.

BH explained that many LNG reserves around the world (both accessible and remote) are too small to be economically viable with the traditional large-scale, stick-built approach to engineering and construction.

This solution allows their construction with pre-constructed turnkey LNG modules that minimise risk and give the developer total control over business growth strategies.

Even the 1 mill tonnes per year range is now viable and easy, the company stressed. The modules can be quickly commissioned and scaled up by one or more at a time — at any time.

Liquefaction module

With an LNG production capacity of 0.8 – 1 mill tonnes per annum, each module weighs 3,000 tonnes and has a footprint of just 1,300 sq m. Driven by an electric motor-compressor of 40 MW, the liquefaction process produces zero emissions.

The process module consists of air coolers, vessels, electrical control cabins, separators, debutaniser and scrubbers.

Each block can power up to three liquefaction modules — with the proven performance of up to four LM9000 gas turbines (including a spare) and one SC2-19 steam turbine.

They ensure 99% availability and provide heat extraction to process. The LM9000 can meet CCGT requirements and power-generation integration with renewables. A battery pack is currently under development that will eliminate the need for the gas turbines spinning reserve.

The liquefaction modules and power-generation blocks are all fully constructed, tested, and commissioned at BH's yard in Avenza, Italy, before being shipping to the project's site.

Avenza is currently about 290,000 sq m, compared to the original size of 40,000 sq m when it was opened in 2011. It has been progressively expanded in the last decade thanks to continuous investments amounting to €60 mill.

It includes two covered warehouses of 27,000 sq m combined. The load out capacity is 4,000 tonnes and there are 16 erection and testing areas, where power generation modules can be tested at full speed and at full load of up to 130 MW.

The testing facilities currently under development are for large LNG mechanical drive trains at full speed and at full load.

Avenza is just 1.5 km from Carrara port, from where all of the modules are shipped, while the Avenza-Massa-Florence proximity enables seamless interaction between all of the engineering, construction, and testing resources, the company explained. ■

"We see a new LNG cycle emerging and expect demand will remain robust in the coming years"

distribution

Containerised LNG bunker solution receives class AiP

A revolutionary yet simple containerised LNG solution has won an Approval in Principle (AiP) from Bureau Veritas (BV). Technical Editor Ian Cochran investigates.

This system was developed jointly by Hamburg-based Marine Service GmbH and UK-based shiprepair experts Newport Shipping.

Based on a 40 ft (FEU) ISO LNG fuel tank container, this system is suitable for both LNG-fuelled containership newbuildings and retrofits.

Class approved 'Type C' LNG fuel tank in accordance with the International Code of Safety for Ships using Gases or other Low-flashpoint Fuels (IGF Code), the container is modelled on a German TÜV certified IMDG FEU container.

The tank's capacity is 31 tonnes or about 33 cu m of LNG. The containers have a fail-safe dry quick coupling connection and are approved for loading up to seven high on deck in stacks.

They take the form of stainless-steel double-walled tanks, which are vacuum insulated and have up to 80 days holding time at sea, or 90 days on land.

Container stowage will be undertaken on a free deck in a safe area. LNG piping and venting, as well as fire fighting systems, are integrated in the container cell guide structure.

A gas handling room will be located adjacent to the container storage stack and separated from the containers by a cofferdam and fire protection barriers to allow the feeding of low and high pressure fuel gas systems for all 4-stroke and 2-stroke dual fuel engine types in operation today.

In addition, a full redundant control, alarm & monitoring system for remote system operation, gas and fire alarm with an interface to the ships' automation

system will be included, as part of the package.

Since LNG containers are portable, the number of containers needed can be easily optimised according to the owners' requirements. Simple and easy to install on board, when a ship is in port, the empty containers can be lifted off and replaced by full ones.

Ingmar Loges, Managing Director, Newport Shipping, said: "The global shipping industry faces unprecedented challenges as environmental regulations tighten. The shipping industry needs alternatives. The containerised LNG concept provides an answer to these challenges."

Marine Service develops several LNG fuel solutions, including tank containers, which are an alternative solution to more traditional LNG bunkering undertaken by trucks or small-scale LNGCs.

Retrofits

Newport Shipping will offer full retrofit services for the LNG fuel tank container solutions at the 15 yards with which the company is involved, both in the Atlantic and the Pacific areas.

With flexible financing options and a quick delivery of turnkey LNG retrofit options, the company said that it expected that this will be an attractive option for clients in the near future.

The finance options include a deferred payment plan of between five and seven years for 60% of the total contract value.

"We are glad to have reached an Approval in Principle from BV for our containerised LNG as fuel solution. LNG



From left: Christian Krämer, Managing Director Marine Service GmbH, Hamburg; BV's Rolf Stiefel, Marine Chief Executive for Central Europe and Russia and Newport's Ingmar Loges

is one of the most promising alternative fuels by now," added Christian Krämer, Marine Service Chairman.

Marine Service is part of the family-owned Krämer Group, which also includes the shipping company, Chemikalien Seetransport. Founded in 1958, as a marine engineering and consultancy company for the development, design, plan approval and construction supervision of seagoing vessels, especially LNGCs, today Marine Service offers a wide range of products and services.

It claims to be one of the market leaders in LNG technology and offers engineering and consultancy services for LNG/LPG carriers, LNG bunker ships and other vessels, as well as converter platforms for offshore wind farms.

In addition, Marine Service designs, develops and commissions its own turnkey LNG fuel gas supply system (FGSS) for cruise vessels and other ship types. A Marine Service FGSS has been stipulated for four cruise vessel newbuildings, thus far.

The company also said that it is pioneering the development of alternative fuel and propulsion technologies.

Newport Shipping UK specialises in providing comprehensive drydocking services for shiprepair work, purchase and delivery of owners' extras (spare parts, paint supply), as well as specialised maintenance, equipment upgrades

(BWTS, scrubbers, etc) and turnkey LNG retrofits.

The Group operates through a network of 15 shipyards with 38 docks capable of handling all vessel sizes and handles around 2,500 dockings annually across the Atlantic and Pacific trading zones.

Utilising Newport's financing services, the Group is also able to minimise cash outlay for shipowners.

Although registered in London, Newport Shipping has a presence in all major shipping centres, including Athens, Oslo, Istanbul, New York, Shanghai, Singapore and Hamburg. ■



An artist's impression of a tank container being lifted into a deck cell guide structure on board ship

Containerised LNG used for fuel - advantages

- ♦ Immediate CO₂ reduction of between 20 and 25%.
- ♦ Greater reduction potential when using bio- or synthetic LNG.
- ♦ Standard ISO containers in a modular structure.
- ♦ Standardised structure for various ship sizes.
- ♦ Minimal offhire period to install.
- ♦ Universal container and connections.
- ♦ Existing logistics infrastructure.
- ♦ Mobility to reach small-scale local facilities.

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Ukraine crisis transforms LNG fuelling prospects

With no resolution to the conflict in Ukraine in sight, ongoing disruption to supply chains threatens to derail growth in LNG fuelling this year, with European markets likely to be most impacted by price pressures. Fuelling Editor Malcolm Ramsay has more

As many firms are preparing for steep price hikes this year, the cost of LNG fuelling projects is coming under increased scrutiny as volatility adds increased risk for operators.

“Sanctions on Russia are likely to have a more significant impact on LNG prices in the short-term than oil prices due to concerns about shortages in Europe, which in turn could make LNG as a transport fuel less attractive,” Matthew Bey, Senior Analyst with RANE, tells *LNG Journal*.

Supply chain pressures

Europe has to date been the leading region for deployment of LNG fuelling infrastructure with the Natural & bioGas Vehicle Association reporting that the continent had reached the milestone of 500 LNG stations in February this year.

Currently Italy leads with 112 stations, followed by Germany with 108, Spain with 79, and France with 60 LNG stations. Despite strong headwinds due to covid, growth has been exponential over the last year with Germany alone rising 140% since February 2021, at which point there were only 45 LNG stations in the country.

With Germany, and much of Europe, heavily reliant on cheap Russian gas however the implications of any further fracturing of relations, or even a complete shutdown of Russian energy exports to

Europe, creates a very different calculus when projecting future growth.

“The Ukraine conflict is increasingly causing civilian casualties and the longer this continues, the more political pressure that will be put on Western governments to outright ban Russian natural gas, crude oil or petroleum products. It also makes it more difficult for Western sanctions that are put into place to be removed,” Bey comments.

To date, Germany has been reluctant to accept sanctions on Russian energy exports, due in part to the fact that around a third of gas imports come from Russian pipeline gas. Stating that the continued supply of gas was “of essential importance”, German chancellor, Olaf Scholz said that “Europe has deliberately exempted energy supplies from Russia from sanctions” as “energy for heat generation, mobility, electricity supply and industry cannot be secured in any other way at the moment.”

Despite this reluctance the scale of the humanitarian crisis and the shift in tactics by Russia towards blanket shelling and bombardment suggest that this situation may have to change in the coming months.

“There are concrete and serious indications that the gas supply situation is about to deteriorate,” Kerstin Andreae, president of Germany’s largest energy

industry association BDEW, commented.

This comes on top of the already tightening supply situation that emerged at the tail end of last year because of the global pandemic.

“Since the second half of 2021, spot LNG has largely been uncompetitive vs. VLSFO or MGO, and towards the end of last year, reports had emerged that LNG-dual fuel and even LNG tankers had chosen to ramp up use of conventional bunkers because those worked out relatively inexpensive (although still driven up by Brent prices), and the cargo (LNG) had gotten too valuable,” Kaushal Ramesh, gas markets analyst at Rystad Energy, tells *LNG Journal*. “We expect that to hold true for the near to medium term, at least until we see some tangible progress towards a ceasefire in Ukraine which so far does not appear to be in sight.”

Re-writing the energy transition

Despite the difficult dilemma faced by many Western countries in the short-term, the longer-term outlook suggests that this historic reshaping of energy markets may actually support increased deployment of LNG as a transport fuel.

“This has probably re-written global trade in many ways, but for gas and LNG



LNG station in Duisburg, Germany

the implications within Europe are an accelerated energy transition - Russian gas is to be replaced as soon as feasible with LNG, renewables and hydrogen,” Ramesh comments. “Countries may have learned the lesson of having a commodity price link to their energy supply - but with renewables that problem goes away, which makes a case for their accelerated deployment.”

Bey of RANE concurs, noting that “Western governments will also look to accelerate the energy transition to cope with higher hydrocarbon prices. LNG as a bunker fuel is one option but will remain an expensive one if Russia remains sanctioned.”

Gabrielle Lelievre, spokesperson for European gas infrastructure association the GIE notes that “the current context is upsetting the geopolitical balance and as well alters the global energy dynamics”, noting that “in these times of unprecedented challenges, it is essential to closely monitor the evolution of the current crisis [and] important to keep in mind that natural gas plays an important role when it comes to the competitiveness of the European economy.”

To maintain this competitiveness, the GIE predicts that European Institutions should revise their plans regarding the financing of natural gas projects and greatly enhance LNG capacities across the continent, a trend that seems likely to continue as the continent seeks to invest in new LNG import terminals and strengthen ties with US exporters.

“For LNG in particular the long-term sentiment has turned bullish again – US producers have yearned for commercial progress since 2020 – and have now found a market across the Atlantic,” Ramesh concludes. ■



Gas pipeline



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For the Record

ADRIATIC LNG, the operator of the largest of three Italian regasification terminals, said it would launch the open season bidding at the end of May 2022 to allocate the regasification capacity available from the end of 2022 to 2047.

Adriatic LNG terminal is co-owned by units of ExxonMobil and QatarEnergy and recently stated it was ready to increase capacity to direct more natural gas to Europe.

The terminal is located 15 kilometres (9.3 miles) off the Veneto coastline and is a gravity-based structure.

The company said its website now contained more precise information on the LNG regasification capacity that will be offered through the open season 2022.

It shows the main provisions regulating access to services and capacity allocation, as well as details on the bidding phases and the evaluation and allocation methodology.

The Adriatic terminal has been on line since autumn 2009 and is a private operator. It is co-controlled by ExxonMobil Italiana Gas and Qatar Terminal Ltd, a subsidiary of QatarEnergy, while Italian gas network operator SNAM has a 7.3 percent shareholding.

“Given the nominal LNG regasification capacity of 9 billion cubic metres per year and the capacity already booked, Adriatic LNG will make available to the market an LNG regasification capacity of approximately 147 Bcm for the next 25 years,” it said.

“This is one of the most important auctions in the world for operators interested in acquiring long-term LNG regasification capacity,” stated the company.

Adriatic LNG also explained that the 2022 open season would be developed in two phases.

An initial non-binding pre-qualification phase expected to take place in June 2022 and a second binding phase for the allocation of LNG regasification capacity in July 2022.

At the same time, Adriatic LNG intends to test the interest of the market operators on the possible development of

LNG regasification capacity above 9 Bcm, which could be for a further increase of 0.5 Bcm per annum of natural gas.

It would also look at the possible development of a Wobbe index correction service in order to receive LNG from even more supply sources.

With the first Open Season closed in December 2021, Adriatic LNG allocated capacity for an overall amount of around 2 Bcm of natural gas over a period of about three years.

“In markets heavily dependent on natural gas imports, Adriatic LNG's 2022 open season is, therefore, a tangible way for Italy and Europe to increase and diversify LNG imports, improving the competitiveness of the domestic natural gas market and ensuring greater security of energy supply,” stated the company.

Adriatic LNG has so far handled more than 800 cargoes at its offshore base.

The terminal includes two LNG storage tanks, each with a capacity of 125,000 cubic metres.

AIR PRODUCTS, the LNG equipment-maker now developing mega-projects in the Middle East, has signed a joint venture contract for a standard project in the Sultanate of Oman in the Arabian peninsula.

The LeHigh Valley, Pennsylvania-based company and Middle East regional partner, Saudi Arabian Refrigerant Gases Company of Saudi Arabia (SARGAS), have signed an agreement to build a new air separation unit (ASU) at the Jindal Shadeed Iron and Steel facility in Sohar in Oman.

The US-Saudi venture is in the region of Oman which is also being developed into the Sohar Port and Freezone of which a separate LNG bunkering project will be part on the Arabian Sea coast and near the entry to the Gulf by the Strait of Hormuz.

Oman is a major anchorage and stop-over point for tankers and other vessels on trade routes between the Middle East, Asia and Europe and a growing number of ship owners are opting for LNG-powered newbuilds.

The Air Products ASU project partner SARGAS is an affiliate of Abdullah Hashim Gases and Equipment, the US company's long-standing industrial gas joint venture in Saudi Arabia.

The ASU project will be undertaken by Ajwaa Gases LLC, a joint venture between Air Products and SARGAS, and

represents the third ASU installed by Air Products at Jindal Shadeed Iron & Steel's facility in Sohar.

“The addition of the new ASU will increase capacity of gaseous oxygen (GOX) and gaseous nitrogen (GAN) by 50 percent together with an increased production capability of liquid oxygen (LOX) and liquid nitrogen (LIN), in Oman,” explained Air Products.

The US company is the leading supplier of LNG equipment for the majority of plants operating worldwide.

The Air Product liquefaction orders in the past year or so have been for Qatar's LNG production expansion, Semptra Energy's Costa Azul LNG export terminal project in Mexico and the currently delayed Mozambique onshore project in Cabo Delgado province.

Air Products, Saudi Aramco and ACWA Power are also making progress with the ASU, gasification and power venture in Jazan Province in Saudi Arabia.

Air Products closed Phase I of the \$12 billion Jazan joint venture in late October 2021.

“Air Products is delighted to expand our offerings at Jindal Shadeed Iron & Steel and strengthen our association further,” said Hamid Sabzikari, Vice President and General Manager of Air Products Industrial Gases in the Middle East, Egypt and Turkey.

“The successful signing of the third ASU demonstrates our commitment to supporting growing customers in Oman and the Middle East region,” stated Sabzikari.

The Air Products gases will be used in the steel melt shop and direct reduced iron (DRI) plant to improve efficiency and production.

“We have had a great association with Jindal Shadeed Iron & Steel over the years and this new ASU plant fortifies the relationship further,” added Khalid Hashim, General Manager of SARGAS.

AUSTRALIA, the largest LNG exporter to North Asia ahead of Qatar and the US, is now taking measures to underpin its own energy security by accelerating seven priority natural gas infrastructure projects and plans to give them government start-up funds to help protect Australia from potential global energy shortages and keep downward pressure on prices.

Under the Future Gas Infrastructure Investment Framework Expression of

Interest process launched last year, an additional A\$50.3 million (US\$37M) will be invested as initial grants in seven priority projects, as well as key carbon-capture and storage projects.

Minister for Industry, Energy and Emissions Reduction Angus Taylor revealed the plan and said the government was working with industry to accelerate the “priority projects” to ensure Australia did not experience the “devastating impacts of a gas supply shortfall” as seen in Europe.

“Our investment will help keep the lights on and homes heated in southern Australia, and support our industries and businesses to keep operating,” stated Taylor ahead of the Southern Hemisphere winter season.

Taylor explained in his statement that Russian natural gas accounted for around 32 percent of total European Union and UK gas consumption, but Russia's invasion of Ukraine has created “an unacceptable risk to global natural gas” security.

“The energy crisis in Europe, should act as a warning of what could happen in Australia if there is not enough investment in the gas sector at home,” warned Taylor in announcing the priority projects to be backed by the ruling conservatives of Prime Minister Scott Morrison.

“Gas prices in the United Kingdom and Europe have increased by more than 300 percent over the past 12 months. Our prices have remained around 75 to 80 percent below these international highs. We must continue to invest in gas to keep our price internationally competitive,” explained the minister.

“Our National Gas Infrastructure Plan, highlighted the critical need for more gas storage to provide greater supply flexibility during winter peaks, along with the need to get more northern gas to the south,” he explained.

“That's why we are investing in seven priority projects as part of our gas-fired recovery, to make sure Australia has adequate supply and storage to avoid expected shortfalls in production in southern Australia that could emerge by 2024,” declared the minister.

The seven infrastructure projects that support government priority actions and have been selected for “early works” support and funding.

They are: In the state of Victoria - the Southwest pipeline expansion project (APA Group) and the Heytesbury

Underground Gas Storage project (Lochard Energy).

In state of Queensland: the Project Range project (APA Group) and the Surat Hub project (APA Group) and the Gas Infrastructure Hub project in the Bowen Basin (Transition Energy Corporation Pty Ltd).

Along the East Coast, the selected project is the East Coast Gas Grid Expansion Stage 2 (APA Group).

In the Northern Territory, a feasibility study will be started into the most efficient infrastructure to deliver natural gas from the Beetaloo sub-basin to the East Coast gas market.

“The investment also includes funding for feasibility studies and options for CO₂-carrying pipelines from major gas and industrial hubs to prospective sites for carbon capture and storage,” added Taylor.

These locations include: Upper Spencer Gulf region to the Cooper Basin; Gladstone to the Surat Basin; Gladstone to the Cooper Basin; and Options for CO₂ pipes in the Beetaloo Basin.

The Minister said the Government in Canberra would now engage with the project proponents to finalise grant agreements.

“The Government has a clear stance on both natural gas and CCS. We will strongly back these sectors which are critical to both affordable and reliable energy for all Australians, as well as emissions reduction,” he stated.

AZULE ENERGY is a new joint venture company set up by UK major BP and Italian energy company Eni in the LNG-producing state of Angola in southwest Africa. It will be the holding entity for the Angolan assets of both European oil and gas companies.

“Azule Energy will be a new international energy company, independently managed, with more than 200,000 barrels equivalent a day of net oil and natural gas production and 2 billion barrels equivalent of net resources,” said a statement.

“It is expected to be Angola’s largest producer, holding stakes in 16 licences, as well as participating in the Angola LNG joint venture,” added BP and Eni.

The agreement on the new company followed a memorandum of understanding on the issue signed in May 2021.

The European companies said that Azule Energy would have a strong pipeline of new projects starting up over

the next few years, including the new Agogo and PAJ oil projects in Blocks 15/06 and 31 respectively offshore Angola.

“It will also develop the New Gas Consortium (NGC), the first non-associated gas project in the country, which will support the energy needs of Angola’s growing economy, its decarbonization path and strengthen its role as a global LNG player,” stated BP and Eni.

Angola is already the second-largest oil producer in Sub-Saharan Africa and uses associated gas to produce LNG source at its liquefaction plant, operated by the main shareholder, the US major Chevron Corp.

Eni and BP are also shareholders in Angola LNG along with France’s TotalEnergies and the Angolan state energy company Sonangol.

The Angola LNG plant is located 350 kilometres north of the capital Luanda in Soyo, at the mouth of the Congo River, and is one of the world’s most modern LNG processing facilities.

A pipeline network of over 500 kilometres delivers gas from offshore oil fields to the Soyo plant designed to process 1.1 billion cubic feet of natural gas per day and produce 5.2 million tonnes per annum of LNG.

BP and Eni added that they shared common goals for Azule Energy in achieving environmental and sustainability ambitions.

“The creation of Azule Energy is a further step in advancing our strategic approach to accelerate growth through focused lean and financially independent companies,” said Claudio Descalzi, Chief Executive of Eni.

“Combining two world-class businesses into one stronger team, Azule Energy will leverage synergies and high-quality assets, boosting activities in Angola and will have one of the largest portfolios of production, development and exploration opportunities in Sub-Saharan Africa,” added Descalzi.

Currently Eni is operator of Blocks 15/06 Cabinda North, Cabinda Centro, 1/14, 28 and soon NGC.

In addition, Eni has a stake in the non-operated blocks 0 (Cabinda), 3/05, 3/05A, 14, 14 K/A-IMI, 15 and in Angola LNG.

BP is operator of Blocks 18 and 31 offshore Angola, and has non-operated stakes in blocks 15, 17, 20 and 29. BP also has non-operated interests in NGC and Angola LNG.

BP, the UK major, said that natural declines in existing hydrocarbon production still imply continuing investment in new upstream oil and natural gas over the next 30 years, while the LNG sector is expected to see substantial growth.

These assertions are contained in the “Energy Outlook 2022” report, which adds helpfully that it “was largely prepared before the military action by Russia in Ukraine” and does not include any analysis of the possible implications of those developments on economic growth or global energy markets.

If anything, the events make BP’s Outlook a more valuable guide to the future importance of LNG supplies to Europe and Asia as well as the need for substantial upstream spending rather than a rush to net zero to reclaim the stone age with no adequate energy replacements nor technologies in place.

Analysts say that one point that can be taken is that the investment in upstream oil and gas is even more crucial as Russian supplies will increasingly point to Asia in the future.

“Growth in liquefied natural gas plays a central role in increasing emerging markets’ access to natural gas,” said BP.

The BP Outlook is focussed on three main scenarios: Accelerated, Net Zero and New Momentum.

“These scenarios are not predictions of what is likely to happen or what BP would like to happen. Rather they explore the possible implications of different judgements and assumptions concerning the nature of the energy transition,” the company explained.

LNG trade grows strongly over the first 10 years of the 30-year outlook, increasing by around two-thirds in the best-case scenario and by one-third if demand is completely regulated by net-zero aims.

BP states that the vast majority of this LNG growth is driven by increasing gas demand in emerging Asia (China, India and other emerging Asia) as they switch away from coal and, outside of China, continue to industrialize.

“LNG imports are the main incremental source of this increased use of gas, accounting for 70-75 percent of the increased gas consumption in emerging Asia out to 2030,” said the report.

“LNG imports continue to expand in the ‘New Momentum’ scenario, rising to over 1,000 billion cubic metres by the

end of the outlook, supported by increasing imports into India and other emerging Asia, and continuing strong imports into Europe,” said the report.

BP added that the growth in LNG exports over the first part of the outlook is driven by the US, which accounts for over 40 percent of the increase in LNG exports to 2030 in all three scenarios.

It states that growth in LNG exports is also supported by sizeable increases in supply from the Middle East, Russia and Africa.

BP’s scenarios are based on existing and developing technologies and do not consider the possibility of entirely new or unknown technologies emerging.

“The Outlook can be used to identify aspects of the energy transition which are common across the main scenarios and so may provide a guide as to how the energy system may evolve over the next 30 years,” said the report.

BP also forecasts that oil demand increases to above its pre-COVID-19 level before falling further out.

The company said the shifting pattern of global oil supplies over the outlook is driven by contrasting trends in US tight oil and output from the Organization of Petroleum Exporting Countries.

“US tight oil recovers over the first part of the outlook, after which it begins to fall and OPEC’s market share gradually increases,” said BP.

The report sees US tight oil, including natural gas liquids (NGLs), rebounding back from the impact of COVID-19, with output peaking above pre-COVID-19 levels at around 15M barrels per day during the first decade of the outlook in all three scenarios.

“Brazilian output also grows over the first 10 years of the outlook. But as US tight formations mature and OPEC adopts a more competitive strategy against a backdrop of accelerating declines in demand, US production (and other sources of non-OPEC output) falls from the late 2020s onwards,” claims the BP report.

“In response to the rebound in US and other non-OPEC supplies, OPEC lowers its production over the first decade or so of the outlook allowing its market share to fall in order to mitigate the downward pressure on prices,” said BP.

“The fall in OPEC’s market share is most pronounced in ‘Accelerated’ and ‘Net Zero’ given the backdrop of falling oil demand from the mid-2020s,” said the report.

CAMERON LNG said that US energy executive Whitney “Whit” Fairbanks, who has previously managed the Peru LNG export plant for Hunt Oil, has been named President of Cameron export plant at Hackberry in Louisiana developed by US utility Semptra Energy.

Fairbanks formerly managed Hunt LNG Company, the operator of the Peru liquefaction and export facility at Pampa Melchorita on the Pacific Coast.

The Peruvian plant produces 4.4 million tonnes per annum from a single Train and receives feed gas via a 400-kilometres natural gas pipeline.

The Cameron LNG plant is much bigger with three Trains and an expansion project in the planning stage.

The US facility is located 18 miles north of the Gulf of Mexico on the Calcasieu Ship Channel near a major pipeline hub and can produce 12 MTPA with feed gas supplies of 1.7 billion cubic feet per day.

The Cameron expansion project will allow the facility to produce an additional 6.75 MTPA of LNG.

“While at Peru LNG, Fairbanks led numerous successful initiatives centred around operational excellence, customer satisfaction, stakeholder engagement and facility expansion,” said Lisa Glatch, Chair of the Board for Cameron LNG.

“Whit’s deep strategic, operational and commercial experience in the LNG industry, including the successful leadership of complex joint venture companies, will be an asset to Cameron LNG as we continue the safe and reliable operations of this world-class facility and advance the development of the expansion project,” explained Glatch.

Prior to joining Cameron LNG, Fairbanks served as a managing member of El Bucare Consulting LLC, a strategy and management advisory company based in Dallas, Texas.

He worked before that in several leadership roles at Hunt Oil, including vice president for strategy and planning, vice president and general manager of Hunt LNG Operating Company and general manager of Hunt Marcellus.

The Cameron LNG liquefaction export project in Hackberry reached full commercial operations of Phase 1 in August 2020.

The company said that to date it had exported more than 350 LNG to 29 countries worldwide.

Cameron LNG is jointly owned by affiliates of Semptra Infrastructure, TotalEnergies, Mitsui and Co. of Japan

and Japan LNG Investment LLC, a venture comprising Mitsubishi Corp. and the Japanese shipping line Nippon Yusen Kabushiki Kaisha (NYK).

CHART INDUSTRIES, the US maker of equipment for LNG and industrial gases facilities, has received a full notice to proceed (FNTF) for the production of cold boxes and brazed aluminum heat exchangers for Venture Global’s Plaquemines LNG export plant on west bank of the Mississippi River.

The Chart equipment will be for the first phase of the venture with production of 10 million tonnes per annum.

“In conjunction with the FNTF, Chart booked the full equipment order of \$136 million for the Plaquemines project from Baker Hughes,” said Chart.

“Chart will begin recognizing revenue on this project in 2022 with a multi-year staggered delivery schedule,” explained Atlanta, Georgia-based Chart.

Chart is benefiting from the LNG boom on the US Gulf Coast and after supplying equipment for the Plaquemines plant, it has also been contracted as a supplier for Cheniere Energy’s Corpus Christi plant expansion and for Tellurian’s Driftwood LNG project.

The Plaquemines project is under preliminary site preparation on the river bank 30 miles south of New Orleans.

First phase production will comprise nine modular blocks with the 10 MTPA of output eventually followed by nine additional block for 20 MTPA in total.

Venture Global had already raised \$500 million of funding in transactions arranged by American and Japanese banks to finance construction activities at Plaquemines.

The Arlington, Virginia-based company previously closed a term-loan involving JPMorgan Chase Bank, Morgan Stanley Senior Funding, Bank of America and Japan’s third-largest banking group, Mizuho Bank.

Venture Global is currently developing 70 MTPA in four projects in Louisiana.

The most advanced plant in terms of construction is Calcasieu Pass in Cameron Parish in Louisiana, south of Lake Charles, with 10 MTPA of capacity and which was shipped its first cargo on March 1.

The other three projects are expected to each produce around 20 MTPA of LNG.

In addition to the Plaquemines and Calcasieu Pass developments, Venture Global is planning two other plants, Delta LNG on the Mississippi and CP2 LNG, which would be built on a 540-acre site in Cameron Parish, adjacent to the Calcasieu Pass facility.

CHENIERE ENERGY has received US Department of Energy long-term authorizations to export more liquefied natural gas shipments from the existing liquefaction facilities owned at Sabine Pass in Louisiana and Corpus Christi in Texas.

The two DoE orders allow Sabine Pass and Corpus Christi more feed gas to liquefy and export. Sabine Pass started operations in February 2016.

The Cheniere plants can now have the additional flexibility to export the equivalent of 0.72 billion cubic feet per day of natural gas as LNG to any country with which the US does not have a free trade agreement, including all of Europe.

When US LNG export plants were being developed for the first time in the lower 48 states the DoE was tasked with making sure there were export limits that protected US domestic natural gas needs as well.

“While US exporters are already exporting at or near their maximum capacity, with the issuances, every operating US LNG export project has approval from DoE to export its full capacity to any country where not prohibited by US law or policy,” said the DoE.

The statement noted that the US was now the top global exporter of LNG and exports are set to grow an additional 20 percent beyond current levels by the end of 2022 as additional capacity comes on stream.

In January 2022, the US supplied more than half of the LNG import needs of Europe.

“With the expected rise in LNG exports, the DoE is particularly focused on driving down methane emissions in the oil and gas sector both domestically and abroad,” added the statement.

It declared that US LNG remained an important component in global energy security.

“The DoE remains committed to finding ways to help our allies and trading partners with the energy supplies they need,” said the statement.

Cheniere announced in early February 2022 the completion of Train 6 at Sabine

Pass in Cameron Parish in Louisiana, formally taking nameplate capacity to 27 million tonnes per annum.

The Corpus Christi facility has nameplate capacity of 13.5 MTPA from three Trains.

CHENIERE said it had initiated a planned lump sum, turnkey, engineering, procurement and construction contract with US LNG and energy engineering firm Bechtel Inc. for the Corpus Christi LNG plant expansion.

Cheniere said it had released Bechtel to commence early engineering, procurement and other site work for the Corpus Christi expansion, known by Cheniere as the Stage III Project.

“The Corpus Christi Stage III Project is a fully permitted project consisting of up to seven mid-scale Trains, each with an expected liquefaction capacity of approximately 1.49 million tonnes per annum with a total production capacity of more than 10 MTPA,” explained the Houston, Texas-based company.

“The project is commercially underpinned by long-term agreements with creditworthy counterparties,” it added.

Cheniere said that it was pleased to once again partner with Bechtel following the engineering firm’s “unmatched track record for execution excellence” while successfully building Cheniere’s LNG platform.

“The signing of this EPC contract and the issuance of LNTF mark important steps towards a final investment decision on the project, which we expect to occur this summer,” said Jack Fusco, Cheniere’s President and Chief Executive.

“We are excited to have the project underway and are focused on the remaining steps required in order to reach FID,” added Fusco.

“The Corpus Christi Stage III Project commences as global LNG market fundamentals highlight the criticality of natural gas in the global energy mix,” stated the Cheniere CEO.

Cheniere, which also operates the Sabine Pass plant Louisiana, announced in early February 2022 the completion of Train 6 at the liquefaction plant in Cameron Parish in Louisiana, formally taking nameplate capacity to 27 MTPA.

The work on Cheniere’s Sabine Pass Train 6 started in June 2019 and the peak workforce on the project reached 1,800 workers who installed 12,250 tons of

steel, poured 48,500 yards of concrete and laid 2,500,000 feet of cable.

Bechtel was also the main EPC contractor at Sabine Pass and Brendan Bechtel, Chairman and CEO of the company, said he was pleased to be now starting on the Corpus Christi contract.

“Cheniere’s award of the EPC contract for the third phase of the LNG development at the Corpus Christi complex is another important step in our long-term partnership to deliver affordable cleaner energy to the world,” stated Brendan Bechtel.

“The industry-leading results we have helped Cheniere achieve over the last nine years are a testament to the power of a ‘One Team’ approach built upon shared goals and trust,” he added.

ENERGY WORLD Corp., the owner and developer of LNG import terminals, liquefaction facilities and power plants in Indonesia, the Philippines and Australia, reported lower fourth-quarter net income after disposing of Indonesian assets.

Net profit decreased from \$10.2 million to \$8.1M during the period.

“The reduction in net profit is mostly due to the Group having disposed of a 49 percent participating interest in Sengkang Production Sharing agreement in March 2021 along with movements in deferred taxes,” said EWC.

Revenue for the consolidated group for the fiscal half-year rose slightly to \$73.5 million versus \$73M in the previous six months.

EWC still retains an array of assets in Indonesia and the Philippines, including a 95 percent interest in the Sengkang gas-fired power plant (Block 1 and Block 2) in Indonesia.

It also has a 51 percent interest in the Sengkang gas field in Indonesia and is outright owner of the Philippines LNG Hub in Pagbilao in Quezon province and in the adjacent Pagbilao power plant.

“The ongoing lockdown of Luzon as a result of Covid-19 restrictions affected our ability to carry out normal site operations at our Pagbilao LNG Hub terminal and power plant, nevertheless, in addition to maintaining the security, safety and environment of the site, there has been some progress achieved in such general and peripheral areas as the roadway, drainage, slope protection, revetment and the preparation for the remobilisation and recommencement of work,” explained EWC.

EWC said its land acquisition programme for the right of way has continued, and where this has been completed soil investigation engineering studies have also been completed for initial transmission towers.

“Equipment for these transmission towers has been purchased and delivered to the Pagbilao site ready for installation,” added EWC, listed on the Australian Securities Exchange.

“The proposals we have submitted to the Indonesian national power utility, Perusahaan Listrik Negara (PLN) for an extension of the Power Purchase Agreement (PPA) for our Sengkang Power Plant project (which expires in October 2022) are now being discussed directly with PLN and we expect further developments in May 2022 in connection with these arrangements,” said EWC.

The company added that it was also in discussions with the upstream regulator in Indonesia, SKKMigas, regarding the gas allocation from the Wasambo gas fields for support for the LNG business development opportunities that exist throughout Eastern Indonesia.

“These developments now require LNG for the fuel and power requirements needed for the processing of raw materials in the region before the processed products can be exported. We foresee a significant demand for domestic supplied LNG for these potential customers arising from early 2024 for multiple years,” said EWC.

The company retains small-scale liquefaction assets in Australia at Alice Springs and the Gilmore LNG project along with stakes in nearby gas resources.

In Australia, EWC said revenue from oil and gas increased by 10.9 percent during in the six month to the end of December compared with the previous period.

Revenue in Australia arises from the Naccowlah joint venture with Santos in which it holds a 2 percent interest.

The company said it reclassified its fixed assets to the Gilmore & and Eromanga projects, which had a book value of A\$9.0M (US\$6.8M) into assets under construction as they are now in the process of being restarted along with the associated gas fields.

EQUINOR confirmed that the Hammerfest LNG plant was resuming production in mid-May and would be part of the Norwegian company’s new

planned natural gas production surge for Europe.

Equinor said that in addition to increased pipeline natural gas exports and the re-start of Hammerfest LNG, adjustments in the gas field permits would also increase the robustness of the production in the fields exporting via the Kollsnes processing plant.

Hammerfest LNG is scheduled to come back on stream following repairs from a fire in September 2020 and will provide more than 6 billion cubic metres of gas per year from the Barents Sea.

Equinor and its partners, together with the Norwegian authorities, will change production permits to allow higher gas production from the Troll, Oseberg and Heidrun fields to be maintained through the Northern Hemisphere summer months.

Under Norway’s natural gas supply boost, production from the Troll field can be increased by up to 1 billion cubic metres of gas in the event of loss of production on other fields in the area.

“In this highly challenging situation we will do our utmost to deliver as much as possible to our customers, enabling them to provide homes and companies with gas,” said Irene Rummelhoff, Equinor’s executive vice president of Marketing, Midstream and Processing.

“We are pleased that we, together with the authorities, our partners and Gassco, now ensure that we can export more gas this summer, while increasing the robustness of gas exports,” she explained.

Part of Equinor’s plan also involved the postponed from May until September of planned turnarounds on four platforms on the Oseberg field.

This will accelerate the production of slightly less than 500 million cubic metres from September to May.

The Ministry of Petroleum and Energy has approved the application from Equinor for a more flexible production permit for the Oseberg field for the current gas year, enabling the field to maintain maximum output.

“Oseberg can thus increase gas exports up to 30 September 2022 by about 1 Bcm,” said Equinor.

This is an about a 15 percent to 20 percent rise for the current gas year, putting this year’s production at about 7 Bcm.

The Norwegian Ministry of Petroleum and Energy has also approved the application from Equinor for an increase in the production permit to 38 Bcm for the

Troll field for the current gas year.

This increases production by 1 Bcm, equivalent to an increase of slightly less than 3 percent for the Troll field in this gas year, in the event of loss of production from other fields.

The Ministry has approved the application from Equinor to increase the gas production on the Heidrun field by 0.4 Bcm in the current gas year, an increase of up to 30 percent.

“Our focus is to maintain safe and efficient operations on our facilities, remaining a reliable supplier of energy to the markets in Europe in a highly challenging situation,” explained Kjetil Hove, executive vice president of Exploration & Production Norway.

“In close dialogue with the authorities and our partners we are now taking steps to maintain the high production level from the winter,” he added.

HIMALAYA Shipping Ltd., the independent bulk carrier company incorporated in Bermuda, is advancing with its corporate development as it awaits the start of deliveries of 12 LNG-powered bulk carriers.

Himalaya’s dual-fuel Newcastlemax dry bulk carriers will start to be delivered from a Chinese shipyard in about a year’s time.

The company’s steady progress was noted in a statement on the granting of share options.

The board established a long-term incentive plan for the Group’s directors and others in the company and has approved a set of general rules.

Around 800,000 of the company’s authorised but unissued share capital will be the settlement for exercised options granted under the plan.

Each share option gives the holder the right to purchase one share in the company at an exercise price of US\$8.00.

Himalaya’s name is reflected in the dozen newbuilds being named after mountains such “Mount Kilimanjaro” and “Mount Etna” and the “Matterhorn”.

The company, whose contracted Chief Executive is Herman Billung, reported a net loss of US\$1.0 million in 2021. It also completed private placements of US\$95M gross in shares.

The 12 dual fuel Newcastlemax dry bulk ships have been ordered from the New Times Shipyard located in Jiangsu, the eastern Chinese province north of Shanghai.

The company received credit approval from a leasing company for the sale

leaseback financing of the first four vessels to be delivered from the second quarter of 2023.

Himalaya was also listed on the Euronext exchange in December 2021. When the ship deliveries begin it will outsource ship management to third-party contractors.

The share options just announced will vest over a period of three years and expire five years after the grant date.

CEO Billung has extensive experience in shipping, and has previously held a number of senior roles within chartering and management.

This includes chartering and Managing Director at T. Klaveness Group 1998-2005, MD Frapaco Shipping, CEO Golden Ocean Management, Songa Bulk and most recently SVP in Star Bulk 2018-2022.

Billung has his education from the Royal Norwegian Navy and Norwegian Business School. He is a Norwegian citizen and resides in Norway.

The Chairwoman of the company, Georgina Sousa, has served as a director on the board since June 2021.

Sousa was previously employed by shipping company Frontline Ltd. as Head of Corporate Administration from February 2007 until December 2018.

She also served as a director of Frontline from April 2013 until December 2018 and was at a host of other companies including Flex LNG from June 2017 until December 2018.

Sousa also served as a director of Seadrill Limited from November 2015 until July 2018, Knightsbridge Shipping Ltd, the predecessor of Golden Ocean Group, 2005 until 2015 and Golar LNG from 2013 until 2015.

On the technical front, the company has decided to increase the size of the low sulfur fuel oil (LSFO) Marine Gas Oil (MGO) tanks to 4,750 cubic metres in order to offer maximum flexibility in trading of the ships.

“The new tank design mean the vessels can do a full round voyage Brazil-China, both on LSFO and LNG,” said Himalaya.

HOEGH LNG Holdings, the leading floating storage and regasification unit (FSRU) operator with 10 modern vessels, said LNG continues to be a growth market and recent events in Ukraine had put energy on top of the agenda in Europe with increased interest in FSRUs.

Höegh LNG, which is headquartered

in Bermuda, made its comments in a presentation to bond investors, pitching itself as having long-term and committed owners in the Norwegian Höegh family and Morgan Stanley Infrastructure Partners.

The company is owned by Larus Holding Limited, a 50-50 joint venture between Leif Höegh & Co. Ltd. and funds managed by Morgan Stanley Infrastructure Partners, and it also owns around 46 percent of Höegh LNG Partners LP.

The company’s President and Chief Executive is Thor Jørgen Guttormsen and Håvard Furu is the Chief Financial Officer.

Höegh LNG also revealed that the FSRU “Independence” operating as an import terminal for the Baltic state of Lithuania would likely be sold.

“Klaipedos Nafta, the charterer of ‘Independence’, has publicly announced that it intends to exercise its purchase option to acquire ‘Independence’ at the end of the existing charter, which runs until the fourth quarter of 2024,” said Höegh.

The company said that while natural gas demand in Europe is rising, Asia would continue to be a high growth area for the industry.

It noted that in the fourth quarter of 2021 global LNG trade rose 5.3 percent year-on-year and Chinese LNG imports were up 7.8 percent in the final three months of 2021.

“Höegh showed solid commercial development in the second half of 2021 with the ‘Hoegh Gallant’ commencing a new 10-year contract with a subsidiary of New Fortress Energy,” said the company.

A new unconditional 10-year FSRU contract was also signed in Brazil with a subsidiary of the utility company Compass Gas and Energia.

The 15-year FSRU contract with additionally signed for the “Höegh Galleon” with Australian Industrial Energy, a company controlled by billionaire commodities businessman Andrew Forrest.

The deal is for the FSRU to operate at Port Kembla, south of Sydney. A site lease for up to 25 years has already been signed with New South Wales Ports for the Port Kembla LNG project.

Höegh LNG said it continued to develop its portfolio of FSRU projects, to ensure that “Höegh Esperanza”, as the remaining FSRU in the fleet, will also be assigned to a long-term FSRU charter.

In corporate activities, Höegh recalled that it had launched a non-binding buyout offer for Höegh LNG Partners LP’s common units with Höegh seeking to acquire through a wholly owned subsidiary all publicly held common units of the Partnership in exchange for \$4.25 in cash per common unit.

“If approved, the transaction would be effected through a merger of the Partnership with a wholly owned subsidiary of Höegh,” said the company.

“The proposed transaction is subject to the negotiation and approval of mutually satisfactory definitive documentation by the parties thereto,” it added.

“If a definitive agreement is reached, the transaction will also require approval by a majority of the holders of outstanding common units in the Partnership,” stated Höegh

The Höegh group’s list of chartered ships and charterers is as follows for Höegh LNG Holdings:

“Arctic Princess” (Equinor); “Arctic Lady” (TotalEnergies); “Independence” (Klaipėda port, Lithuania); “Höegh Giant” (H-Energy, India); Höegh Esperanza (LNGC trading); “Höegh Gannet” (LNGC trading/Compass Brazil); “Höegh Galleon” (LNGC trading/AIE Australia); and “Höegh Gallant” (Jamaica - New Fortress).

Charter list for Höegh LNG Partners LP: “Neptune” (TotalEnergies); “Cape Ann” (TotalEnergies); “PGN FSRU Lampung” (PGN Indonesia); “Höegh Gallant” (New Fortress/ HLNG); “Höegh Grace” (SPEC, Colombia).

KOSMOS ENERGY, the US-based shareholder in the floating liquefied natural gas joint venture offshore the West African nations of Mauritania and Senegal, posted higher fourth-quarter net profits and reported the FLNG venture 70 percent completed amid asset acquisitions in Ghana.

Kosmos is part of a joint venture for the FLNG project being developed with UK major BP underpinned by the Greater Tortue-Ahmeyim gas fields in the waters of Mauritania and Senegal with first gas scheduled for 2023.

“The Greater Tortue-Ahmeyim LNG project has made steady progress in 2021,” said Dallas, Texas-based Kosmos.

“All eight process modules have been lifted onto the deck (of the FPSO) and mechanical completion of the process sub-systems is underway,” the company explained.

“Construction was completed of the 21st (and final) caisson of the breakwater and the subsea pipe-laying vessel completed its nautical trials in preparation for the offshore installation campaign in the second quarter of 2022,” added Kosmos.

Kosmos said that the FLNG hull had all four mixed-refrigerant compressors lifted onboard and pipe-rack installation operations had commenced.

In its earnings, Kosmos reported net income in the fourth quarter of \$98.7 million compared with \$7.9M in the same three months of 2020.

Annual losses narrowed to \$77.8M versus \$411.5M of losses reported in 2020.

The company noted that it had rebuilt operational momentum and improved the balance sheet with a “strong” fourth quarter.

“Kosmos has a differentiated portfolio that is fit for the future with high-quality, low-cost oil assets funding our growth in natural gas and LNG,” said the Kosmos Chairman and Chief Executive Andrew G. Inglis.

“Our record 2P reserves are balanced between oil and gas with a reserve life of over 20 years,” added Inglis.

“With our existing assets and sanctioned projects, production is expected to grow around 50 percent in the next two years and we plan to do that while further de-leveraging the balance sheet,” stated the CEO.

“Our goal is to develop our portfolio in a responsible way, helping our host nations in Africa to expand access to affordable and reliable energy,” he declared.

Kosmos, a specialist in Atlantic Margin exploration and production, acquired an additional interests in the Jubilee field and in the Tweneboa, Enyenra and Ntomme (TEN) oil and gas fields offshore of Ghana in October 2021 from Occidental Petroleum of the US for around \$550M

Ghana National Petroleum Corp. also acquiring stakes in the same fields

Kosmos raised the purchase price through an equity and bond offering.

In November 2021, Tullow Oil of the UK and PetroSA, the Ghanaian subsidiary of the South African company, exercised their pre-emption rights.

“Completion of the pre-emption transactions remains subject to finalizing definitive agreements and securing approval from the Government of Ghana,” added Kosmos.



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NATURGY Group, the Spanish global utility company with LNG supplies from the US and Russia and natural gas and utility businesses in South America as well as renewables in the US and Australia, has held a successful annual meeting in Madrid where it revealed continuing help for customers hit by soaring bills.

Naturgy said it was strengthening its commitment to society in the current situation with the continuation of its initiative to sell electricity at a guaranteed fixed price far below the existing pool price.

The company said that the package had already been granted to almost 400,000 customers.

Naturgy Chairman and Chief Executive Francisco Reynés chaired the company's gathering on March 15 in Madrid.

The AGM was held in hybrid format, both in-person and online, with about 1,000 shareholders in attendance to hear that 2021 targets had been met despite a volatile energy situation.

Naturgy said it closed the year having achieved all its forecasts. Revenue was €22.14 billion euros (\$22.22Bln), while gross earnings were €3.98Bln and net profit €1.23Bln.

The company continued to improve in terms of solvency and liquidity over the course of last year. At the end of December, the net debt held by the company was €12.83Bln.

“Recent events stemming from the invasion of Ukraine have intensified the volatility in this sector worldwide to unprecedented levels of stress,” CEO Reynés told shareholders.

“As a company committed to all our stakeholders, we have a duty to maintain our commitment to society and to continue our process of transformation in order to adapt and anticipate,” he added.

Naturgy had said after its fourth-quarter earnings that it would split into two separately listed companies, one focused on infrastructure and the other handling power generation.

Naturgy's LNG portfolio includes 2.5 million tonnes per annum of delivered ex-ship (DES) cargoes through to 2038 from the Yamal LNG plant in Arctic Russia, operated by Novatek.

Its regular long-term supplies also come from 3.5 MTPA of free-on-board shipments from Cheniere Energy Sabine Pass plant in Louisiana.

The company additionally controls a

fleet of 12 LNG carriers for deliveries which also come from countries like Trinidad & Tobago and Nigeria.

In his speech to shareholders, Francisco Reynés highlighted the milestones reached by the company despite a tumultuous macro and energy context. He said 2021 was “a year of recovery” within the context of far-reaching changes in the energy sector.

A statement from Naturgy said the AGM reached a quorum of over 90 percent and almost 800 people connected remotely.

It approved changes to the 12-member board of directors with three new directors being approved. They were named as Ramón Adell Ramón, Enrique Alcántara-Irazoqui and Jaime Siles Fernández-Palacios. They will serve for the next four years.

NEW FORTRESS Energy, the New York-based LNG-for-power company, has welcomed a court ruling in its favour in Sri Lanka allowing its floating import project and power joint venture to proceed.

The Supreme Court of Sri Lanka dismissed petitions seeking to halt NFE's development of an FLNG terminal and an affiliated power plant as well as a second project.

NFE along with the Government Sri Lanka had executed a definitive agreement in September 2021 whereby NFE would invest in energy infrastructure in Sri Lanka and develop a new LNG terminal off the coast of the capital Colombo.

NFE will have gas supply rights to the Kerawalapitya Power Complex and will initially provide the Government with an estimated 1.2 million gallons per day of LNG to supply both the currently operational 310 megawatts Yugadanavi Power Plant and an additional 350 MW facility.

The second plant supplied will be the Sobadanavi Power project which is expected to commence operations in 2023.

“We are pleased that the Court has dismissed these petitions, as NFE can now proceed with our plans to deliver cleaner fuels and more reliable, affordable power to Sri Lanka,” said Wes Edens, Chairman and Chief Executive of NFE, listed on the Nasdaq global exchange.

“We look forward to partnering with the Government of Sri Lanka by investing in modern energy

infrastructure that paves the way for a sustainable and prosperous future for all Sri Lankans,” stated Edens.

In addition to its LNG imports and power projects, which are mainly operational in South America and the Caribbean, NFE is also promoting its “Fast LNG” production and delivery method for natural gas fields.

NFE recently signed an accord with a subsidiary of Italy's Eni in the Republic of Congo for the deployment of LNG production equipment off the coast of the West African nation for a period of 20 years.

NFE said it would set up its “Fast LNG” facility to produce up to 1.4 million tonnes per annum of LNG in the associated gas fields off the Congo.

The deal in the form of a preliminary Heads of Agreement provides a framework for negotiating a long-term tolling agreement between NFE and Eni.

NFE said that this would be for the full capacity of the facility and for the purchase by NFE of around 1.2 million gallons of LNG per day pursuant to a 20-year free-on-board (FOB) sales and purchase agreement.

The Republic of Congo associated gas from oil production was expected to start in the second quarter of 2023.

NEW FORTRESS Energy has signed two 20-year sale and purchase agreements with US company Venture Global, owner of the existing Calcasieu Pass LNG plant and developer of three other liquefaction and export projects in Louisiana.

Under the deals, Venture Global will supply 2 million tonnes per annum of LNG on a free on board (FOB) basis from its Louisiana plants.

Under the first agreement, NFE will purchase 1 MTPA of LNG from Venture Global's Plaquemines LNG export facility being constructed on the Mississippi River, south of New Orleans, for a term of 20 years.

In addition to 1 MTPA from Plaquemines, NFE agreed to purchase 1 MTPA of LNG from Venture Global's CP2 LNG project to be located in Cameron Parish, adjacent to the Calcasieu Pass facility.

“We are pleased to partner with Venture Global as we advance our mission of providing customers around the world with access to low-carbon natural gas and affordable electricity,” said Wes Edens, Chairman and Chief

Executive of NFE.

“These volumes support our plan to expand and diversify our stable natural gas supply portfolio to meet the growing needs of our customers in a structurally short global natural gas market,” added Edens.

In December 2021, Venture Global filed a formal application requesting authorization from the Federal Energy Regulatory Commission to site, construct and operate the 20 MTPA nameplate capacity CP2 LNG plant.

“Venture Global is proud to enter into a long-term LNG partnership with New Fortress Energy,” said Michael Sabel, CEO of Venture Global.

“Our companies share a commitment to keeping energy markets well supplied while also advancing clean energy goals, through the export of low-cost US LNG to emerging economies,” added Sabel.

“The CP2 LNG facility, adjacent to Calcasieu Pass, will build on our vision of making Louisiana an international hub for innovation to enhance global energy security,” he stated.

In addition to Calcasieu Pass and the CP2 and Plaquemines projects, Venture Global is also developing the Delta LNG plant, which will be sited near Plaquemines on the Mississippi.

Venture Global has additionally signed a series of Chinese LNG supply deals.

The latest China agreements were with units of China National Offshore Oil Corp (CNOOC) after two previous accords with China Petroleum & Chemical Corp. (Sinopec).

The first of Venture Global's two most recent deals was an SPA for 20 years with CNOOC Gas and Power Group for a total of 2 MTPA.

CNOOC also will buy an additional 1.5 MTPA of LNG under a short-term accord from the Calcasieu Pass facility.

Venture Global will be Louisiana's and America's largest LNG exporter when all four plants are completed.

PEMBINA PIPELINE Corp., the Canadian pipelines company and joint owner of the Cedar floating liquefied natural gas project, has entered into definitive agreements valued at around US\$9 billion with US investment giant Kohlberg Kravis Roberts (KKR) to combine their respective Western Canada natural gas processing assets into a single joint venture entity.

The Pembina-KKR firm will be owned 60 percent by Pembina and 40 percent

by KKR's global infrastructure funds.

KKR has been expanding its energy assets and has a stake in the Semptra Infrastructure unit controlling LNG projects and pipelines in the US and Mexico.

Pembina will serve as the operator and manager of the as yet unnamed new company jointly owned with KKR.

Pembina and the Haisla First Nation have a 50-50 partnership joint venture to develop a floating LNG export plant near Kitimat in British Columbia.

The FLNG project will be located in the Douglas Channel and is expected have a liquefaction capacity of up to 4 million tonnes per annum of LNG.

Feed gas for Cedar FLNG will be sourced from the prolific Montney natural gas resource play in northeast BC.

Included in the transaction are Pembina's field-based natural gas processing assets, the Veresen Midstream business, currently owned 55 percent by funds managed by KKR and 45 percent by Pembina and the business currently carried on by Energy Transfer Canada.

"The transactions bring together three complementary platforms to create a premier, highly competitive Western Canadian gas processing entity with the ability to serve customers throughout the Montney and Duvernay trends from north central Alberta to northeast British Columbia (NEBC)," said Pembina.

"The agreements increase Pembina's ownership in Veresen Midstream and exposure to increasing LNG-driven volume growth in NEBC in a capital efficient manner," added Calgary, Alberta-based Pembina.

The company said that concurrently with the closing of the joint venture transaction, the Pembina-KKR firm would also acquire Energy Transfer LP's remaining 51 percent interest in ETC.

Pembina said that collectively, the ascribed value of these transactions total C\$11.4 billion (US\$8.9Bln), excluding the value of assets under construction.

The company noted that completion of the transactions was subject to approval under the Competition Act (Canada) and other customary conditions and closing was expected to occur late in the second quarter or third quarter of 2022.

"Pembina has enjoyed a strong relationship with KKR as a partner in Veresen Midstream over the past four

years," said Scott Burrows, Pembina's President and Chief Executive.

"We work well together and share a mutual desire to invest capital and generate attractive returns. The formation of this new joint venture is a natural extension of our relationship, unlocks value for Pembina and creates another growth platform," explained Burrows.

"We are extremely pleased to be creating this exciting new company with KKR to drive real synergies and deliver a wider suite of commercial opportunities," he stated.

PEMEX, the Mexican oil and gas company Petróleos Mexicanos, is currently struggling to emerge from the economic slowdown amid widening losses at a time when several LNG export projects are moving forward in the country.

Pemex executives took part in a conference call following the latest dire earnings that showed the company posting a 124 billion Mexican pesos (\$6.05 billion) fourth-quarter loss compared with a profit of 102.6Bln pesos (\$5Bln) in the same three months of 2020 because of a plunging currency and higher taxes.

The Mexican peso has dropped from 18.80 pesos to the dollar at the start of 2020 to 20.50 pesos to the dollar at the start of 2022.

Pemex said it was working to boost natural gas output partly through improving gas capture rates.

Natural gas production in the fourth quarter was 3.72 billion cubic feet per day, an increase of 2.3 percent compared with the same period in 2020. Non-associated gas production was up 9.1 percent.

Gas production growth was led by the Ixachi field in the eastern state of Veracruz, which grew 106 million cubic feet per day from a year earlier.

Natural gas capture showed a slight improvement and reached 88.1 percent in the fourth quarter.

Executives blamed the figure on high levels of nitrogen in the Ku-Maloob-Zaap asset along with processing infrastructure issues and other problems at the Ixachi and Quesqui gas fields.

Pemex flared 620 million cubic feet per day of natural gas in 2021, which amounts to around 17 percent of total production.

Chief Financial Officer Alberto Velázquez told analysts that capital

expenditure for 2022, including more spending on exploration and production, is expected to be about 200 billion pesos (\$9.7Bln), which is more than the 2021 expenditure of 161 billion pesos and the 122Bln pesos spent in 2020.

Production will be led by the Ixachi, Quesqui and Mulach fields with 18 wells expected to be completed in the first quarter of 2022.

Pemex is aiming for production of 1.903 million barrels per day in 2022, 1.971 million barrels a day in 2023 and 2.063 million barrels a day in 2024.

The company said its crude oil and condensate production for the last three months of 2021 averaged 1.75 million barrels per day, up 4.5 percent compared with the same quarter in 2020.

The state-run company also reported that its debts fell slightly by 0.7 percent to \$109Bln, though it remains the world's most indebted state energy company.

Mexican President Andres Manuel Lopez Obrador has pledged to revive Pemex and has provided billions of dollars in financial support to the company to try to achieve a turnaround.

Pemex said in December it would continue to cut crude exports this year and could suspend them altogether in 2023 as it works to meet the government's target of refining all of its oil domestically.

Analysts said the national oil and gas company needs to be weaned off of state aid to improve its corporate prospects.

The woes of Pemex continue as LNG export projects move forward, though involving US and non-state companies.

Mexico-Pacific Ltd (MPL), based in Houston in Texas, is developing an LNG export facility on the Pacific Coast using US natural gas as the feed gas and installing processing technology from ConocoPhillips.

This Mexican LNG export plant is proposed for near Puerto Libertad in the northwest state of Sonora and would have just over 14 million tonnes per annum of output.

Another plant is the Costa Azul facility, an existing import terminal in the West Coast state of Baja California currently being transformed into an export plant by US utility Semptra Energy.

PETRONET LNG, the owner of the largest Indian cargo import terminal at Dahej, has incorporated a wholly-owned subsidiary company in Singapore to

increase trading activities especially for spot and short-term LNG cargo supplies.

The Indian company said in a filing to the Bombay stock exchange (BSE) that the subsidiary in the Asian city state is called Petronet LNG Singapore Pte. Ltd and was registered on the 7th of March 2022.

"The newly incorporated wholly-owned subsidiary has been incorporated to carry out business/activities, including but not limited to purchase of LNG on long, spot and short-term basis and sale of LNG and trading of LNG to Indian and foreign companies," said Petronet.

"Petronet in Singapore will also engage in optimization and diversion of LNG under its portfolio, carry out hedging, purchase of LNG under LNG SPAs, sale of LNG to customers and investments in overseas ventures," explained the state-controlled Indian company.

The Chief Executive of Petronet, Akshay Kumar Singh, said after the most recent earnings that the joint venture company planned to invest at home and abroad to improve its portfolio and access to LNG.

One of the company's main projects in India is constructing an East Coast LNG import terminal as its two operating terminals are on the West Coast at Dahej, north of Mumbai, and at Kochi in the southwest state of Kerala.

Singh has said that the East Coast terminal at Gopalpur in the state of Odisha would have capacity of around 4 million tonnes per annum.

Petronet had previously planned to set up a terminal at Gangavaram in the East Coast state of Andhra Pradesh, though did not proceed because of a lack of perceived demand.

CEO Singh said after the latest earnings that Petronet was looking at investments overseas that could involve access to LNG off-take.

"We will evaluate good opportunities for overseas investment. If it is beneficial for the country, definitely we will go for it," said Singh.

Petronet reported record earnings in the third quarter of the fiscal year as natural gas prices increased.

Petronet's net profits jumped by 31.4 percent to 1,159.46 crore rupees (\$154.5M) as an increase in prices boosted margins from the 882.05 crore rupees (\$117.8M) posted in the same three months of the previous fiscal year.

The New Delhi-based company's net

profits were 42 percent higher than the 817.61 crore rupees (\$109.27M) reported in the quarter to the end of September 2021.

Petronet's Dahej facility has capacity to handle 17.5 MTPA of LNG and with six storage tanks and two more planned.

The Dahej utilisation rate for April through December 2021 was 90.2 percent while the Kochi facility's utilisation rate was 21.9 percent for its 5 MTPA of capacity.

Shareholders in Petronet, which began operations in 2004, include the other big Indian energy players, Gas Authority of India, Indian Oil, Bharat Petroleum Corp. and Oil and Natural Gas Corp.

ROYAL VOPAK, the Netherlands-based global storage company with four stakes in liquefied natural gas terminals and a new LNG import project for Hong Kong, said the German Federal Government would be replacing Vopak as a shareholder in the proposed German LNG terminal at Brunsbüttel on the Elbe River.

Vopak said the Brunsbüttel joint venture would move forward quickly with the remaining LNG expertise of Dutch utility Gasunie.

Vopak emphasized that the planning approval process for Brunsbüttel, which was started in 2021, is also being moved ahead at "full speed".

Rotterdam-based Vopak said that in addition, the engineering, procurement and construction contractors, the Spanish consortium of Cobra Installations and Services SA and Sener Engineering, would immediately be commissioned to start the preparatory work.

The facilities include a jetty with two berths to handle the largest carriers.

Vopak said that Brunsbüttel would be on a very fast completion scheduled with the Berlin government now involved and could soon be in the phase of building the two LNG storage tanks, each with capacity of 165,000 cubic metres and regasification equipment to handle over 5.5 million tonnes per annum.

"In view of current political developments and their impact on the gas market, the shareholders and management of German LNG Terminal GmbH (the project company) on the one hand and the German Federal Government on the other have agreed on key points for further planning," explained Vopak.

It added that Gasunie and the German government-backed development and investment bank, Kreditanstalt für Wiederaufbau (KfW), signed a memorandum of understanding (MoU) to take the project into a next phase and start the joint construction of the LNG terminal.

Vopak said the KfW state agency, based in Frankfurt, will join the Brunsbüttel project as a shareholder.

"The current shareholders have agreed that Gasunie is the best partner for the German government to complete the terminal project quickly and successfully in order to ensure stable energy supply with gas and enhance security of supply in Germany," stated Vopak.

Having worked together to build up the company, Vopak LNG Holding BV and German company Oiltanking GmbH, a subsidiary of Marquard & Bahls AG, will leave the group of shareholders by May 2022.

Kees van Seventer, President of Vopak LNG, and René Anghel, Chief Financial Officer of Oiltanking, issued a joint statement explaining the future path of the project.

"The state participation and the leadership of Gasunie enable the necessary accelerated realization of the terminal. It is in the interest of securing the energy supply of Northwest Europe," said Van Seventer and Anghel.

"The framework including commercial conditions of this state participation and a private ownership are different and so Vopak and Oiltanking have decided not to participate further in the implementation of the project. We wish the project the greatest possible

success," they stated.

One consequence of the change in the shareholder structure will be that the former joint Managing Director German Terminal, Philipp Kroepels, will return to Oiltanking.

The shareholders expressly thanked Kroepels for his work in building up the company under "challenging conditions".

Michael Kleemiss, aged 54, remains as sole Managing Director of the terminal development company.

He has almost 25 years of experience in the natural gas business in both Germany and the Netherlands and has been working on the project since inception.

SHELL plc said it intended to withdraw from involvement in all Russian hydrocarbons, including crude oil, petroleum products, gas and liquefied natural gas in a phased manner, aligned with new government guidance.

The now London-based company said that as an immediate first step, it would stop all spot purchases of Russian crude oil and would close its filling stations as well as jet fuel and lubricants operations in Russia.

The latest Shell statement follows last week's moves to end involvement in the Nord Stream II natural gas pipeline project and to exit its equity partnerships with Russian gas giant Gazprom and related entities.

These included ending its 27.5 percent stake shareholdings in the Sakhalin-II LNG export facility in the Russian Far East, its 50 percent stake in the Salyem Petroleum Development and the Gydan energy venture.

"We are acutely aware that our decision last week to purchase a cargo of Russian crude oil to be refined into products like petrol and diesel - despite being made with security of supplies at the forefront of our thinking - was not the right one and we are sorry," declared Shell Chief Executive Ben van Beurden.

"As we have already said, we will commit profits from the limited, remaining amounts of Russian oil we will process to a dedicated fund," he added.

"We will work with aid partners and humanitarian agencies over the coming days and weeks to determine where the monies from this fund are best placed to alleviate the terrible consequences that this war is having on the people of Ukraine," stated Van Beurden.

Shell also explained that its actions to date had been guided by "continuous discussions with governments" about the need to disentangle society from Russian energy flows, while maintaining energy supplies.

The company said that threats to stop pipeline flows to Europe further illustrated the "difficult choices and potential consequences" that are being faced.

Shell plans to immediately stop buying Russian crude oil on the spot market and we will not renew term contracts.

"At the same time, in close consultation with governments, we are changing our crude oil supply chain to remove Russian volumes," said the company.

"We will do this as fast as possible, but the physical location and availability of alternatives mean this could take weeks to complete and will lead to reduced throughput at some of our refineries," it added.

Shell is now implementing a "phased withdrawal" from Russian petroleum products, pipeline gas and LNG.

"This is a complex challenge. Changing this part of the energy system will require concerted action by governments, energy suppliers and customers, and a transition to other energy supplies will take much longer," it stated.

Van Beurden also declared that ultimately, it was for governments to decide on the "incredibly difficult trade-offs" that must be made during the war in Ukraine.

"We will continue to work with them to help manage the potential impacts on the security of energy supplies, particularly in Europe," the CEO concluded.

SONATRACH, the Algerian state energy company and LNG producer, has reported a "significant" oil and associated natural gas discovery with Italy's Eni in the Zemlet el Arbi concession of the Berkine North Basin in the Algerian desert.

Sonatrach said in a statement it had successfully completed with its partner Eni the drilling of the first well in the Zemlet El Arbi exploration area.

The Zemlet El Arbi concession is located in the prolific Berkine Basin and is located almost 300 kilometres (186 miles) southeast of Hassi Messaoud.

"During the production test, the well

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indicated the presence of 7,000 barrels of oil per day and 5 million standard cubic feet per day (140,000 cubic metres per day) of associated gas,” explained Sonatrach.

“Sonatrach and Eni are working in close collaboration to accelerate the production phase of this new discovery through fast-track development,” it added.

The HDLE-1 exploration well is located about 15 km from Bir Rebaa North field’s existing processing facilities and was highlighted as a significant crude oil discovery with excellent petro-physical characteristics.

“HDLE-1 is the first well of an exploration campaign which provides for the drilling of five wells in the northern region of the Berkine Basin,” added Sonatrach.

Sonatrach and Eni said they would now pursue their “near field” exploration strategy ensuring “rapid development” of these new resources.

The Algiers-based company, whose two LNG liquefaction plants at Arzew and Skikda on the Mediterranean coast last year exported around 11 million tonnes per annum of LNG, said the production is scheduled for a start at the Zemlet El Arbi discovery for as early as the third quarter of 2022.

Preliminary estimates of the size of the discovery are around 140 million barrels of oil in place.

The concession is operated by a joint venture between Sonatrach with 51 percent and Eni with a 49 percent share.

THAILAND through its state-owned energy company PTTEP will take over operatorship at the Yadana natural gas project in neighbouring Myanmar.

The field is a key resource for the energy security of both Southeast Asian nations and the Thais will take over on the withdrawal of France’s TotalEnergies over human rights issues.

The Yadana project currently produces natural gas at the rate of around 770 million standard cubic feet per day and accounts for a crucial part of electricity generation in Myanmar.

PTTEP explained that Thailand, which is an LNG importer, also relied on this source of energy as around 550 million standard cubic feet per day from the field is transported to 12 power plants for electricity generation, serving the demand of 11 million people living in the west and central parts of Thailand.

“The amount of this imported gas

contributed to about 11 percent of Thailand’s gas demand,” declared the company whose formal name is PTT Exploration and Production Public Company Ltd.

PTTEP, which is a growing LNG importer as the economy develops and has a stake in the Mozambique LNG project, said it had carefully considered the status of the Yadana field and placed the utmost importance on its continuity.

“We will prevent disruption to energy demand since the Yadana project is a pivotal source of natural gas supply to the livelihoods of the people of both Myanmar and Thailand,” stated PTTEP.

“ASEAN countries have been cooperating and supporting each other in various aspects, working hand in hand in a way that will help develop economies and improve the quality of lives of their people,” explained PTTEP.

“Developing the energy industry for both Thailand and Myanmar, particularly in the area of petroleum exploration and production has been one of the main collaborations over the past 30 years,” said the Thai company.

The Thais emphasized that the existence of such a reliable source of energy was vital in satisfying domestic consumption and for improving people’s standards of living.

“To this regard, natural gas from the Gulf of Moattama, has been supplied to generate electricity for both households and industrial sectors in Thailand and Myanmar, covering medical service and public health, education, transportation, communication and telecommunication,” said PTTEP.

PTTEP said that after the decision by TotalEnergies to withdraw from the Yadana project, PTTEP thoroughly considered taking the step as the “successor operator” to ensure there is no interruption of natural gas supply and to reinforce long-term energy security, especially in the current circumstances.

“Considering the current situation in Myanmar and certain timeframe for the change of operator, PTTEP as a capable company with the operational familiarities of the Yadana field will help secure the continuity of natural gas supply and, more importantly, safe operation,” said PTTEP.

The nomination of PTTEP as the new operator has been decided by the remaining partners in this project.

The operatorship transfer, which is expected to be completed by July 20, 2022, requires the full support of TotalEnergies to ensure seamless transition and production continuity with utmost safety standards.

Under the Production Operating Agreement (POA), the TotalEnergies share will be allocated proportionately to the remaining joint venture partners with no commercial value.

After the effective date of the withdrawal of TotalEnergies, PTTEP will hold just over 37 percent of participating interest, while a subsidiary of US major Chevron Corp., Unocal Myanmar Offshore Co., will hold just over 41 percent, which is the largest participating interest in the project.

“Throughout three decades of its operation, PTTEP always considered the importance of maintaining energy security and of conducting its business by adhering to the principle of good corporate governance in every country where the company operates,” declared PTTEP.

“The company recognizes that equitable access to energy is a fundamental human right that all people are entitled to,” it concluded.

TOKYO GAS, a leading liquefied natural gas importer and city-gas and power supplier, said Japan’s newest regasification facility, the Niihama LNG import terminal on Shikoku Island, has started operations.

The utility and four Japanese partners formed a joint venture to build and operate the Niihama LNG terminal with 1 million tonnes per annum of capacity at Sumitomo Chemical’s plant in Ehime Prefecture in Western Japan.

The facility, which is the 37th separate LNG import facility constructed in Japan has one LNG storage tank with a capacity of 230,000 cubic metres capacity and one jetty as well as truck-loading facilities.

The other partners are Sumitomo group members including Sumitomo Chemical and Sumitomo Electric Power, as well as Shikoku Electric Power and Shikoku Gas.

The project also includes the 150-megawatt Niihama gas-fired power plant.

“The joint venture company Niihama LNG has completed the construction and trial operations at the Sumitomo Chemical Ehime Plant in Niihama City in Ehime Prefecture and has begun

supplying gas to the plant,” said Tokyo Gas.

“We also plan to start supplying gas to industries in neighbouring areas,” it added.

Tokyo Gas Engineering Solutions, a subsidiary of Tokyo Gas, holds the company’s 50.1 percent share in the Niihama LNG venture.

Tokyo Gas, which imports around 13 MTPA of LNG, offered a corporate bond to investors, and which it called Japan’s first “energy transition bond”, to help finance the Niihama LNG venture.

Tokyo Gas explained that besides the Ehime plant, the new terminal will supply regasified LNG to the new 150 megawatts gas-fired Niihama Kita power plant.

“The Niihama Kita Thermal Power Station, scheduled to start operation in 2022 and being built by Sumitomo Electric Power, will also use LNG as fuel,” stated Tokyo Gas.

“Niihama LNG and jointly invested companies will contribute to the promotion of carbon neutrality through the spread and expansion of environmentally friendly natural gas and the stable and efficient use of energy,” Tokyo Gas concluded.

UNIPER, the German utility and European liquefied natural gas capacity holder and cargo trader, said it had arranged increased capacity rights at the Dutch Gate LNG import terminal in Rotterdam.

The company, which is based in Düsseldorf, is currently Germany’s third-largest publicly listed energy supply company and has around 33 gigawatts of installed generation capacity.

Uniper said it would increase its capacity rights at the Gate terminal by 1 billion cubic metres per annum from October 1 and for a period of three years.

European natural gas buyers are seeking to diversify procurement options in the face of reducing pipeline natural gas volumes being transported from Russia because of the war in Ukraine.

The Rotterdam regasification terminal is a joint venture between Dutch utility Gasunie and Royal Vopak, the global energy storage giant.

The facility has been operational since September 2011 and its initial throughput capacity was 12 Bcm per annum and expansion plans will increase this to 16 Bcm every year.

Gate terminal also offers a portfolio of other services including back-loading LNG carriers as well as bunkering vessels and loading for LNG tank trucks and containers.

Uniper said the latest deal at the Dutch Gate terminal builds on a long-lasting relationship between the companies

In anticipation of a tighter natural gas market going forward, Uniper and Gate had already committed to a capacity increase of 1 Bcm per annum starting in October 2024.

“In these challenging times Uniper continues to broaden the access of its global LNG portfolio into Northwest Europe to fortify the security of supply for Germany and the Netherlands,” said Uniper Chief Commercial Officer Niek den Hollander.

Uniper’s European regasification capacity also includes bookings of 1.7 Bcm per annum at the UK LNG import terminal at the Isle of Grain on the Medway River southeast of London.

The Isle of Grain facility is operated by the UK’s National Grid plc and is the largest in Europe in terms of storage.

Uniper said that in 2021 it traded more than 350 LNG cargoes worldwide and operated seven LNG carriers.

Gate Managing Director, Wim Groenendijk, said the latest transaction with Uniper was a prime example of close German-Dutch cooperation with concrete action in times of emergency.

“We will continue to explore on a daily basis how to best help our customers and society in serving the LNG and gas markets,” added Groenendijk.

“The LNG arriving at Gate terminal is of great importance for the gas supply of the Netherlands and the whole of Northwest Europe,” he declared.

US FORECASTS say there are expected to be high levels of US LNG exports in 2022 with a 16 percent increase, though stressed that there were heightened levels of uncertainty resulting from a variety of factors, including Russia’s invasion of Ukraine.

The US short-term energy outlook said that shipments from the seven liquefaction plants now in operation would average 11.3 billion cubic feet per day in 2022.

“Although Europe’s inventories are low, the additional LNG imports as well as a mild winter, are helping bring inventories closer to the five-year

average than they were at the beginning of the winter,” explained the report from the Energy Information Administration.

“A wide range of potential macroeconomic outcomes could significantly affect energy markets during the forecast period,” stated the EIA.

The agency noted that there was supply uncertainty resulting from the conflict in Ukraine as well as from the production decisions of the 10-member Organization of Petroleum and 10 other oil producers as well as the rate at which US oil and natural gas producers increase drilling.

US LNG exports averaged 10.9 Bcf per day in February 2022, down from 11.2 Bcf per day in January.

“Similar to last year, US LNG exports in February were limited by fog in the Gulf of Mexico that affected vessel traffic and led to piloting services being suspended for several days on the Sabine Pass, Lake Charles (location of Cameron LNG), and Corpus Christi waterways,” said the report.

“Although exports fell in February, they were higher than in any month prior to December 2021. Many US LNG cargoes were delivered to Europe last month, where inventories are lower than the five-year average,” it added.

The EIA report also expected US domestic consumption of natural gas would average 84.6 Bcf per day, an increase of 2 percent from 2021.

“The increase in US natural gas consumption reflects rising demand in the industrial sector as a result of increased manufacturing activity,” said the EIA.

“In addition, the increase reflects higher consumption in the residential and commercial sectors as a result of colder temperatures this year compared with 2021,” stated the report.

As regards the Henry Hub natural gas spot price, which averaged \$4.69 per million British thermal units (MMBtu) in February, the forecast average in March was \$4.10 per MMBtu because of a rise in production and declines are forecasts for the rest of the year.

“We expect the Henry Hub price will average \$3.83/MMBtu in the second quarter of 2022 and \$3.95/MMBtu for all of 2022. We expect the Henry Hub spot price will average \$3.59/MMBtu in 2023,” said the report.

The EIA estimated that inventory withdrawals in February were 627

billion cubic feet and that natural gas inventories ended the month at 1.6 trillion cubic feet (Tcf).

“We expect natural gas inventories to fall by about 95 Bcf in March, ending the withdrawal season at about 1.5 Tcf, which would be 10 percent less than the five-year average for this time of year,” said the report.

The report expected the North Sea Brent crude price would average \$117 a barrel in March, \$116 per barrel in the second quarter of 2022 and \$102 a barrel in the second half of 2022.

“We expect the average price to fall to \$89 a barrel in 2023. However, this price forecast is highly uncertain. Actual price outcomes will be dependent on the degree to which existing sanctions imposed on Russia, any potential future sanctions, and independent corporate actions affect Russia’s oil production or the sale of Russia’s oil,” the report concluded.

WILLIAMS Companies, the US natural gas pipelines and assets operator, has agreed a \$950 million deal to expand its East Texas presence in the Haynesville Shale and giving more access to Gulf Coast LNG markets.

The Williams deal acquires the Haynesville gathering and processing assets of Trace Midstream, a portfolio company of Quantum Energy Partners.

Williams, based in Tulsa, Oklahoma, is engaged in natural gas and liquids gathering, processing, interstate transportation and storage and with major positions in main US supply basins.

“The combined Williams and Trace assets provide expanded scale in one of the largest growth basins in the country, increasing the company’s gathering capacity in the Haynesville basin from 1.8 billion cubic feet per day to over 4 Bcf per day,” said Williams.

Williams also benefits from additional volumes committed to its Louisiana Energy Gateway project, designed to gather gas in the Haynesville and connect to markets, including the Transcontinental Gas Pipe Line (Transco) and LNG exports.

The transaction includes a memorandum of understanding signed to form a joint venture partnership with Quantum Energy Partners in support the construction of the Louisiana Energy Gateway.

Williams said the acquisition was expected to result in an investment

amounting to around six-times 2023 gross earnings with strong growth anticipated and minimal expansion capital required, thereby supporting the company credit rating.

Williams explained that as another part of the transaction, a Trace customer and Quantum affiliate, Rockcliff Energy, has agreed to a long-term capacity commitment in support of the company Louisiana Energy Gateway project.

“The project is designed to gather responsibly-sourced natural gas produced in the Haynesville and connect it to premium Transco markets, as well as growing industrial and LNG export demand along the Gulf Coast,” stated Williams.

Williams said that it would continue to increase scale and connectivity in the best and most efficient natural gas basins and these transactions with Trace, Rockcliff and Quantum represent “an important extension” of its natural gas-focused strategy.

“We are excited for the opportunity to help Rockcliff continue their success and connect them to growing markets with Quantum as our new partner,” said Alan Armstrong, the Williams President and Chief Executive.

“Importantly, this is going to be the flagship of our low-carbon wellhead-to-water venture, proving up what an important role natural gas can play in reducing emissions, lowering costs and providing secure reliable energy here and around the world,” stated Armstrong.

Blake Webster, managing director with Quantum said he was grateful for its partnership with the Trace management team who developed a strategic infrastructure platform with high standards.

“We are also excited to establish a partnership with Williams on the project, which we view as a critical bridge to connect responsibly sourced Haynesville natural gas with Gulf Coast LNG markets,” added Webster.

Williams said the transaction was expected to close in the second quarter of 2022 and subject to regulatory approvals.

Canada’s RBC Capital Markets served as lead financial advisor to Williams and US bank Citi served as lead financial advisor to Trace.

Williams was legally represented by Davis Polk & Wardwell LLP and Trace was represented by Vinson & Elkins LLP. ■

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LNG Import Terminals

Explanatory Notes

- The tables do not include the following types of LNG facilities :
 - ◆ Small marine satellite terminals receiving LNG from liquefaction plants in their own country (such as exist in Norway) or which receive LNG transhipped from nearby reception terminals in their own country (such as in Japan)
 - ◆ Satellite LNG storage facilities that receive LNG transported only by road or rail
- Expansions of LNG reception terminals are only shown if they involve new storage tanks
- Where there is a blank in the table the information is uncertain or unknown.

Any comments on the tables, and corrections / additional information from terminal shareholders and project developers would be most welcome, and should be sent to editor@lngjournal.com

Country	Location (Project)	Owners	Start up	Storage	
				Tanks	Capacity
Belgium	Zeebrugge	Fluxys	1987	4	380,000
Canada	Canaport Saint John	Irving Oil, Repsol	2009	3	480,000
Chile	Quintero	ENAP, Metrogas, Enagas	2009	3	334,000
	Mejillones	Engie, Ameris Capital AGF	2010	1	175,000
China	Beihai LNG, Guangxi	Sinopec	2015	4	640,000
	Dalian	PetroChina	2011	3	480,000
	Dapeng ND Guangdong	CNOOC	2018	4	640,000
	Dongguan, Guangdong	Jovo Group	2013	2	160 000
	Fujian LNG (Xiuyu)	CNOOC, Fujian I&D Corp.	2008	2	640,000
	Guangdong	CNOOC,BP	2006	3	480,000
	Haikou, Hainan LNG	CNOOC	2014	3	480,000
	Ningbo, Zhejiang	CNOOC, Zhejiang Energy	2012	3	480,000
	Qidong, Jiangsu	Guanghui Energy	2018	1	60,000
	Qingdao, Shandong	Sinopec	2014	3	480,000
	Rudong	PetroChina	2011	3	530,000
	Shanghai	CNOOC, Shenergy Group	2009	3	495,000
	Shanghai, Mengtougou	Shanghai Gas	2008	3	120 000
	Shenzen, Diefu	CNOOC	2016	2	320,000
	Tangshan, Hebei	PetroChina	2013	3	480,000
	Tianjin North	Sinopec	2017	2	320,000
	Yuedong, Guangdong	CNOOC	2016	2	320,000
	Zhoushan Zhejiang	Enn Group	2018	2	320,000
	Zhuhai, Gaolan	CNOOC	2013	3	480,000
Dominican Republic	Punta Caucedo	AES Andres	2003	1	160 000
Finland	Pori	Gasum Skangas	2016	1	30,000
	Tornio	Gasum Skangas	2018	1	30,000
France	Fos Tonkin	Elengy	1972	3	150,000
	Montoir-de-Bretagne	Elengy	1980	3	360,000
	Fos Cavaou	Engie, Total	2010	3	330,000
	Dunkirk LNG	EDF, Fluxys, Total	2016	3	570,000
Gibraltar	Gasnor	Shell	2018	1	5,000
Greece	Revithoussa	DEPA	2000	3	225,000
India	Dabhol	GAIL, NTPC (Ratnagiri Gas & Power)	2009	3	480,000
	Dahej	Petronet LNG	2004	4	592,000
	Hazira	Shell India, Total	2005	2	320,000
	Kochi, Kerala	Petronet LNG	2013	2	320,000
	Mundra	Gujarat State Petroleum, Adani Group	2018	2	320,000
	Kamarajar (Ennore), Tamil Nadu	Indian Oil, DFC, ICICI Bank	2019	2	360,000
Indonesia	Arun	Pertamina	2015	5	507,000
Italy	Panigaglia	Snam	1969	2	100,000
	Porto Levante (offshore GBS)	ExxonMobil, Qatar Petroleum, Edison Gas	2009	2	250,000
Jamaica	Montego Bay	New Fortress	2018	1	7,000
Japan	Negishi	Tokyo Gas	1969	14	1,180,000
	Sodegaura	Tokyo Gas JERA Co. Inc	1973	35	2,660,000
	Ohgishima	Tokyo Gas	1998	4	850,000
	Higashi-Ohgishima	JERA Co. Inc.	1984	9	540,000
	Futtsu	JERA Co. Inc.	1985	10	1,360,000
	Yokkaichi LNG	JERA Co. Inc.	1988	4	320,000
	Kawagoe	JERA Co. Inc.	1997	6	840,000
	Yokkaichi Works	Toho Gas	1991	2	160,000
	Chita LNG Joint	Toho Gas, Chubu Electric	1978	4	300,000
	Chita LNG	Toho Gas, Chubu Electric	1983	7	640,000
	Chita - Midorihama	Toho Gas	2001	3	600,000
	Senboku I	Osaka Gas	1972	4	180,000
	Senboku II	Osaka Gas	1977	18	1,585,000
	Himeji	Osaka Gas	1984	8	740,000
	Himeji LNG	Kansai Electric	1979	7	520,000
	Yanai	Chugoku Electric	1990	6	480,000
	Niigata	Nihonkai LNG, Tohoku Electric	1984	8	720,000
	Oita	Oita Gas, Kyushu Electric	1990	5	460,000
	Tobata	Kitakyushu LNG	1977	8	480,000
	Fukuoka	Saibu Gas	1993	2	70,000
	Sodeshi	Shizuoka Gas	1996	3	337,200
	Hatsukaichi	Hiroshima Gas	1996	2	170,000
	Kagoshima	Nippon Gas	1996	2	136,000
	Shin-Minato	Sendai City Gas	1997	1	80,000
	Nagasaki	Saibu Gas	2003	1	36,000
	Sakai	Kansai Electric, Cosmo Oil	2006	3	420,000
	Mizushima	Nippon Oil, Chugoku Electric	2006	2	320,000

LNG Import Terminals (continued)

Country	Location (Project)	Owners	Start up	Storage	
				Tanks	Capacity
Japan (continued)	Sakaide	Shikoku Electric, Cosmo Oil	2011	1	180,000
	Ishikari LNG	Hokkaido Gas, Hokkaido Electric	2012	2	380,000
	Okinawa	Okinawa Electric Power	2012	2	280,000
	Naoetsu	Inpex	2013	2	360,000
	Joetsu	JERA Co. Inc.	2011	3	540,000
	Hachinohe LNG	Nippon Oil	2015	2	280,000
	Hitachi LNG	Tokyo Gas	2015	1	230,000
Korea	Soma Fukushima	Japan Petroleum Exploration	2017	1	225,000
	Boryeong	GS Energy, SK E&S	2017	3	200,000
	Incheon	Kogas	1996	20	2,880,000
	Kwangyang	POSCO SK E&S	2005	4	530,000
	Pyeong-Taek	Kogas	1986	23	3,360,000
	Samcheok	Kogas	2014	3	600,000
	Tong-Yeong	Kogas	2002	17	2,620,000
	Jeju	Kogas	2019	2	90,000
Kuwait	Al Zour LNG	KIPIC	2021	8	1,800,000
Malaysia	Pengerang Johor	Petronas Gas	2017	2	400,000
Mexico	Altamira	Vopak, Enagas	2006	2	300,000
	Energia Costa Azul	Sempre LNG	2008	2	320,000
	Manzanillo	Samsung, Kogas, Mitsui	2012	2	300,000
Netherlands	Gate LNG	Gasunie, Royal Vopak	2011	3	540,000
Panama	Costa Norte	AES	2018	1	130,000
Phillipines	Pagbilao LNG	Energy World Corp.	2017	1	130,000
Poland	Swinoujscie	Baltic Gaz System	2015	2	320,000
Portugal	Sines	REN Atlantico	2004	3	390,000
Puerto Rico	Penuelas	EcoElectrica	2000	1	160,000
Singapore	Singapore	Singapore Energy Authority	2013	3	540,000
Spain	Barcelona	Enagas	1969	8	840,000
	Huelva	Enagas	1988	5	610,000
	Cartagena	Enagas	1989	5	587,000
	Bilbao	Enagas, EVE	2003	3	450,000
	Sagunto	GNF, Osaka Gas, Oman Oil	2006	4	600,000
	Mugardos, El Ferrol	Reganosa, Sonatrach, Sojitz Corp.	2006	2	300,000
	El Musel, Gijón,	Enagas	2013	2	300,000
Sweden	Lysekil	Gasum	2014	1	30,000
	Nynashamn	AGA Gas	2011	1	20,000
Taiwan	Yung-An	CPC	1990	6	690,000
	Tai-Chung	CPC	2009	5	800,000
Thailand	Map Ta Phut	PTT LNG	2011	2	320,000
Turkey	Marmara Ereglisi	Botas	1994	3	255,000
	Izmir	EgeGaz	2006	2	280,000
USA	Everett	Suez LNG NA	1971	2	155,000
	Lake Charles	Shell, ETE	1982	4	425,000
	Freeport	Freeport LNG Development	2008	2	320,000
	Golden Pass, TX	Qatar Petroleum, ExxonMobil	2010	5	775,000
	Pascagoula, MS	Gulf LNG, Kinder	2012	2	320,000
UK	Isle of Grain	National Grid	2005	8	1,000,000
	South Hook	ExxonMobil, Qatar Petroleum, Total	2009	5	775,000
	Dragon LNG, Milford Haven	Shell, Petronas	2009	2	310,000

LNG Import Terminal Projects

Country	Location/Project	Owners/Project Developers	Start up	Storage	
				Tanks	Capacity
China	Shenzhen	CNPC Yudean Power	2021	2	120,000
	Tianjin (Nangang)	Beijing Energy	2022	10	2,000,000
	Yangjiang	CNPC Yudean Power	2023	2	120,000
	Zhangzhou Fujian	CNOOC	2022	2	160,000
India	Dhamra Odisha	Indian Oil, Adani, GAIL	2020	2	320,000
	Jaigarh	Hiranandani Group	2021	2	320,000
	Kodinar	Hindustan Petroleum Corp.	2022	1	160,000
Japan	Himuka	Diagas Group-Osaka Gas	2022	1	65,000

LNG FSRU Import Facilities

Country	Location (Project)	Owners	Start up
Argentina	Escobar GasPort	Excelerate/Enarsa	2011
Bangladesh	Moheshkhali	Excelerate, PetroBangla	2018
	Cox's Bazar	Summit Power International, Excelerate Energy	2019
Brazil	Pecem, FSRU	Petrobras	2009
	Guanabara Bay FSRU	Petrobras	2009
	Salvador, Bahia FSRU	Petrobras	2013
	Porto Sergipe FSRU	Golar LNG/Stonepeak	2020
	Porto do Acu FSRU	GNA	2020
China	Tianjin FSRU	CNOOC, Hoegh, various	2013
Croatia	Hrvatska LNG	Hrvatska Elektroprivreda Plc, Plinacro Ltd	2021
Colombia	Cartagena FSRU	Promigas, Sociedad Portuaria El Cayao	2016
Egypt	Ain Sokhna, Suez	EGAS, BW Gas	2015
Ghana	Tema LNG	Helios/GNPC	2021
Indonesia	Lampung	Hoegh LNG, PGN LNG	2014
	Nusantara (Jakarta Bay)	Golar LNG, Pertamina	2012
	Benoa LNG	PT Pertagas Niaga	2016
	Amurang	Karadeniz	2020
	Jawa Satu FSRU	Pertamina	2021
Israel	Hadera Gateway	Israel Electric	2013
Italy	Livorno	OLT Offshore LNG Toscana	2013
Jamaica	Old Harbour	Golar FSRU, New Fortress	2019
Jordan	Aqaba, Jordan	Golar LNG	2015
Kuwait	Mina Al-Ahmadi	KPC	2009
Lithuania	Klaipeda	Klaipedos Nafta Hoegh LNG	2014
Malaysia	Malacca FSRU	Petronas	2012
Malta	FSU Armada Mediterrana	ElectroGas	2016
Myanmar	Thanlyin	CNTIC Vpower	2020
Pakistan	Port Qasim	Excelerate, Engro Corp	2015
	Port Qasim	BW-Mitsui, GGP Consortium	2017
Russia	Kaliningrad FSRU	Gazprom	2020
Turkey	Aliaga FSRU, Turquoise FLNG	Etki LNG	2016
	Dortyol FSRU Terminal	Botas	2018
UAE	Ruwais, Abu Dhabi	Gasco (UAE)	2016
	Jebel Ali Port, Dubai	DSA (UAE)	2010

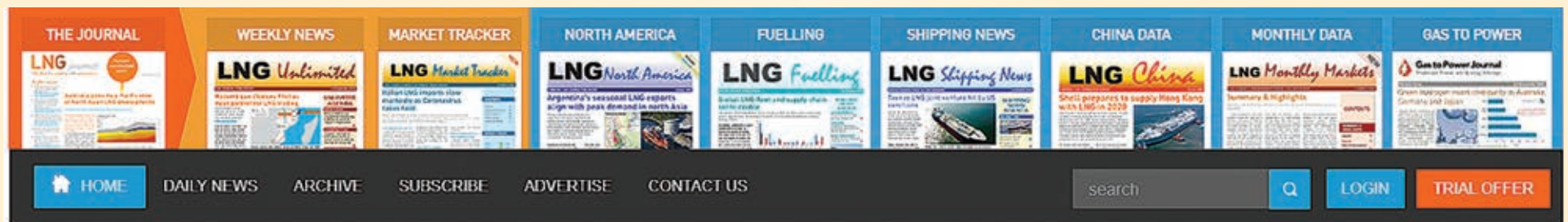
LNG Export Projects

Country	Location/Project	Project Developers	Planned Start Up	Number of Trains	Capacity In MTPA
AUSTRALIA	Pluto LNG expansion	Woodside	2021+	2	10.0
CANADA	Bear Head LNG, Nova Scotia	LNG Ltd.	2024	4	8.0
	Goldboro LNG, Nova Scotia	Pieridae Energy	2024	2	10.0
	Kitimat LNG, BC	Woodside, Chevron	2024	2	10.0
	LNG Canada, BC	Shell, Mitsubishi, Kogas, PetroChina, Petronas	2024	2	12.0
	Kwispaa FLNG, Vancouver	Steelhead LNG	2024	4	12.0
	Vancouver Tilbury	WesPac Midstream	2021	1	3.25
	Woodfibre LNG, Squamish	Pacific Oil & Gas Co	2020	2	2.1
INDONESIA	Sengkang LNG	Energy World Corp.	2021+	4	2.0
MALAYSIA	Rotan FLNG (Sabah)	Petronas, Murphy Oil	2021	1	1.5
MOZAMBIQUE	Area 1 Onshore	Anadarko Petroleum and partners	2023+	2	10.0
	Area 4 Onshore	Eni and partners	2023+	2	10.0
	Area 4 FLNG	Eni and partners	2022	1	3.4
NIGERIA	NLNG Train 7	NNPC, Shell, Eni, Total	2022+	1	7.0
PAPUA NEW GUINEA	Elk-Antelope LNG	Total, ExxonMobil Oil Search, Petromin	Studies		
RUSSIA	Sakhalin II expansion	Gazprom, Shell, Mitsui, Mitsubishi	2021	studies	
	Vladisvostok LNG	Gazprom, Itochu, various	2023+	2	10.0
	Arctic LNG II Siberia	Novatek, Total	2023	3	19.8
USA	Alaska LNG Nikiski	Alaska Gasline Development Corp.	2023+	3	20.0
	Annova LNG, Brownsville	Exelon Corp.	2023+	6	6.0
	Commonwealth LNG, Louisiana	Commonwealth LNG LLP	2023+	8	9.0
	Delfin LNG, Louisiana	Delfin	2023+	3	9.0
	Driftwood LNG, Louisiana	Tellurian, Total and others	2023	6	27.6
	Galveston Bay LNG	NextDecade	2023+	6	27.0
	Golden Pass, Texas	Qatar Petroleum, ExxonMobil	2024	3	15.6
	Jacksonville, St John's River	Eagle LNG, Ferus Natural Gas Fuels	2021+	small	TBC
	Jordan Cove, Coos Bay	Pembina Corp.	2024	2	7.8
	Lake Charles, Louisiana	Shell, ETE	2024	3	15.0
	Magnolia LNG	Louisiana LNG Ltd.	2023+	4	8.0
	Port Arthur LNG	Sempra	2023+	2	10.0
	Rio Grande LNG	NextDecade	2023+	6	27.0
	Sabine Pass LNG, Louisiana	Cheniere	2016-19	1	4.5
	Texas LNG Brownsville	Chandra, Meyer, Samsung, others	2023+	2	4.0
	VG LNG (Cameron Parish)	Venture Global	2022	5	12.0
	VG LNG (Plaquemines)	Venture Global	2022	10	20.0
	VG LNG (Delta-Plaquemines)	Venture Global	2024	36	22.5

LNG Exporters

Country	Location/Project	Shareholders	Start up	Liquefaction		Storage	
				Trains	capacity (nominal) mtpa	No. of tanks	Total capacity m³
ABU DHABI (UAE)	Das Island (Adgas)	ADNOC, Mitsui, BP, Total	1977 1994	2 1	3.2 2.5	3	240,000
ALGERIA	Arzew	Sonatrach GL4Z	1964	3	1.1	3	35,000
	Arzew	Sonatrach GL1Z	1978	6	7.8	3	300,000
	Arzew	Sonatrach GL2Z	1980	6	8.0	3	300,000
	Arzew	Sonatrach	2014	1	4.7		
	Skikda	Sonatrach GL1K II	1980	3	3.0	5	308,000
	Skikda	Sonatrach (rebuild)	2013	1	4.5		
ANGOLA	Soyo	Sonangol, Chevron, BP, ENI, Total	2012	1	5.2	2	370,000
AUSTRALIA	Karratha	NWS Woodside, Shell, BHP	1989	2	5.0	4	260,000
		(BP, Chevron	1992	1	2.5	1	130,000
		(Mitsubishi/Mitsui)	2004	1	4.4	1	130,000
		NWS partners	2008	1	4.4	1	130,000
	Darwin	Darwin (Bayu Undan) ConocoPhillips, Santos, Eni, Inpex, TEPCO, Tokyo Gas	2006	1	3.5	1	188,000
	Australia Pacific LNG	ConocoPhillips, Origin Energy, Sinopec	2016	2	7.5	2	320,000
	Gladstone LNG	Santos, Petronas, Total, Kogas	2015	2	7.8	2	280,000
	Gorgon LNG	Chevron, Shell, ExxonMobil	2016	3	15.6	2	360,000
	Pluto LNG	Woodside, Tokyo Gas, Kansei	2012	1	4.8	2	240,000
	QCLNG	Shell, CNOOC	2014	2	8.0	2	280,000
	Wheatstone LNG	Chevron, Woodside, Kuwait (KUFPEC), Jera, Kyushu	2017	2	8.9	2	300,000
	Ichthys LNG	Inpex Corp., Total	2018	2	8.9	2	330,000
	Prelude FLNG	Shell, Inpex, Kogas CPC	2019	1	3.5		
BRUNEI	Lumut	Brunei/Shell/Mitsubishi/Total	1972-74	5	7.2	3	176,000
CAMEROON	Hilli Episeyo FLNG	Kribi Perenco	2018	1	1.2	1	125,000
EGYPT	Damietta	Union Fenosa, EGPC, EGAS	2004	1	5.0	2	300,000
	Idku	EGPC, EGAS, Shell, Total, Petronas	2005	2	7.2	2	280,000
EQ.GUINEA	Bioko Island	Marathon, Sonagas, Mitsui, Marubeni	2007	1	3.4	2	272,000
INDONESIA	Bontang I	Pertamina, VICO, JILCO, Total	1977	2	5.2	5	635,000
	Bontang II		1983	2	5.2		
	Bontang III		1989	1	2.8		
	Bontang IV		1993	1	2.8		
	Bontang V		1997	1	2.8		
	Bontang VI		1999	1	3.0		
	Sulawesi LNG		2015	1	2.0	1	170,000
	Tangguh	BP, MI Berau, CNOOC, Nippon, LNG Japan	2008	2	7.6	2	340,000
MALAYSIA	Bintulu (MLNG Satu)	Petronas, Sarawak, Mitsubishi	1983	3	8.1	4	260,000
	Bintulu (MLNG Dua)	Petronas, Shell, Sarawak, Mitsubishi	1995	3	7.8	1	65,000
	Bintulu (MLNG Tiga)	Petronas, Shell, Sarawak, Mitsubishi, Nippon Oil	2003	2	6.8	1	120,000
	Bintulu Train 9	Petronas	2016	1	3.6		
	Kanowit FLNG	Petronas	2016	1	1.2		
NIGERIA	Bonny Island	NNPC, Shell, Total, Eni	1999	2	6.4	2	168,400
		Nigeria LNG (formed by above)	2002	1	3.2	1	84,200
		Nigeria LNG	2006	2	8.2		
		Nigeria LNG	2008	1	4.1	1	84,200
NORWAY	Snøhvit/Melkoya	Equinor, Total, Petoro	2007	1	4.2	2	280,000
OMAN	Oman LNG	Oman Govt., Shell, Total, Korea LNG	2000	2	7.1	2	240,000
		Mitsubishi, Mitsui, Partex and Itochu					
PAPUA NEW GUINEA	PNG LNG	Oman Govt., Oman LNG Union Fenosa, Osaka Gas, & Itochu	2006	1	3.7	2	240,000
		ExxonMobil, Oil Search, Santos, JX Nippon Oil	2014	2	6.9	2	320,000
PERU	Peru LNG	Hunt Oil, Shell, Marubeni, SK Group	2010	1	4.4	2	260,000
QATAR	Qatargas 1-T1&2	QP, ExxonMobil, Total, Marubeni, Mitsui	1997	2	6.4	4	340,000
	Qatargas 1-T3	QP, ExxonMobil, Total, Marubeni, Mitsui	1999	1	3.1		
	Qatargas II-T1	QP, ExxonMobil	2009	1	7.8		
	Qatargas II-T2	QP, ExxonMobil, Total	2009	1	7.8	8	1,160,000
	Qatargas III-T1	QP, ConocoPhillips, Mitsui	2010	1	7.8		
	Qatargas IV-T1	QP, Shell	2010	1	7.8		
	RasGas I- T1&2	QP, ExxonMobil, Kogas, Itochu, LNG Japan	1999	2	6.6		
	RasGas II- T3	QP, ExxonMobil	2004	1	4.7		
	RasGas II- T4	QP, ExxonMobil	2005	1	4.7	6	840,000
	RasGas II- T5	QP, ExxonMobil	2007	1	4.7		
	Rasgas III – T6	QP, ExxonMobil	2009	1	7.8		
	Rasgas III – T7	QP, ExxonMobil	2010	1	7.8		
RUSSIA	Sakhalin Island	(Sakhalin Energy) Gazprom, Shell, Mitsui, Mitsubishi	2009	2	9.6	2	200,000
	Yamal LNG Siberia	Novatek, Total, CNPC, Silk Fund	2017	3	16.5	4	640,000
TRINIDAD & TOBAGO	Point Fortin Train 1	BP, Shell, CIC, NGC	1999	1	3.0	2	204,000
	Train 2	BP, Shell	2002	1	3.3	1	160,000
	Train 3	BP, Shell	2003	1	3.3	1	160,000
	Train 4	BP, Shell, NGC	2005	1	5.2	1	160,000
USA	Cheniere Sabine Pass	Cheniere Energy	2016	5	22.5	5	800,000
	Cove Point LNG	Dominion Energy	2017	1	5.3	7	695,000
	Cheniere Corpus Christi	Texas Cheniere	2018	3	15.0	3	480,000
	Cameron Hackberry	Sempra, Total, Mitsui, Mitsubishi	2019	2	9.8	3	480,000
	Elba Island Georgia	Kinder Morgan, EIG Energy	2019	10	2.5	5	535,000
	Freeport LNG, Texas	Freeport LNG	2019	2	10.2	3	483,000
	Calcasieu Pass LNG	Venture Global	2022	18	11	2	400,000
YEMEN	Bal-Haf	Yemen LNG, Total, Yemen Gas, Hunt Oil, SK Group, Hyundai	2009	2	6.7	2	320,000

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World LNG Carrier Fleet

LNG Carrier	Capacity m ³	Registered Owner	Builder	Delivery	Flag	Power Plant	Cargo System	No. of Tanks	Original Project	Hull Number
Aamira	268,000	Nakilat SHI 1753 Inc.	Samsung	Apr-10	M. Islnds.	Diesel	TZ Mk. III	10	Qatargas IV	1753
Abadi	135,000	Tost Two (NBD) Sendirian Berhad	Mitsubishi	May-02	Brunei	Steam	Moss	5	Lumut	2163
Adam LNG	162,000	Oman Shipping Co.	HHI	Jul-14	Malta	Diesel	TZ Mk. III Flex	4	Oman LNG	2584
Adamastos	170,800	Shin Doun Kisen Co. Ltd.	HHI	Aug-21	Malta	X-DF	TZ Mk. III Flex	4	Portfolio	3109
Adriano Knutsen	180,000	Knutsen OAS Shipping	HHI	Jul-19	Spain	ME-GI	TZ Mk. III Flex	4	Corpus Christi	2963
Al Aamriya	210,168	J5 Nakilat No.1 Ltd.	Daewoo	May-08	M. Islnds.	Diesel	GT NO 96	5	RasGas III	2249
Al Areesh	148,786	Al Areesh LLC	Daewoo	Jan-07	Bahamas	Steam	GT NO 96	4	RasGas II	2239
Al Bahiya	210,100	Nakilat DSME 2286 Inc.	Daewoo	Dec-09	M. Islnds.	Diesel	GT NO 96	5	Qatargas IV	1726
Al Bidda	137,339	Mitsui O.S.K. Lines	Kawasaki	Nov-99	Japan	Steam	Moss	5	Qatargas I	1470
Al Daayen	148,853	Seaspirit Leasing	Daewoo	Mar-07	Bahamas	Steam	GT NO 96	4	RasGas II	2240
Al Dafna	268,000	Nakilat SHI 1726 Inc.	Samsung	Oct-09	M. Islnds.	Diesel	TZ Mk. III	10	RasGas	1726
Al Deebel	145,000	Peninsula LNG Transport No. 3	Samsung	Nov-05	Bahamas	Steam	TZ Mk. III	4	RasGas II	1442
Al Gattara	216,200	Overseas LNG H1 Corp.	HHI	Nov-07	M. Islnds.	Diesel	TZ Mk. III	4	Qatargas II	1791
Al Ghariya	210,150	Neptora Schiffsbetriebsgesellschaft mbH & Company ts Julia KG	Daewoo	Dec-07	Bahamas	Diesel	GT NO 96	4	Qatargas II	2248
Al Gharrafa	216,200	Overseas LNG H2 Corp.	HHI	Jan-08	M. Islnds.	Diesel	TZ Mk. III	5	Qatargas II	1792
Al Ghashamiya	217,591	Nakilat SHI 1696 Inc.	Samsung	Apr-09	M. Islnds.	Diesel	TZ Mk. III	10	Qatargas III	1696
Al Ghuwairiya	263,300	Nakilat Al Ghuwairiya Inc.	Daewoo	Dec-08	M. Islnds.	Diesel	GT NO 96	5	Qatargas II	2255
Al Hamla	216,200	Overseas LNG S2 Corp.	Samsung	Feb-08	M. Islnds.	Diesel	TZ Mk. III	4	Qatargas II	1606
Al Hamra	137,000	Al Hamra Ltd.	STX	Nov-96	Liberia	Steam	Moss	4	Das Island	1332
Al Huwaila	217,000	Al Huwaila Inc.	Samsung	May-08	Bahamas	Diesel	TZ Mk. III	10	RasGas III	1643
Al Jasra	137,227	Mitsui O.S.K. Lines	Mitsubishi	Jun-00	Japan	Steam	Moss	5	Qatargas I	2117
Al Jassasiya	145,700	Venice Maritime Inc.	Daewoo	May-07	Bermuda	Steam	GT NO 96	4	RasGas II	2243
Al Karaana	210,100	Nakilat DSME 2284 Inc.	Daewoo	Oct-09	M. Islnds.	Diesel	GT NO 96	4	Qatargas III	2284
Al Kharaitiyat	216,300	Nakilat HHI 1909 Inc.	HHI	Jun-09	M. Islnds.	Diesel	TZ Mk. III	4	Qatargas III	1909
Al Kharsaah	217,000	Al Kharsaah Inc.	Samsung	Jun-08	Bahamas	Diesel	TZ Mk. III	10	RasGas III	1644
Al Khatiya	210,150	Nakilat DSME 2283 Inc.	Daewoo	Jul-09	M. Islnds.	Diesel	GT NO 96	4	Qatargas IV	2283
Al Khaznah	135,496	Al Khaznah Inc.	Mitsui E&S	Jul-94	Liberia	Steam	Moss	5	Das Island	1390
Al Khor	137,354	Mitsui O.S.K. Lines	Mitsubishi	Nov-96	Japan	Steam	Moss	5	Qatargas I	2089
Al Khuwair	217,000	Al Khuwair Inc.	Samsung	Jun-08	Bahamas	Diesel	TZ Mk. III	10	RasGas III	1646
Al Mafyar	266,000	Nakilat SHI 1697 Inc.	Samsung	Apr-09	M. Islnds.	Diesel	TZ Mk. III	5	Qatargas III	1697
Al Marrouna	149,539	Seaspirit Leasing	Daewoo	Sep-06	Bahamas	Steam	GT NO 96	4	RasGas II	2238
Al Mayeda	266,000	Nakilat SHI 1694 Inc.	Samsung	Jan-09	M. Islnds.	Diesel	TZ Mk. III	5	Qatargas III	1694
Al Nuaman	210,100	Nakilat DSME 2285 Inc.	Daewoo	Dec-09	M. Islnds.	Diesel	GT NO 96	4	Qatargas III	2286
Al Oraiq	210,200	J5 Nakilat No.3 Ltd.	Daewoo	Jun-08	M. Islnds.	Diesel	GT NO 96	18	RasGas III	2250
Al Rayyan	137,420	Mitsui O.S.K. Lines	Kawasaki	Mar-97	Japan	Steam	Moss	5	Qatargas I	1445
Al Rekayyat	216,293	Nakilat HHI 1910 Inc.	HHI	Jun-09	M. Islnds.	Diesel	TZ Mk. III	4	Qatargas III	1910
Al Ruwais	210,150	Neptana Schiffsbetriebsgesellschaft mbH & Company ts Alexandra KG	Daewoo	Aug-07	Bahamas	Diesel	GT NO 96	4	Qatargas II	2245
Al Sadd	210,200	Nakilat DSME 2265 Inc.	Daewoo	Mar-09	M. Islnds.	Diesel	GT NO 96	12	Qatargas III	2265
Al Safliya	210,150	Nausola Schiffsbetriebsgesellschaft mbH & Company ts Britta KG	Daewoo	Sep-07	Bahamas	Diesel	GT NO 96	5	Qatargas II	2246
Al Sahla	216,200	J5 Nakilat No.5 Ltd.	HHI	Jun-08	M. Islnds.	Diesel	TZ Mk. III	4	RasGas III	1863
Al Samriya	263,300	Nakilat Al Samriya Inc.	Daewoo	Feb-09	M. Islnds.	Diesel	GT NO 96	5	Qatargas II	2257
Al Shamal	217,000	Al Shamal Inc.	Samsung	Apr-08	Bahamas	Diesel	TZ Mk. III	10	RasGas III	1645
Al Sheehaniya	210,100	Nakilat DSME 2264 Inc.	Daewoo	Feb-09	M. Islnds.	Diesel	GT NO 96	12	Qatargas III	2264
Al Thakhira	145,000	Peninsula LNG Transport No. 2	Samsung	Aug-05	Bahamas	Steam	TZ Mk. III	4	RasGas II	1441
Al Thumama	216,200	J5 Nakilat No.2 Ltd.	HHI	Feb-08	M. Islnds.	Diesel	TZ Mk. III	4	RasGas III	1862
Al Utouriya	215,000	J5 Nakilat No.8 Ltd.	HHI	Sep-08	M. Islnds.	Diesel	TZ Mk. III	4	RasGas III	1875
Al Wajbah	137,308	Mitsui O.S.K. Lines	Mitsubishi	Jun-97	Japan	Steam	Moss	5	Qatargas I	2090
Al Wakrah	137,371	Mitsui O.S.K. Lines	Kawasaki	Nov-98	Japan	Steam	Moss	5	Qatargas I	1446
Al Zubarah	137,573	Mitsui O.S.K. Lines	Mitsui E&S	Nov-96	Japan	Steam	Moss	5	Qatargas I	1411
Alto Acrux	147,798	Bahamas LNG Shipping	Mitsubishi	Mar-08	Bahamas	Steam	Moss	4	Darwin LNG	2219
Amadi	154,800	Brunei Gas Carriers	HHI	Jul-15	Brunei	Steam	TZ Mk. III	4	Lumut	2607
Amali	148,000	BGC SPV NBD	Daewoo	Aug-11	Brunei	Steam	GT NO 96	4	Lumut	2277
Amani	154,800	Brunei Gas Carriers	HHI	Oct-14	Brunei	Steam	TZ Mk. III	4	Lumut	H2606
Amberjack LNG	174,000	LNGShips	HHI	Apr-20	Malta	X-DF	TZ MK. III Flex	–	Portfolio	3021
Amur River	149,700	Seacrown Maritime	HHI	Nov-07	M. Islnds.	Steam	TZ Mk. III	4	Sakhalin II	1734
Arctic Aurora	155,000	Fareastern Shipping	HHI	Jul-14	M. Islnds.	Diesel/Gas-Electric	TZ Mk. III	4	Snøhvit LNG	2580
Arctic Discoverer	142,612	Northern LNG Transport II Company S.A.	Mitsui E&S	Feb-06	Bahamas	–	Moss	4	Hammerfest	1564
Arctic Lady	147,200	Leif Hoegh (UK) Ltd.	Mitsubishi	Apr-06	Norway	Steam	Moss	4	Hammerfest	2185
Arctic Princess	147,200	R.B. Quadrangle Leasing	Mitsubishi	Jan-06	Norway	Steam	Moss	4	Hammerfest	2184
Arctic Spirit	89,800	Artic Spirit LLC	Ishikawajima	Dec-93	Liberia	Steam	IHI SPB	4	Atlantic LNG	3016
Arctic Voyager	142,759	Lloyds TSB Equipment Leasing (No.1)	Kawasaki	Jul-06	Bahamas	Steam	Moss	4	Hammerfest	1532

Aristarchos	174,000	Dias Gas Carrier Corp.	HHI	Jun-21	Malta	X-DF	TZ Mk. III Flex	4	Portfolio	3107
Aristidis I	174,000	Atrotos Gas Carrier Corp.	HHI	Jan-21	Malta	X-DF	TZ Mk. III Flex	4	Portfolio	3106
Aristos I	174,000	Xiang Ch25 HK International	HHI	Nov-20	Malta	X-DF	TZ Mk. III Flex	4	Portfolio	3105
Arkat	148,000	BGC SPV NBD	Daewoo	Feb-11	Brunei	–	GT NO 96	4	Lumut	2273
Arwa Spirit	165,500	Membrane Shipping	Samsung	Aug-08	M. Islnds.	Diesel/Gas-Electric	TZ Mk. III	4	Balhaf	1625
Aseem	155,003	India LNG Transport Company No.3 S.A.	Samsung	Nov-09	Malta	Diesel	TZ Mk. III	4	RasGas	1686
Asia Endeavour	154,948	Chevron Global Technology Services Co.	Samsung	Jun-15	Bahamas	Diesel/Gas-Electric	TZ MK. III	4	Gorgon	1942
Asia Energy	154,948	Chevron Global Technology Services Co.	Samsung	Oct-14	Bahamas	Diesel/Gas-Electric	TZ MK. III	4	Gorgon	1921
Asia Excellence	154,948	Chevron Global Technology Services Co.	Samsung	Jan-15	Bahamas	Diesel/Gas-Electric	TZ MK. III	4	Gorgon	1941
Asia Integrity	154,948	Chevron Global Technology Services Co.	Samsung	Feb-17	Bahamas	Diesel/Gas-Electric	TZ Mk. III	4	Wheatstone	2069
Asia Venture	154,948	Chevron Global Technology Services Co.	Samsung	Jul-17	Bahamas	Diesel/Gas-Electric	TZ Mk. III	4	Wheatstone	2070
Asia Vision	154,948	Chevron Global Technology Services Co.	Samsung	Jul-14	Bahamas	Diesel/Gas-Electric	TZ MK. III	4	Gorgon	1920
Asklipios	170,816	Sea 199 Leasing Co Ltd.	HHI	Sep-21	Malta	X-DF	TZ Mk. III Flex	4	Portfolio	3110
Attalos	170,800	Sea 200 Leasing Co. Ltd.	HHI	Aug-21	Malta	X-DF	TZ Mk. III Flex	4	–	3108
Barcelona Knutsen	173,400	Norspan LNG V AS	Daewoo	Jan-10	Spain	Diesel/Gas-Electric	GT NO 96	4	Portfolio	2267
Beidou Star	172,000	Mitsui O.S.K. Lines	Hudong Zhonghua	Sep-15	H.K., China	Diesel	GT NO 96	4	PNG LNG	H1672A
Berge Arzew	138,088	Sonatrach Berge Arzew Corp.	Daewoo	Jul-04	Norway	Steam	GT NO 96	4	Arzew	2217
Bilbao Knutsen	138,000	Norspan LNG AS	Izar	Jan-04	Spain	Steam	GT NO 96	4	Portfolio	321
Bishu Maru	164,700	"K" Line - Kawasaki Kisen Kaisha	Kawasaki	Dec-17	Panama	TFDE	Moss	4	Wheatstone	1713
Bonito LNG	174,000	LNGShips	HHI	May-20	Malta	X-DF	TZ MK. III Flex	4	–	3022
Boris Davydov	172,410	Arctic LNG 4 Ltd.	Daewoo	Dec-18	Cyprus	TFDE - Azipod	GT NO 96 GW	4	Yamal	2428
Boris Vilkitsky	172,410	Arctic LNG 1 Ltd.	Daewoo	Jun-17	Cyprus	TFDE - Azipod	GT NO 96 GW	4	Yamal	2421
British Achiever	173,644	BP	Daewoo	Nov-18	Isle of Man	ME-GI	GT NO 96 GW	4	Freeport	2442
British Contributor	173,644	BP	Daewoo	Dec-18	Isle of Man	ME-GI	GT NO 96 GW	4	Freeport	2443
British Listener	173,644	BP	Daewoo	Jan-19	Isle of Man	ME-GI	GT NO 96 GW	4	Freeport	2444
British Mentor	173,644	BP	Daewoo	Mar-19	Isle of Man	ME-GI	GT NO 96 GW	4	Freeport	2445
British Partner	173,400	BP	Daewoo	Jun-18	Isle of Man	ME-GI	GT NO 96 GW	4	Freeport	2441
British Sapphire	155,000	RBSSAF (19) Ltd.	HHI	Jun-08	Isle of Man	Diesel/Gas-Electric	TZ Mk. III	4	Portfolio	1779
British Sponsor	173,644	BP	Daewoo	May-19	Isle of Man	ME-GI	GT NO 96 GW	4	Freeport	2446
Broog	137,529	Mitsui O.S.K. Lines	Mitsui E&S	Apr-98	Japan	Steam	Moss	5	Qatargas I	1412
Bu Samra	266,000	Nakilat Bu Samra Inc.	Samsung	Dec-08	M. Islnds.	–	TZ Mk. III	5	Qatargas II	1677
Bushu Maru	180,000	Mitsui O.S.K. Lines	Mitsubishi	Jul-19	Bahamas	Reheat Steam Turbine	TZ MK. III Flex	4	Sabine Pass	2327
BW Boston	138,059	Partrederiet BW Gas GDF Suez EMT DA	Daewoo	Jan-03	Norway	Steam	GT NO 96	4	Atlantic LNG	2207
BW Brussels	162,400	Ines LNG	Daewoo	Aug-09	Bermuda	Diesel/Gas-Electric	GT NO 96	4	Balhaf	2259
BW Everett	138,028	BW Gas SLNG	Daewoo	Jun-03	Norway	Steam	GT NO 96	4	Atlantic LNG	2212
BW Helios	174,000	Selene Navigation Pte Ltd.	Daewoo	May-21	Bermuda	ME-GI	GT NO 96 GW	4	–	2497
BW Lesmes	174,000	BW Gas AS	Daewoo	Mar-21	Bermuda	ME-GI	GT NO 96 GW	4	–	2496
BW Lilac	173,400	BW Maritime	Daewoo	Mar-18	Isle of Man	ME-GI	GT NO 96 GW	4	–	2436
BW Magna	173,000	BW Group	Daewoo	Mar-19	Singapore	ME-GI	GT NO 96	4	–	2488
BW Magnolia	173,400	Helen Navigation Pte Ltd.	Daewoo	Feb-20	Singapore	ME-GI	GT NO 96 GW	–	–	2490
BW Paris	162,400	SNC Elias	Daewoo	Jul-09	Bermuda	Diesel/Gas-Electric	GT NO 96	4	Balhaf	2258
BW Pavilion Aranda	173,400	BW Group	Daewoo	Sep-19	Singapore	ME-GI	GT NO 96 GW	4	Portfolio	2489
BW Pavilion Aranthera	173,400	BW Diamond LNG Pte Ltd.	Daewoo	Jul-20	Singapore	ME-GI	GT NO 96 GW	4	Portfolio	2491
BW Pavilion Leeara	158,629	BW LPG FPSOI	HHI	Jun-15	Singapore	Diesel/Gas-Electric	TZ Mk. III Flex	4	Portfolio	2572
BW Pavilion Vanda	155,000	BW LPG FPSOI	HHI	Feb-15	Singapore	DFDS	TZ Mk. III Flex	4	Portfolio	2571
BW Tatiana	135,269	Shell Tankers Singapore	Mitsubishi	Dec-02	Singapore	Steam	Moss	5	Atlantic LNG	2173
BW Tulip	173,400	BW Maritime	Daewoo	Dec-17	Singapore	ME-GI	GT NO 96 GW	4	–	2435
Cadiz Knutsen	138,826	Norspan LNG II AS	Navantia	Apr-04	Spain	Steam	GT NO 96	4	Portfolio	103
Cape Ann	145,130	SRV Joint Gas Two Ltd.	Samsung	Apr-10	Norway	Diesel/Gas-Electric	TZ Mk. III	4	Jaigarh LNG	1689
Castillo de Caldelas	176,300	Empresa Naviera Elcano	Imabari Shipbuilding	Jun-18	Malta	ME-GI	TZ Mk. III Flex	–	Portfolio	8188
Castillo De Merida	176,300	Empresa Naviera Elcano	Imabari Shipbuilding	Mar-18	Spain	ME-GI	TZ MK. III Flex	4	Portfolio	8177
Castillo de Santisteban	170,000	Naviera Trans Gas AIE	STX	Jun-10	Malta	Diesel Electric	GT NO 96	4	Portfolio	3008
Castillo de Villalba	138,000	Empresa Naviera Elcano	Navantia Cadiz	Sep-03	Spain	Steam	GT NO 96	4	Portfolio	87
Catalunya Spirit	138,000	Teekay Shipping Spain S.L.	Izar	Jun-03	Spain	Steam	GT NO 96	4	Atlantic LNG	319
Celsius Canberra	180,000	Xiang CH27 HK International	Samsung	Jan-21	Marshall Isl.	X-DF	TZ Mk. III Flex	4	US Portfolio	2298
Celsius Carolina	180,000	Oriental Fleet LNG 03 Ltd.	Samsung	Aug-21	Marshall Isl.	X-DF	TZ Mk. III Flex	4	US Portfolio	2314
Celsius Charlotte	180,000	Xiang CH28 HK International	Samsung	Jun-21	Marshall Isl.	X-DF	TZ Mk. III Flex	4	US Portfolio	2313
Celsius Copenhagen	180,000	Greenheart Gas Shipco I LLC	Samsung	Nov-20	Bermuda	X-DF	TZ Mk. III Flex	4	Portfolio	2297
CESI Beihai	174,000	COSCO Shipping Energy Transportation Co.	Hudong Zhonghua	Jun-17	H.K., China	DFDS	GT NO 96	4	APLNG	1717A
CESI Gladstone	174,000	China Shipping Co.	Hudong Zhonghua	Oct-16	H.K., China	–	GT NO 96	4	APLNG	1715A
CESI LianYungAng	174,000	COSCO Shipping Energy Transportation Co.	Hudong Zhonghua	Jun-18	H.K., China	Diesel-Electric	GT NO 96	4	APLNG	1720A
CESI Qingdao	174,000	China Shipping Co.	Hudong Zhonghua	Feb-17	H.K., China	DFDS	GT NO 96	4	APLNG	1716A

CESI Tianjin	174,000	COSCO Shipping Energy Transportation Co.	Hudong Zhonghua	Jul-17	China	TFDE	GT NO 96	4	APLNG	1718A
CESI Wenzhou	174,000	COSCO Shipping Energy Transportation Co.	Hudong Zhonghua	Feb-18	China	Diesel-Electric	GT NO 96	4	APLNG	1719A
Cheikh Bouamama	75,558	Skikda LNG Transport Corp.	Universal SB	Jul-08	Liberia	Steam	TZ Mk. III	4	Arzew/Skikda	88
Cheikh el Mokrani	75,759	Mediterranean LNG Transport Corp.	Japan Marine United	Jun-07	Liberia	Steam	TZ Mk. III	4	Skikda	55
Christophe De Margerie	170,000	DY Shipping Limited	Daewoo	Nov-16	Russia	Diesel/Gas-Electric	GT NO 96 GW	–	Yamal	2418
Clean Energy	149,700	Pegasus Shipholding	HHI	Mar-07	M. Islnds.	Steam	TZ Mk. III	4	Portfolio	1748
Clean Horizon	162,000	Dynagas	HHI	Apr-15	Malta	Diesel/Gas-Electric	TZ Mk. III Flex	4	Portfolio	2566
Clean Ocean	162,000	Dynagas	HHI	May-14	M. Islnds.	Diesel/Gas-Electric	TZ Mk. III Flex	4	Sabine Pass	2558
Clean Planet	162,000	Dynacom Tankers Management	HHI	Aug-14	M. Islnds.	Diesel Electric	TZ Mk. III Flex	4	Yamal	H2565
Clean Vision	162,000	Olinda	HHI	Aug-15	Malta	Diesel/Gas-Electric	TZ Mk. III Flex	4	Portfolio	2567
CNTIC VPower Energy	127,500	Shell Tankers Australia	Mitsubishi	Jan-92	Bermuda	Steam	Moss	4	North West Shelf	2041
Cobia LNG	174,000	Cardiff LNG ETA Owning LLC	HHI	Feb-21	Malta	X-DF	TZ Mk. III Flex	4	–	3038
Cool Discoverer	174,000	Serendipity Maritime Ltd.	HHI	Sep-20	Greece	X-DF	TZ MK. III Flex	4	Portfolio	S970
Cool Explorer	160,000	Thenamaris Ships Management Inc.	Samsung	Jan-15	Malta	DFDS	TZ Mk. III Flex	4	Spot	2049
Cool Racer	174,000	Eloquent Shipping Ltd.	HHI	Feb-21	Malta	X-DF	TZ Mk. III Flex	4	Portfolio	3126
Cool Runner	160,000	Thenamaris Ships Management Inc.	Samsung	Mar-14	Malta	Diesel Electric	TZ Mk. III Flex	4	Wheatstone	H2046
Cool Voyager	160,000	Energy Shipping & Trading	Samsung	Oct-13	Malta	TFDE	TZ Mk. III Flex	4	Wheatstone	–
Corcovado LNG	160,162	Drytank	Daewoo	Apr-14	Malta	Diesel Electric	GT NO 96 L03	4	Spot	H2297
Creole Spirit	173,400	Teekay LNG Partners	Daewoo	Feb-16	Bahamas	ME-GI	GT NO 96 GW	–	Sabine Pass	2407
Cubal	160,276	Mint LNG IV	Samsung	Jan-12	Bahamas	–	TZ Mk. III	4	Soyo	1813
Cygnus Passage	145,400	Cygnus LNG Shipping	Mitsubishi	Jan-09	Panama	Steam	Moss	4	Sakhalin II	2235
Dapeng Moon	147,200	Yue Gang LNG Ship Management Co.	Hudong Zhonghua	Jul-08	H.K., China	Steam	GT NO 96	4	Pluto	1309
Dapeng Star	147,210	Yue Peng LNG Shipping Co.	Hudong Zhonghua	Nov-09	H.K., China	Steam	GT NO 96	4	Pluto	1379
Dapeng Sun	147,200	Yue Peng LNG Shipping Co.	Hudong Zhonghua	Apr-08	H.K., China	Steam	GT NO 96	4	North West Shelf	1308
Diamond Gas Crystal	174,000	Diamond LNG Shipping 5 Pte Ltd.	Hyundai Samho	Jun-21	Singapore	X-DF	TZ Mk. III Flex	4	–	8030
Diamond Gas Metropolis	174,000	Diamond LNG Shipping 4 Ltd.	HHI	Nov-20	Bahamas	X-DF	TZ Mk. III Flex	4	Portfolio	8029
Diamond Gas Orchid	165,000	NYK Line	Mitsubishi	Jun-18	Japan	STaGE	Sayaringo	4	Cameron	2325
Diamond Gas Rose	165,000	NYK Line	Mitsubishi	Aug-18	Bahamas	STaGE	Sayaringo	4	Cameron	2325
Diamond Gas Sakura	165,000	Tokyo Gas	Japan Marine United	May-19	Panama	STaGE	Sayaringo	4	Cameron	2332
Diamond Gas Victoria	174,000	Diamond LNG Shipping 6 Pte Ltd.	Hyundai Samho	Jun-21	Bahamas	X-DF	TZ MK. III Flex	4	–	8031
Disha	136,025	India LNG Transport Company No.1 Ltd.	Daewoo	Dec-03	Malta	Gas Turbine	GT NO 96	4	RasGas	2210
Doha	137,262	Mitsui O.S.K. Lines	Mitsubishi	Jun-99	Japan	Steam	Moss	5	Qatargas I	2091
Dorado LNG	174,000	Hai Kuo Shipping 2052G Ltd.	Samsung	Dec-20	Malta	X-DF	TZ Mk. III Flex	4	Portfolio	2276
Duhail	210,150	Nauranto Schiffsbetriebsgesellschaft mbH & Company ts Gabriela KG	Daewoo	Dec-07	Bahamas	Diesel	GT NO 96	4	Qatargas II	2247
Dukhan	137,661	Qatar LNG Transport	Mitsui E&S	Sep-04	Liberia	Steam	Moss	5	Qatargas II	1561
East Energy	122,255	Bonny Gas Transport	STX	Aug-82	Bermuda	Steam	Membrane	4	NLNG	26B
Eduard Toll	172,410	Teekay Corp.	Daewoo	Sep-17	Bahamas	TFDE - Azipod	GT NO 96 GW	4	Yamal	2423
Ejnan	145,000	Peninsula LNG Transport No. 3	Samsung	Jan-07	Bahamas	Steam	TZ Mk. III	4	RasGas II	1594
Ekaputra 1	136,400	Cometco Shipping Inc.	Mitsubishi	Jan-89	Liberia	Steam	Moss	5	Bontang	2011
Elisa Aquila	174,000	Caroline 82 SASU	Hyundai Samho	04/03/2022	France	X-DF	TZ Mk. III Flex	4	Portfolio	S917
Elisa Larus	174,000	Caroline 77 SASU	Hyundai Samho	May-20	France	X-DF	TZ Mk. III Flex	4	Portfolio	S970
Energy Advance	147,624	Tokyo LNG Tanker Co. & Toho LNG Shipping Co.	Kawasaki	Mar-05	Japan	Steam	Moss	4	Portfolio	1521
Energy Atlantic	156,000	Alpha Tankers	STX	Sep-15	Greece	TFDE	GT NO 96 L03	4	Sabine Pass	1670
Energy Confidence	153,000	Tokyo LNG Tanker Co. & NYK	Kawasaki	Apr-09	Japan	Steam	Moss	4	Darwin LNG	1611
Energy Endeavour	173,400	Rossini Navigation SA	Daewoo	Jan-21	M. Islnds.	ME-GI	GT NO 96 GW	–	–	2484
Energy Frontier	147,599	Tokyo LNG Tanker Co.	Kawasaki	Sep-03	Japan	Steam	Moss	4	Sakhalin II	1520
Energy Glory	165,000	NYK Line	Japan Marine United	Mar-19	Japan	TFDE	TZ Mk. III Flex+	4	Cove Point	5071
Energy Horizon	177,000	Tokyo LNG Tanker Co. & NYK	Kawasaki	Aug-11	Japan	Steam	Moss	4	Pluto	1664
Energy Innovator	165,000	Tokyo Gas	Japan Marine United	Jun-19	Panama	TFDE	TZ Mk. III Flex+	4	Cove Point	5072
Energy Integrity	173,400	Mozart Navigation SA	Daewoo	May-21	M. Islnds.	ME-GI	GT NO 96 GW	4	–	2485
Energy Intelligence	173,400	Strauss Navigation SA	Daewoo	Jun-21	M. Islnds.	ME-GI	GT NO 96 GW	4	–	2500
Energy Liberty	165,000	Mitsui O.S.K. Lines	Japan Marine United	Oct-18	Japan	TFDE	TZ Mk. III Flex+	4	Cove Point	5070
Energy Navigator	145,000	Tokyo LNG Tanker Co.	Kawasaki	May-08	Japan	Steam	Moss	4	Sakhalin II	1600
Energy Pacific	173,400	Ravel Navigation SA	Daewoo	Aug-20	M. Islnds.	ME-GI	GT NO 96 GW	4	Portfolio	2483
Energy Progress	147,558	Jovial Shipping Navigation	Kawasaki	Nov-06	Bahamas	Steam	Moss	4	Darwin LNG	1540
Energy Universe	166,571	Tokyo LNG Tanker Co.	Japan Marine United	Aug-19	Panama	TFDE	TZ Mk. III Flex	4	Cove Point	5073
Enshu Maru	164,700	Mitsui O.S.K. Lines	Kawasaki	Aug-18	Panama	Reheat Steam Turbine	Moss	4	Wheatstone	1720
Esshu Maru	153,000	Mitsui O.S.K. Lines	Mitsubishi	Dec-14	Bahamas	–	Sayaendo	4	Portfolio	–
Etyfa Prometheas	135,269	Shell Bermuda (Overseas) Ltd.	Mitsubishi	Oct-02	Singapore	Steam	Moss	5	Peru LNG	2172
Excalibur	138,034	Exmar Excalibur Shipping Co.	Daewoo	May-02	Belgium	Steam	GT NO 96	4	Portfolio	2206
Fedor Litke	172,410	Arctic LNG 2 Ltd.	Daewoo	May-17	Cyprus	TFDE - Azipod	GT NO 96 GW	4	Yamal	2422
Flex Amber	174,000	Bund 10 Holding Ltd.	HHI	Oct-20	M. Islnds.	X-DF	TZ Mk. III Flex	4	Portfolio	8011
Flex Artemis	174,000	Flex LNG Rreliance Ltd.	Daewoo	Aug-20	M. Islnds.	ME-GI	NO-96-GW+FRS	4	Portfolio	2479
Flex Aurora	174,000	Flex LNG Aurora Ltd.	HHI	Jun-20	M. Islnds.	X-DF	TZ Mk. III Flex	4	Portfolio	8010
Flex Constellation	173,400	Frontline	Daewoo	Jun-19	M. Islnds.	ME-GI	NO-96-GW+PRS	4	Portfolio	H2470

Flex Courageous	173,400	Frontline	Daewoo	Aug-19	M. Islnds.	ME-GI	NO-96-GW+PRS	4	–	2471
Flex Endeavour	172,400	Flex LNG	Daewoo	Jan-18	U.K.	ME-GI	NO-96-GW+PRS	4	–	2447
Flex Enterprise	172,400	Flex LNG	Daewoo	Jan-18	U.K.	ME-GI	NO-96-GW+PRS	4	Portfolio	2448
Flex Freedom	173,400	Flex Freedom Ltd.	Daewoo	Jan-21	M. Islnds.	ME-GI	NO-96-GW+FRS	4	Portfolio	2492
Flex Rainbow	174,000	Flex LNG	Samsung	Jun-18	Isle of Man	ME-GI	TZ Mk. III Flex	4	–	2108
Flex Ranger	174,101	Flex LNG	Samsung	Jun-18	Isle of Man	ME-GI	TZ Mk. III Flex	4	–	2107
Flex Resolute	173,400	Flex LNG Resolute Ltd.	HHI	Sep-20	M. Islnds.	ME-GI	NO-96-GW+FRS	4	Portfolio	2480
Flex Vigilant	174,000	Flex Vigilant Ltd.	HHI	May-21	Liberia	X-DF	TZ Mk. III Flex	4	Portfolio	8013
Flex Volunteer	174,000	Flex Volunteer Ltd.	HHI	Jan-21	M. Islnds.	X-DF	TZ Mk. III Flex	4	–	8012
Fraiha	210,100	J5 Nakilat No.6 Ltd.	Daewoo	Aug-08	M. Islnds.	Diesel	GT NO 96	18	RasGas III	2252
Fuji LNG	149,172	Aletheia Owning Co.	Kawasaki	Mar-04	Malta	Steam	Moss	4	Sabine Pass	1527
Fuwairit	138,200	Camartina Shipping Co.	Samsung	Jan-04	Bahamas	Steam	TZ Mk. III	4	RasGas II	1406
Gail Bhuwan	180,000	Primavera Montana SA	Daewoo	Feb-21	M. Islnds.	X-DF	GT NO 96 GW	4	Portfolio	2499
Galicia Spirit	140,624	Teekay Gas II	Daewoo	Jul-04	Liberia	Steam	GT NO 96	4	Portfolio	2209
GasLog Chelsea	153,000	Gas-Fifteen Ltd.	Hanjin (Busan)	Jun-10	Bermuda	TFDE	TZ Mk. III	4	–	193
GasLog Galveston	174,000	Gas-Thirty Three Ltd.	Samsung	Jan-21	Bermuda	X-DF	TZ Mk. III Flex+	4	US Portfolio	2301
GasLog Geneva	174,000	GasLog	Samsung	Oct-16	Bermuda	TFDE	TZ Mk. III Flex	4	Portfolio	2102
GasLog Genoa	174,000	GasLog	Samsung	Mar-18	Bermuda	X-DF	TZ Mk. III Flex	4	Portfolio	2130
GasLog Georgetown	174,000	Gas-Thirty Two Ltd.	Samsung	Nov-20	Bermuda	–	TZ Mk. III Flex+	4	Portfolio	2300
GasLog Gibraltar	174,000	Gas-Fourteen Ltd.	Samsung	Nov-16	Bermuda	TFDE	TZ Mk. III Flex	4	Portfolio	2103
GasLog Gladstone	174,000	GasLog	Samsung	Mar-19	Bermuda	X-DF	TZ Mk. III Flex+	4	Portfolio	2131
GasLog Glasgow	174,000	GasLog	Samsung	Jul-16	Bermuda	TFDE	TZ Mk. III Flex	4	Portfolio	2073
GasLog Greece	174,000	GasLog	Samsung	Mar-16	Bermuda	TFDE	TZ Mk. III Flex	4	Portfolio	2072
GasLog Hong Kong	174,000	GasLog	HHI	Mar-18	Bermuda	X-DF	TZ Mk. III Flex	4	Portfolio	2801
GasLog Houston	174,000	GasLog	HHI	Dec-18	Bermuda	X-DF	TZ Mk. III Flex	4	GoM	2800
GasLog Salem	155,000	GasLog	Samsung	May-15	Bermuda	TFDE	TZ Mk. III	4	Portfolio	2044
GasLog Santiago	155,000	Gas-Four Ltd.	Samsung	Mar-13	Bermuda	TFDE	TZ Mk. III	4	Portfolio	1947
GasLog Saratoga	155,000	GasLog	Samsung	Dec-14	Bermuda	TFDE	TZ Mk. III	4	Spot	2043
GasLog Savannah	155,000	Gas-One Ltd.	Samsung	May-10	Liberia	TFDE	TZ Mk. III	4	Portfolio	1641
GasLog Seattle	155,000	Gas-Seven Ltd.	Samsung	Oct-13	Bermuda	TFDE	TZ Mk. III	4	Portfolio	2041
GasLog Shanghai	155,000	Gas-Three Ltd.	Samsung	Feb-13	Bermuda	TFDE	TZ Mk. III	4	Portfolio	1946
GasLog Singapore	155,000	Gas-Two Ltd.	Samsung	Aug-10	Liberia	TFDE	TZ Mk. III	4	Portfolio	1642
GasLog Skagen	155,000	Gas-Six Ltd.	Samsung	Aug-13	Bermuda	TFDE	TZ Mk. III	4	Portfolio	2017
GasLog Sydney	155,000	Gas-Five Ltd.	Samsung	Jun-13	Bermuda	–	TZ Mk. III	4	Portfolio	2016
GasLog Wales	180,000	GasLog	Samsung	May-20	Bermuda	X-DF	TZ Mk. III Flex+	4	Portfolio	2274
GasLog Warsaw	180,000	GasLog	Samsung	Jul-19	Bermuda	X-DF	TZ Mk. III Flex+	4	Portfolio	2212
GasLog Wellington	176,400	GAS-Thirty Four Ltd.	Samsung	Jun-21	Bermuda	X-DF	TZ Mk. III Flex+	4	US Portfolio	2311
GasLog Westminster	180,000	Gas-Thirty Ltd.	Samsung	Jul-20	Malta	X-DF	TZ Mk. III Flex	4	Portfolio	2262
GasLog Winchester	176,400	Gas-Thirty Five Ltd.	Samsung	Aug-21	Bermuda	X-DF	TZ Mk. III Flex+	4	US Portfolio	2312
GasLog Windsor	180,000	GasLog	Samsung	Apr-20	Bermuda	X-DF	TZ Mk. III Flex	4	Portfolio	2213
Gemmata	135,269	Shell Bermuda (Overseas) Ltd.	Mitsubishi	Feb-04	Singapore	Steam	Moss	5	Peru LNG	2183
Georgiy Brusilov	172,410	Arctic LNG 3 Ltd.	Daewoo	Nov-18	Cyprus	TFDE - Azipod	GT NO 96 GW	4	Yamal	2427
Georgiy Ushakov	172,652	Teekay Corp.	Daewoo	Sep-19	Bahamas	ME-GI	GT NO 96 GW	4	Yamal	2433
Ghasha	137,000	Ghasha Inc.	Mitsui E&S	Jun-95	Liberia	Steam	Moss	5	Das Island	1392
Gigira Laitebo	177,419	Cleopatra LNG Shipping Co.	HHI	Feb-10	Bahamas	–	TZ Mk. III	4	RasGas	1876
Global Energy	74,100	GDF Armateur 2	STX	Jan-04	France	Diesel/Gas-Electric	CS1	4	Portfolio	32M
Global Energy	173,400	Hai Kuo Shipping 2118G Ltd.	Daewoo	May-20	Greece	ME-GI	GT NO 96 GW	4	Portfolio	2478
Global Sea Spirit	169,932	Global Sea Spirit Inc	Daewoo	Oct-21	Greece	ME-GI	–	4	US Portfolio	2502
Global Star	173,400	Hai Kuo Shipping 2119G Ltd.	Daewoo	Jan-21	M. Islnds.	ME-GI	GT NO 96 GW	4	Portfolio	2487
Golar Arctic	140,648	Golar LNG 2216 Corp.	Daewoo	Oct-03	Singapore	Steam	GT NO 96	4	Jamaica LNG	2216
Golar Bear	160,000	Golar LNG	Samsung	Sep-14	M. Islnds.	Diesel/Gas-Electric	TZ Mk. III Flex	4	Spot	2027
Golar Celsius	160,000	Golar Hull M2026 Corp.	Samsung	Oct-13	M. Islnds.	Diesel/Gas-Electric	TZ Mk. III Flex	4	Spot	2026
Golar Crystal	159,800	Golar LNG	Samsung	Sep-14	M. Islnds.	–	TZ Mk. III Flex	4	Spot	2022
Golar Frost	160,000	Golar LNG	Samsung	Oct-14	M. Islnds.	Diesel/Gas-Electric	TZ Mk. III Flex	4	Portfolio	2055
Golar Glacier	162,000	Golar LNG	Hyundai Samho	Nov-14	M. Islnds.	TFDE	TZ Mk. III Flex	4	Spot	–
Golar Grand	145,700	Golar Grand Corp.	Daewoo	Jan-06	M. Islnds.	Steam	GT NO 96	4	Gorgon	2226
Golar Ice	160,000	Golar LNG	Samsung	Jan-15	Bermuda	Diesel Electric	TZ Mk. III Flex	4	Spot	2048
Golar Kelvin	162,000	Golar LNG	Hyundai Samho	Jan-15	M. Islnds.	DFDS	TZ Mk. III Flex	4	Spot	S659
Golar Maria	145,700	Golar LNG 2234 LLC	Daewoo	Jun-06	M. Islnds.	Steam	GT NO 96	4	Spot	2234
Golar Penguin	160,000	Golar LNG	Samsung	Sep-14	M. Islnds.	–	TZ Mk. III Flex	4	Spot	2023
Golar Seal	160,000	Golar Hull M2021 Corp.	Samsung	Sep-13	M. Islnds.	Diesel/Gas-Electric	TZ Mk. III Flex	4	Spot	2021
Golar Snow	160,000	Golar LNG	Samsung	Jan-15	Bermuda	Diesel/Gas-Electric	TZ Mk. III Flex	4	Spot	2047
Grace Acacia	149,700	Algawin Shipping Inc.	HHI	Feb-07	Bahamas	Steam	TZ Mk. III	4	Spot	1728
Grace Barleria	149,700	NYK LNG Shipmanagement	HHI	Apr-07	Bahamas	–	TZ Mk. III	4	Portfolio	1729
Grace Cosmos	150,000	Algahunt Shipping Inc.	HHI	Feb-08	Bahamas	Steam	TZ Mk. III	4	Portfolio	1730
Grace Dahlia	177,000	NYK Line	Kawasaki	Sep-13	Japan	Steam	Moss	4	Spot	1665
Grace Emilia	174,000	Akizuki Maritima SA	Hyundai Samho	Oct-21	Bahamas	X-DF	–	4	Portfolio	8032
Grand Aniva	145,000	NYK-SCF LNG Shipping No. 1	Mitsubishi	Jan-08	Cyprus	Steam	Moss	4	Sakhalin II	2230

Grand Elena	145,580	NYK-SCF LNG Shipping No. 1	Mitsubishi	Oct-07	Cyprus	Steam	Moss	4	Sakhalin II	2229
Grand Mereya	147,000	Ice Gas LNG Shipping Co.	Mitsui E&S	Mar-08	Cyprus	Steam	Moss	4	Sakhalin II	1681
Gui Ying	170,701	Fortune Power Shipping Ltd.	Hudong Zhonghua	Oct-21	Singapore	X-DF	GT NO 96 L03+	4	Portfolio	H1828A
Hanjin Muscat	138,366	Pluto Lease Corp.	Hanjin (Busan)	Jul-99	Panama	Steam	GT NO 96	4	Oman LNG	54
Hanjin Pyeongtaek	130,636	Hanjin Shipping Co.	Hanjin (Busan)	Sep-95	Panama	Steam	GT NO 96	4	Bontang	16
Hanjin Ras Laffan	138,214	KSH International	Hanjin (Busan)	Jul-00	Panama	Steam	GT NO 96	4	RasGas I	62
Hanjin Sur	138,333	KSG International	Hanjin (Busan)	Feb-00	Panama	Steam	GT NO 96	4	Oman LNG	61
Hellas Athina	170,520	Kronos Shipping LLC	Hyundai Samho	Sep-21	Malta	X-DF	TZ Mk. III Flex	4	Portfolio	8040
Hellas Diana	174,000	Zeus Shipping LLC	Hyundai Samho	Mar-21	Malta	X-DF	TZ Mk. III Flex	4	Portfolio	8039
Hispania Spirit	145,500	Teekay Gas Naviera SL	Daewoo	Aug-02	Spain	Steam	GT NO 96	4	Peru LNG	2205
HongKong Energy	138,000	Chevron LNG Shipping Co.	Daewoo	Feb-04	Australia	Steam	GT NO 96	4	North West Shelf	2214
Hyundai Aquapia	137,415	H&S Shipping	HHI	May-00	Panama	Steam	Moss	4	Oman LNG	1156
Hyundai Cosmopia	137,415	H&B Shipping	HHI	Feb-00	Panama	Steam	Moss	4	RasGas I	1074
Hyundai Ecopia	149,745	KLT 1 International	HHI	Nov-08	Panama	–	TZ Mk. III	4	Balhaf	1903
Hyundai Greenpia	125,000	Hyundai Merchant Marine	HHI	May-96	Panama	Steam	Moss	4	MLNG	853
Hyundai Oceanpia	135,000	H&T Shipping	HHI	Jun-00	Panama	Steam	Moss	4	Oman LNG	1157
Hyundai Peacepia	174,000	Hyundai LNG Shipping	Daewoo	Jun-17	Panama	ME-GI	GT NO 96 GW	4	Sabine Pass	2452
Hyundai Princepia	174,000	Hyundai LNG Shipping	Daewoo	May-17	Panama	ME-GI	GT NO 96 GW	4	Sabine Pass	2451
Hyundai Technopia	137,415	H&K Shipping	HHI	Jul-99	Panama	Steam	Moss	4	RasGas I	1073
Hyundai Utopia	125,182	Hyundai Merchant Marine	HHI	Jun-94	Panama	Steam	Moss	4	Donggi Senoro	760
Iberica Knutsen	138,000	Norspan LNG III AS	Daewoo	Aug-06	Norway	Ultra Steam Turbine	GT NO 96	4	Portfolio	2236
Ibra LNG	147,000	SNC Corentin	Samsung	Jul-06	Panama	Steam	TZ Mk. III	4	Oman LNG	1573
Ibri LNG	147,569	Dune LNG Carrier	Mitsubishi	Jul-06	Panama	Steam	Moss	4	Oman LNG	2215
Isabella	169,932	Kasimia Marine Co.	Daewoo	Jul-21	Greece	ME-GI	GT NO 96 GW	4	–	2495
Ish	137,000	Ish Inc.	Mitsubishi	Nov-95	Liberia	Steam	Moss	5	Das Island	2067
K. Acacia	138,017	Horizon Maritime Shipholding	Daewoo	Dec-99	Panama	Steam	GT NO 96	4	Oman LNG	2203
K. Freesia	138,015	Meridian Maritime Shipholding	Daewoo	Aug-00	Panama	Steam	GT NO 96	4	RasGas I	2204
K. Jasmine	145,878	Kolt JV No. 1	Daewoo	May-08	Panama	Steam	GT NO 96	4	Sakhalin II	2260
K. Mugungwha	151,812	Kolt JV No. 2	Daewoo	Nov-08	Panama	Steam	GT NO 96	4	Oman LNG	2261
KARMOL LNGT Powership Asia	127,500	BHP Consortium	Kawasaki	Jan-91	Bermuda	Steam	Moss	4	North West Shelf	1410
Kinisis	173,400	Chandris Group	Daewoo	Oct-18	Greece	ME-GI	GT NO 96 GW	4	Portfolio	2464
Kita LNG	147,895	Cardiff LNG	Daewoo	May-14	Malta	Diesel Electric	GT NO 96 L03	4	Spot	H2298
Kmarin Diamond	155,000	RBSSAF (19) Ltd.	Hyundai Samho	Jul-08	Isle of Man	Diesel/Gas-Electric	TZ Mk. III	4	Portfolio	S297
Kmarin Emerald	155,000	RBSSAF (19) Ltd.	HHI	May-07	Isle of Man	–	TZ Mk. III	4	Portfolio	1777
Kumul	170,000	Mitsui O.S.K. Lines	Hudong Zhonghua	Dec-15	H.K., China	Diesel	GT NO 96	4	PNG LNG	1673A
La Mancha Knutsen	176,300	Norspan LNG IX	HHI	Sep-16	Spain	ME-GI	TZ Mk. III Flex	4	Portfolio	2733
La Seine	174,000	Xiang CH16 HK International	HHI	Feb-20	Malta	X-DF	TZ MK. III Flex	4	Portfolio	3020
Lalla Fatma N'Soumer	145,000	Algerian Nippon Gas Transport Corp.	Kawasaki	Oct-04	Bahamas	Steam	Moss	4	Arzew	1534
Lena River	155,000	Solana Holdings	HHI	Sep-13	M. Islnds.	–	TZ Mk. III	4	Portfolio	H2557
Lijmiliya	263,300	Nakilat Lijmiliya Inc.	Daewoo	Dec-08	M. Islnds.	Diesel	GT NO 96	5	Qatargas II	2256
LNG Abalamabie	162,000	Bonny Gas Transport	Samsung	Jul-16	Bermuda	DFDS	TZ Mk. III Flex	4	NLNG	2079
LNG Abuja II	162,000	Bonny Gas Transport	Samsung	Mar-16	Bermuda	–	TZ Mk. III Flex	4	NLNG	2078
LNG Adamawa	141,000	Bonny Gas Transport	HHI	Apr-05	Bermuda	Steam	Moss	4	NLNG	1470
LNG Adventure	174,000	Diderot Financement 28 SNC	Samsung	Mar-21	M. Islnds.	X-DF	TZ Mk. III Flex	4	Portfolio	2302
LNG Akwa Ibom	141,000	Bonny Gas Transport	HHI	Oct-04	Bermuda	Steam	Moss	4	NLNG	1469
LNG Alliance	154,472	NYK Armateur	STX	Mar-07	France	Diesel/Gas-Electric	CS1	4	Portfolio	32P
LNG Aquarius	126,300	P.T. Hanochem Shipping	General Dynamics	Jan-77	Indonesia	Steam	Moss	5	Bontang	41
LNG Barka	155,982	Lloyd's TSB General Leasing (No. 3)	Kawasaki	Dec-08	Bahamas	Steam	Moss	4	Oman LNG	1591
LNG Bayelsa	137,500	Bonny Gas Transport	HHI	Mar-03	Bermuda	–	Moss	4	NLNG	1429
LNG Benue	145,952	BW Gas LNG Carriers	Daewoo	Apr-06	Bermuda	Steam	GT NO 96	4	NLNG	2224
LNG Bonny II	174,000	Nigeria LNG	HHI	Dec-15	Bermuda	Diesel/Gas-Electric	TZ Mk. III Flex	4	NLNG	2636
LNG Borno	149,600	Okra Shipping No. 1	Samsung	Aug-07	Bermuda	Steam	TZ Mk. III	4	NLNG	1563
LNG Cross River	141,000	Bonny Gas Transport	HHI	Aug-05	Bermuda	Steam	Moss	4	NLNG	1471
LNG Dream	145,000	Osaka Gas Consortium	Kawasaki	Sep-06	Bahamas	Steam	Moss	4	North West Shelf	1545
LNG Dubhe	174,000	Mitsui O.S.K. Lines	Hudong Zhonghua	Nov-19	Panama	ME-GI	GT NO 96 L03+	4	Yamal	1810A
LNG Ebisu	147,546	LNG Ebisu Shipping Corp.	Kawasaki	Jul-08	Bahamas	–	Moss	4	Pluto	1588
LNG Endeavour	170,520	Fortune Great Shipping Ltd.	Samsung	Oct-21	France	X-DF	TZ Mk. III Flex	4	Portfolio	2355
LNG Endurance	170,520	DuPlessis Bail SNC	Samsung	Dec-21	France	X-DF	TZ Mk. III Flex	4	Portfolio	2307
LNG Enterprise	170,520	Hanovre Financement 20 SASU	Samsung	Oct-21	France	X-DF	TZ Mk. III Flex	4	Portfolio	2360
LNG Enugu	145,926	BW Gas LNG Carriers	Daewoo	Oct-05	Bermuda	Steam	GT NO 96	4	NLNG	2222
LNG Finima II	162,000	Bonny Gas Transport	Samsung	Dec-15	Bermuda	–	TZ Mk. III Flex	4	NLNG	2076
LNG Fukurokuju	164,700	Mitsui O.S.K. Lines	Kawasaki	Jul-16	Panama	Steam	Moss	4	APLNG	1712
LNG Imo	148,452	Bergesen LNG XI Ltd.	Daewoo	Jun-08	Bermuda	–	GT NO 96	4	NLNG	2232
LNG Jamal	135,333	Osaka Gas Consortium	Mitsubishi	Oct-00	Japan	Steam	Moss	5	Oman LNG	2157
LNG Juno	180,000	Mitsui O.S.K. Lines	Mitsubishi	Oct-18	Japan	STaGE	Moss	–	Freeport	2323
LNG Jupiter	153,000	Osaka Gas Consortium	Kawasaki	Jul-09	Panama	Steam	Moss	4	PNG LNG	1592
LNG Jurojin	160,000	LNG Jurojin Shipping Corp.	Mitsubishi	Nov-15	Bahamas	Steam	Moss	4	Portfolio	2299

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LNG Kano	148,565	Bergesen LNG IX Ltd.	Daewoo	Jan-07	Bermuda	Steam	GT NO 96	4	NLNG	2230
LNG Kolt	153,595	KLT 5 International	Hanjin (Busan)	Dec-08	Panama	Steam	TZ Mk. III	4	Portfolio	192
LNG Lagos II	174,000	Nigeria LNG	HHI	Jan-16	Bermuda	DFDS	TZ Mk. III Flex	4	NLNG	2637
LNG Lerici	65,000	LNG Shipping S.p.A.	Sestri Ponente	Apr-98	Italy	Steam	GT NO 96	4	Portfolio	5911
LNG Lokoja	148,471	Bergesen LNG VIII Ltd.	Daewoo	Nov-06	Bermuda	Steam	GT NO 96	4	NLNG	2229
LNG Maleo	127,544	Mitsui O.S.K. Lines	Mitsui E&S	Jan-89	Japan	Steam	Moss	4	North West Shelf	1351
LNG Mars	155,693	Osaka Gas Consortium	Mitsubishi	Oct-16	Japan	Steam	Moss	4	PNG LNG	2296
LNG Megrez	174,000	Mitsui O.S.K. Lines	Hudong Zhonghua	Nov-20	Panama	ME-GI	GT NO 96 L03+	4	Yamal	1813A
LNG Merak	174,000	Mitsui O.S.K. Lines	Hudong Zhonghua	Jan-20	Panama	ME-GI	GT NO 96 L03+	4	Yamal	1811A
LNG Ogun	149,000	Okra Shipping No. 1	Samsung	Jul-07	Bermuda	Steam	TZ Mk. III	4	NLNG	1564
LNG Ondo	148,478	Bergesen LNG X Ltd.	Daewoo	Sep-07	Bermuda	Steam	GT NO 96	4	NLNG	2231
LNG Oyo	145,842	BW Gas LNG Carriers	Daewoo	Jan-06	Bermuda	Steam	GT NO 96	4	NLNG	2223
LNG Phecda	174,000	Mitsui O.S.K. Lines	Hudong Zhonghua	Sep-20	Panama	ME-GI	GT NO 96 L03+	4	Yamal	1812A
LNG Pioneer	138,121	M & S Shipping 3 S.A.	Daewoo	Jul-05	Bahamas	Steam	GT NO 96	4	Das Island	2219
LNG Port Harcourt II	162,000	Bonny Gas Transport	Samsung	Dec-15	Bermuda	–	TZ Mk. III Flex	4	NLNG	2077
LNG Prima Carrier	137,000	Pacific Eurus Shipping	Mitsubishi	Mar-06	Bahamas	Steam	Moss	4	Das Island	2187
LNG River Niger	141,000	Bonny Gas Transport	HHI	Jul-06	Bermuda	Steam	Moss	4	NLNG	1472
LNG River Orashi	145,914	BW Gas LNG Carriers	Daewoo	Nov-04	Bermuda	Steam	GT NO 96	4	NLNG	2221
LNG Rivers	137,200	Bonny Gas Transport	HHI	Jun-02	Bermuda	–	Moss	4	NLNG	1295
LNG Rosenrot	176,523	Fair Wind Navigation SA	Daewoo	Jan-21	M. Islnds.	X-DF	GT NO 96 GW	4	Portfolio	2498
LNG Sakura	177,000	Mitsui O.S.K. Lines	Kawasaki	Feb-18	Bahamas	TFDE	Moss	–	Freeport	1731
LNG Saturn	155,300	Mitsui O.S.K. Lines	Mitsubishi	Feb-16	Bahamas	Ultra Steam Turbine	Moss	4	Gorgon	2311
LNG Schneeweisschen	180,000	Mitsui O.S.K. Lines	Daewoo	Sep-18	Bermuda	TFDE	GT NO 96 GW	–	Freeport	2462
LNG Sokoto	137,425	Bonny Gas Transport	HHI	Sep-02	Bermuda	–	Moss	4	NLNG	1296
LNG Unity	154,472	GDF Armateur 2	STX	Nov-06	France	Diesel/Gas-Electric	CS1	4	Portfolio	32N
LNG Venus	153,000	Mitsui O.S.K. Lines	Mitsubishi	Nov-14	Japan	–	Sayaendo	4	North West Shelf	2295
LNG Vesta	127,386	Tokyo LNG Tanker Co.	Mitsubishi	Jun-94	Japan	Steam	Moss	4	–	2061
LNGShips Athena	170,618	Cardiff LNG Iota Owning LLC	HHI	Mar-21	Malta	X-DF	TZ Mk. III Flex	4	–	112
LNGShips Empress	174,000	Cardiff LNG Kappa Owning LLC	Samsung	Mar-21	Malta	X-DF	TZ Mk. III Flex	4	QCLNG	2380
LNGShips Manhattan	174,000	Cardiff LNG Theta Owning LLC	HHI	May-21	Malta	X-DF-HPSCR	NO-96-GW+PRS	4	QCLNG	3039
Lobito	160,276	Mint LNG III	Samsung	Nov-11	Bahamas	–	TZ Mk. III	4	Soyo	1812
Lusail	145,000	Peninsula LNG Transport No. 1	Samsung	May-05	Bermuda	–	TZ Mk. III	4	RasGas II	1440
Macoma	145,400	Teekay LNG Partners	Daewoo	Sep-17	Bahamas	ME-GI	GT NO 96 GW	4	Portfolio	2417
Madrid Spirit	138,000	Teekay Shipping Spain S.L.	Navantia	Dec-04	Spain	Steam	GT NO 96	4	Atlantic LNG	105
Magdala	173,400	Teekay Corp.	Daewoo	Feb-18	Bahamas	ME-GI	GT NO 96 GW	4	Portfolio	2453
Magellan Spirit	165,500	Magellan Spirit ApS	Samsung	Apr-09	Denmark	Diesel/Gas-Electric	TZ Mk. III	4	Portfolio	1626
Malanje	160,276	Mint LNG II	Samsung	Oct-11	Bahamas	–	TZ Mk. III	4	Soyo	1811
Maran Gas Achilles	174,000	Maran Gas Maritime	Hyundai Samho	Jan-16	Greece	DFDS	TZ Mk. III Flex	4	Portfolio	S689
Maran Gas Agamemnon	174,000	Maran Gas Maritime	Hyundai Samho	May-16	Greece	DFDS	TZ Mk. III Flex	4	Portfolio	S690
Maran Gas Alexandria	161,870	Maran Gas Maritime	Hyundai Samho	Oct-15	Greece	–	TZ Mk. III Flex	4	QCLNG	S627
Maran Gas Amphipolis	174,000	Maran Gas Maritime	Daewoo	Aug-16	Greece	–	GT NO 96 L03	4	Portfolio	2412
Maran Gas Andros	173,400	Maran Gas Maritime	Daewoo	Nov-19	Greece	ME-GI	GT NO 96 GW	4	Freeport	2467
Maran Gas Apollonia	161,870	Maran Gas Maritime	Hyundai Samho	Jan-14	Greece	Diesel Electric	TZ Mk. III Flex	4	Punta Europa	S624
Maran Gas Asclepius	145,000	Sea Satin Corp.	Daewoo	Jul-05	Greece	Steam	GT NO 96	4	RasGas II	H2227
Maran Gas Chios	170,000	Maran Gas Maritime	Daewoo	Mar-19	Greece	ME-GI	GT NO 96 GW	4	–	2456
Maran Gas Coronis	145,700	Jopica Shipping Company	Daewoo	Jul-07	Greece	Steam	GT NO 96	4	RasGas II	2244
Maran Gas Delphi	159,800	Maran Gas Maritime	Daewoo	Feb-14	Greece	Diesel Electric	GT NO 96 L03	4	Portfolio	2296
Maran Gas Efessos	159,800	Maran Gas Maritime	Daewoo	Jun-14	Greece	–	GT NO 96 L03	4	Portfolio	H-2291
Maran Gas Hector	174,000	Maran Gas Maritime	Hyundai Samho	Nov-16	Greece	Diesel/Gas-Electric	TZ Mk. III Flex	–	Portfolio	S691
Maran Gas Hydra	173,400	Maran Gas Maritime	Daewoo	Feb-19	Greece	ME-GI	GT NO 96 GW	4	Sabine Pass	2459
Maran Gas Ithaca	174,000	Arona Maritime Inc.	Daewoo	Oct-21	Greece	X-DF	TZ Mk. III Flex	4	Portfolio	2507
Maran Gas Leto	174,000	Maran Gas Maritime	Hyundai Samho	Mar-16	Greece	DFDS	TZ Mk. III	4	Portfolio	S688
Maran Gas Lindos	161,870	Maran Gas Maritime	Daewoo	Jul-15	Greece	DFDS	GT NO 96 L03	4	Punta Europa	2292
Maran Gas Mystras	155,900	Maran Gas Maritime	Daewoo	Aug-15	Greece	DFDS	GT NO 96 L03	4	QCLNG	2405
Maran Gas Olympias	174,000	Maran Gas Maritime	Daewoo	Feb-17	Greece	ME-GI	GT NO 96 L03	–	Portfolio	2415
Maran Gas Pericles	173,400	Maran Gas Maritime	Hyundai Samho	Aug-16	Greece	DFDS	TZ Mk. III Flex	4	Portfolio	S734
Maran Gas Posidonia	161,870	Maran Gas Maritime	Hyundai Samho	May-14	Greece	–	TZ Mk. III Flex	4	Punta Europa	S625
Maran Gas Psara	173,595	Highseas Shiptrade Co.	Daewoo	May-20	Greece	ME-GI	GT NO 96 GW	4	Portfolio	2469
Maran Gas Roxana	174,000	Maran Gas Maritime	Daewoo	Jan-17	Greece	ME-GI	GT NO 96 L03	4	Portfolio	2413
Maran Gas Sparta	159,800	Maran Gas Maritime	Hyundai Samho	Apr-15	Greece	–	TZ Mk. III Flex	4	QCLNG	S626
Maran Gas Spetses	173,400	Maran Gas Maritime	Daewoo	Jul-18	Greece	ME-GI	GT NO 96 GW	4	GoM	2458
Maran Gas Troy	155,000	Maran Gas Maritime	Daewoo	Sep-15	Greece	DFDS	GT NO 96 L03	4	–	2406
Maran Gas Ulysses	173,400	Maran Gas Maritime	Hyundai Samho	Jan-17	Greece	Diesel/Gas-Electric	TZ Mk. III Flex	–	Portfolio	S735
Maran Gas Vergina	174,000	Santa Lucia Enterprises Inc.	Daewoo	Dec-16	Greece	ME-GI	GT NO 96	–	Portfolio	2414
Maria Energy	174,000	Tsakos Energy Navigation	HHI	Sep-16	Greece	Diesel/Gas-Electric	TZ Mk. III Flex	4	–	2612
Marib Spirit	165,500	Membrane Shipping	Samsung	Apr-08	M. Islnds.	Diesel/Gas-Electric	TZ Mk. III	4	Balhaf	1608
Marshal Vasilevskiy	170,000	Gazprom	HHI	Jan-19	Russia	Diesel/Gas-Electric	TZ Mk. III Flex	4	Kaliningrad LNG	2854
Marvel Crane	177,000	NYK Line	Mitsubishi	Mar-19	Japan	STaGE	Moss	–	Cameron	2321

Marvel Eagle	155,000	Mitsui O.S.K. Lines	Kawasaki	Oct-18	Panama	Reheat Steam Turbine Moss		–	Cameron	1728
Marvel Falcon	174,000	Mitsui O.S.K. Lines	Samsung	Apr-18	Singapore	TFDE	TZ Mk. III Flex	4	Cameron	2148
Marvel Hawk	177,000	Mitsui O.S.K. Lines	Samsung	Dec-18	Japan	TFDE	TZ Mk. III Flex	4	Cameron	2149
Marvel Heron	177,000	Mitsui O.S.K. Lines	Mitsubishi	Sep-19	Japan	STaGE	Moss	–	Cameron	2322
Marvel Kite	177,000	Mitsui O.S.K. Lines	Samsung	Jan-19	Japan	TFDE	TZ Mk. III	4	Cameron	2150
Marvel Pelican	156,265	Mitsui O.S.K. Lines	Kawasaki	Dec-19	Panama	Reheat Steam Turbine Moss		4	Cameron	1729
Marvel Swan	174,000	MIF I NO 20 K/S	Samsung	Apr-21	Denmark	X-DF	TZ MK. III Flex	4	–	2310
Megara	173,400	Teekay LNG Partners	Daewoo	Jul-18	Bahamas	ME-GI	GT NO 96 GW	4	Portfolio	2455
Mekaines	266,000	Nakilat SHI 1695 Inc.	Samsung	Apr-09	M. Islnds.	–	TZ Mk. III	5	Qatargas III	1695
Merchant	138,000	Sea Breeze Leasing	Samsung	Jul-03	Isle of Man	Steam	TZ Mk. III	4	Portfolio	1381
Meridian Spirit	165,500	Meridian Spirit Aps	Samsung	Jan-10	Denmark	Diesel/Gas-Electric	TZ Mk. III	4	Portfolio	1633
Mesaimeer	216,312	Nakilat HHI 1908 Inc.	HHI	Mar-09	M. Islnds.	Diesel	TZ Mk. III	4	Qatargas III	1908
Methane Alison Victoria	145,000	Lloyds TSB Leasing No.8 Ltd.	Samsung	Apr-07	Bahamas	Steam	TZ Mk. III	4	Punta Europa	1587
Methane Becki Anne	170,000	Methane Services (Shell)	Samsung	Sep-10	Bermuda	–	TZ Mk. III	4	Singapore	1858
Methane Heather Sally	145,000	Lloyds TSB Leasing No.8 Ltd.	Samsung	Jan-07	Bahamas	Steam	TZ Mk. III	4	Punta Europa	1586
Methane Jane Elizabeth	145,000	British Gas Asia Pacific	Samsung	Jun-06	Bermuda	Steam	TZ Mk. III	4	Idku	1554
Methane Julia Louise	170,000	Methane Services (Shell)	Samsung	Apr-10	Bermuda	–	TZ Mk. III	9	Singapore	1745
Methane Kari Elin	138,267	BG Group	Samsung	May-04	Bermuda	Steam	TZ Mk. III	4	Singapore	1428
Methane Lydon Volney	145,000	BG Group	Samsung	Aug-06	Bermuda	Steam	TZ Mk. III	4	Idku	1555
Methane Mickie Harper	170,000	Methane Services (Shell)	Samsung	Dec-10	Bermuda	Diesel/Gas-Electric	TZ Mk. III	4	Singapore	1859
Methane Nile Eagle	145,000	Egypt LNG Shipping	Samsung	Dec-07	Bermuda	Steam	TZ Mk. III	4	Idku	1588
Methane Patricia Camila	170,000	Methane Services (Shell)	Samsung	Oct-10	Bermuda	–	TZ Mk. III	4	Singapore	1746
Methane Princess	138,000	Golar LNG	Daewoo	Aug-03	U.K.	Steam	GT NO 96	4	Portfolio	2215
Methane Rita Andrea	145,000	British Gas Asia Pacific	Samsung	Apr-06	Bermuda	Steam	TZ Mk. III	4	Idku	1553
Methane Shirley Elisabeth	145,000	Lloyds TSB Leasing No.8 Ltd.	Samsung	Feb-07	Bermuda	Steam	TZ Mk. III	4	Punta Europa	1585
Methane Spirit	165,500	Malt Singapore Pvt. Ltd.	Samsung	Feb-08	M. Islnds.	Diesel/Gas-Electric	TZ Mk. III	4	Atlantic LNG	1607
Milaha Qatar	145,500	Qatar Shipping Co.	Samsung	Apr-06	Malta	Steam	TZ Mk. III	4	RasGas II	1562
Milaha Ras Laffan	138,270	Milaha Ras Laffan GmbH & Co. KG	Samsung	Apr-04	Malta	Steam	TZ Mk. III	4	RasGas II	1425
Min Lu	147,100	Minlu LNG Shipping Co.	Hudong Zhonghua	Aug-09	H.K., China	–	GT NO 96	4	Tangguh	1378
Min Rong	145,000	Min Rong LNG Shipping Co.	Hudong Zhonghua	Feb-09	H.K., China	–	GT NO 96	4	Tangguh	1320
Minerva Chios	170,520	Peninsula Shipping SA	Samsung	Aug-21	Greece	X-DF	TZ Mk. III Flex+	4	–	2305
Minerva Kalymnos	174,000	Koje Shipping SA	Samsung	Feb-21	Malta	X-DF	GT NO 96 GW	4	–	2304
Minerva Limnos	173,400	Roland Shipping SA	Daewoo	Jun-21	Greece	ME-GI	GT NO 96 GW	4	Portfolio	2482
Minerva Psara	173,400	Wimbledon Shipping SA	Daewoo	Jan-21	Malta	–	GT NO 96 GW	4	–	2481
MOL Hestia	173,400	LNG Harmonia Shipping Corp	Daewoo	Jul-21	M. Islnds.	X-DF	GT NO 96 GW	4	–	2505
Mozah	266,000	Nakilat Haloul Inc.	Samsung	Aug-09	M. Islnds.	Diesel	TZ Mk. III	5	Qatargas II	1675
Mraweh	137,000	Mraweh Ltd.	STX	Apr-96	Liberia	Steam	Moss	4	Das Island	1331
Mu Lan	174,400	Fortune Great Shipping Ltd.	Hudong Zhonghua	Aug-21	Liberia	X-DF	GT NO 96 L03+	4	Portfolio	1827A
Mubaraz	137,000	Mubaraz Ltd.	STX	Dec-95	Liberia	Steam	Moss	4	Das Island	1330
Murex	173,400	Teekay LNG Partners	Daewoo	Jul-17	Bahamas	ME-GI	GT NO 96 GW	4	Portfolio	2416
Murwab	210,100	J5 Nakilat No. 4 Ltd.	Daewoo	Jun-08	M. Islnds.	Diesel	GT NO 96	18	RasGas III	251
Myrina	173,400	Teekay Corp.	Daewoo	May-18	Bahamas	ME-GI	GT NO 96 GW	4	Portfolio	2454
Neo Energy	150,000	Sea Optima	HHI	Jan-07	Liberia	Steam	TZ Mk. III	4	Portfolio	1754
Neptune	145,130	SRV Joint Gas Ltd.	Samsung	Nov-09	Norway	–	TZ Mk. III	4	Portfolio	1688
Nikolay Urvantsev	172,658	China Shipping Development Co.	Daewoo	Jul-19	H.K., China	ME-GI	GT NO 96 GW	4	Yamal	2432
Nikolay Yevgenov	172,410	Teekay Corp.	Daewoo	Apr-19	Bahamas	ME-GI	GT NO 96 GW	4	Yamal	2430
Nikolay Zubov	172,410	Arctic LNG 5 Ltd.	Daewoo	Nov-18	Cyprus	TFDE - Azipod	GT NO 96 GW	4	Yamal	2429
Nizwa LNG	147,684	Oryx LNG Carrier	Kawasaki	Dec-05	Panama	Steam	Moss	4	Oman LNG	1562
Nohshu Maru	180,000	Mitsui O.S.K. Lines	Mitsubishi	Feb-19	Bahamas	Reheat Steam Turbine Moss		4	–	2326
Northwest Sanderling	127,525	Shell Tankers Australia	Mitsubishi	Jan-89	Australia	Steam	Moss	4	North West Shelf	1996
Northwest Sandpiper	125,042	Shell Tankers Australia	Mitsui E&S	Jan-93	Australia	Steam	Moss	4	North West Shelf	1370
Northwest Snipe	127,500	International Gas Transportation Co., Ltd.	Mitsui E&S	Jan-90	Australia	Steam	Moss	4	North West Shelf	1352
Northwest Stormpetrel	127,500	Shell Tankers Australia	Mitsubishi	Dec-94	Australia	Steam	Moss	4	North West Shelf	2074
Oak Spirit	173,400	Teekay LNG Partners	Daewoo	Mar-16	Bahamas	ME-GI	GT NO 96 GW	–	Sabine Pass	2408
Ob River	149,700	Lance Shipping	HHI	May-07	M. Islnds.	Steam	TZ Mk. III	4	Sakhalin II	1719
Oceanic Breeze	155,300	"K" Line - Kawasaki Kisen Kaisha	Mitsubishi	Apr-18	Japan	Reheat Steam Turbine Moss		4	Ichthys	2310
Onaiza	210,150	Nakilat DSME 2266 Inc.	Daewoo	Apr-09	M. Islnds.	Diesel	GT NO 96	12	Qatargas III	2266
Orion Sea	170,852	Meridian 23 Ltd.	Samsung	Jan-22	Liberia	X-DF	TZ Mk. III	4	Portfolio	2336
Ougarta	170,000	Hyproc Shipping Co.	HHI	Mar-17	Algeria	DFDS	TZ Mk. III Flex	4	Arzew	2814
Pacific Arcadia	145,400	Bahamas LNG Shipping	Mitsubishi	Oct-14	Bahamas	–	Moss	4	PNG LNG	MHISB 2289
Pacific Breeze	180,000	"K" Line - Kawasaki Kisen Kaisha	Kawasaki	Mar-18	Japan	TFDE	Moss	4	Ichthys	1718
Pacific Enlighten	145,400	Pacific Hope Shipping	Mitsubishi	Mar-09	Panama	Steam	Moss	4	North West Shelf	2236
Pacific Mimosa	155,300	NYK Line	Mitsubishi	Mar-18	Japan	Reheat Steam Turbine Moss		–	Wheatstone	2316
Pacific Notus	137,006	Pacific LNG Shipping	Mitsubishi	Sep-03	Bahamas	Steam	Moss	5	Darwin LNG	2176
Palu LNG	159,800	Cardiff LNG	Daewoo	Nov-14	Malta	TFDE	GT NO 96 L03	4	Spot	2400
Pan Africa	174,000	Teekay LNG Partners	Hudong Zhonghua	Jan-19	H.K., China	TFDE	GT NO 96	4	QCLNG	1666A
Pan Americas	174,000	Teekay LNG Partners	Hudong Zhonghua	Jan-18	H.K., China	TFDE	GT NO 96	4	QCLNG	H1664A

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Pan Asia	174,000	Teekay LNG Partners	Hudong Zhonghua	Sep-17	H.K., China	TFDE	GT NO 96	4	QCLNG	1663A
Pan Europe	174,000	Teekay LNG Partners	Hudong Zhonghua	Jul-18	H.K., China	TFDE	GT NO 96	4	QCLNG	H1665A
Papua	170,000	Mitsui O.S.K. Lines	Hudong Zhonghua	Nov-14	H.K., China	–	GT NO 96	4	PNG LNG	H1670A
Patris	174,000	Chandris Group	Daewoo	Jan-18	Liberia	ME-GI	GT NO 96 GW	4	Freeport	2460
Pearl LNG	174,000	Cardiff LNG Delta Owning LLC	Samsung	Aug-20	Malta	X-DF	NO-96-GW+PRS	4	Portfolio	2275
Point Fortin	154,200	Los Halillos Shipping Co.	Koyo Dockyard	Jan-10	Panama	Steam	TZ Mk. III	4	Portfolio	2263
Polar Spirit	89,800	Polar Spirit LLC	Ishikawajima	Jun-93	Liberia	Steam	IHI SPB	4	Atlantic LNG	3015
Portovenere	65,000	LNG Shipping S.p.A.	Sestri Ponente	Apr-97	Italy	Steam	GT NO 96	4	Portfolio	5910
Portovyy	138,107	Monteriggioni Inc.	Daewoo	Aug-03	Belgium	Steam	GT NO 96	4	Portfolio	2213
Prachi	162,000	India LNG Transport Company No. 4 Ltd.	HHI	Nov-16	Singapore	Diesel/Gas-Electric	TZ Mk. III Flex	–	Gorgon	2633
Prism Agility	180,000	SK Shipping	HHI	May-19	Panama	X-DF	TZ Mk. III Flex	4	Portfolio	2937
Prism Brilliance	180,000	SK Shipping	HHI	May-19	Panama	X-DF	TZ Mk. III Flex	4	Portfolio	2938
Prism Courage	176,462	Millenaire Financement 12 SASU	HHI	Oct-21	Panama	X-DF	TZ Mk. III Flex	4	Portfolio	2939
Pskov	170,200	Sovcomflot	STX	Sep-14	Liberia	–	GT NO 96	4	Portfolio	1911
Puteri Delima	130,400	Puteri Delima S.Bhd.	STX	Jan-95	Malaysia	Steam	GT NO 96	4	MLNG II	30F
Puteri Delima Satu	137,100	MISC	Mitsui E&S	Oct-02	Malaysia	Steam	GT NO 96	4	MLNG III	1506
Puteri Firus Satu	137,100	Puteri Firus S.Bhd.	Mitsubishi	Aug-04	Malaysia	Steam	GT NO 96	4	MLNG III	2177
Puteri Intan	137,100	Puteri Intan S.Bhd.	STX	Aug-94	Malaysia	Steam	GT NO 96	4	MLNG II	30E
Puteri Intan Satu	137,100	MISC	Mitsubishi	Aug-02	Malaysia	Steam	GT NO 96	4	MLNG III	2165
Puteri Mutiara Satu	137,100	MISC	Mitsui E&S	Apr-05	Malaysia	Steam	GT NO 96	4	MLNG III	1562
Puteri Nilam	130,400	Puteri Nilam S.Bhd.	STX	Jul-95	Malaysia	Steam	GT NO 96	4	MLNG II	30G
Puteri Nilam Satu	137,100	Puteri Nilam S.Bhd.	Mitsubishi	Jul-03	Malaysia	Steam	GT NO 96	4	MLNG III	2169
Puteri Zamrud	130,400	Puteri Zamrud S.Bhd.	STX	Jun-96	Malaysia	Steam	GT NO 96	4	MLNG II	30H
Puteri Zamrud Satu	137,100	MISC	Mitsui E&S	Feb-04	Malaysia	–	GT NO 96	4	MLNG III	1507
Qogir	174,000	LNGShips	Samsung	Jun-20	Malta	X-DF	TZ MK. III Flex	–	Portfolio	2271
Raahi	138,076	India LNG Transport Company No.2 Ltd.	Daewoo	Oct-04	Malta	Steam	GT NO 96	4	RasGas	2211
Rasheeda	266,000	Nakilat SHI 1754 Inc.	Samsung	Aug-10	M. Islnds.	Diesel	TZ Mk. III	10	Qatargas IV	1754
Rias Baixas Knutsen	180,000	Knutsen OAS Shipping	HHI	Sep-19	Norway	ME-GI	TZ Mk. III Flex	4	Corpus Christi	2964
Ribera del Duero Knutsen	173,400	Norspan LNG VIII AS	Daewoo	Dec-10	Norway	–	GT NO 96	4	Portfolio	2275
Rioja Knutsen	170,000	Norspan LNG X	HHI	Dec-16	Norway	ME-GI	TZ Mk. III Flex	4	Portfolio	2734
Rudolf Samoylovich	172,410	Teekay Corp.	Daewoo	Aug-18	Bahamas	ME-GI	GT NO 96 GW	4	Yamal	2425
Salalah LNG	147,000	Tiwi LNG Carrier S.A.	Samsung	Dec-05	Panama	Steam	TZ Mk. III	4	Oman LNG	1536
SCF Barents	174,000	Heliconia Maritime SA	HHI	Sep-20	Liberia	DFDS	TZ Mk. III Flex	4	Portfolio	8007
SCF La Perouse	174,000	Albus Shipping Ltd.	HHI	Feb-20	Liberia	X-DF	NO-96-GW+PRS	4	Portfolio	8006
SCF Melampus	170,200	Sovcomflot	STX	Jan-15	Liberia	Diesel Electric	GT NO 96 GW	4	Portfolio	1912
SCF Mitre	170,200	Sovcomflot	STX	Apr-15	Liberia	Diesel Electric	GT NO 96 GW	4	Portfolio	1913
SCF Timmerman	174,000	Headliner Maritime SA	HHI	Jan-21	Liberia	X-DF	NO-96-GW+PRS	4	Portfolio	8008
Sean Spirit	174,162	Teekay LNG Partners	Hyundai Samho	Dec-18	Bermuda	ME-GI	TZ Mk. III Flex	–	Freeport	S856
Seishu Maru	138,000	Mitsui O.S.K. Lines	Mitsubishi	Sep-14	Bahamas	–	Moss	4	PNG LNG	2297
Senshu Maru	127,167	Mitsui O.S.K. Lines	Mitsui E&S	Feb-84	Japan	Steam	Moss	5	Bontang	1230
Seri Alam	145,572	MISC	Samsung	Jul-05	Malaysia	–	TZ Mk. III	4	Bintulu	1502
Seri Amanah	145,709	MISC	Samsung	Mar-06	Malaysia	Steam	TZ Mk. III	4	Bintulu	1503
Seri Anggun	145,731	MISC	Samsung	Oct-06	Malaysia	Steam	TZ Mk. III	4	North West Shelf	1589
Seri Angkasa	145,130	MISC	Samsung	Dec-06	Malaysia	Steam	TZ Mk. III	4	Bintulu	1590
Seri Ayu	145,894	MISC	Samsung	Oct-07	Malaysia	Steam	TZ Mk. III	4	Bintulu	1591
Seri Bakti	152,944	MISC	Mitsubishi	Apr-07	Malaysia	Steam	GT NO 96	4	Gladstone	2220
Seri Balhaf	152,000	MISC	Mitsubishi	Jan-09	Malaysia	Steam	GT NO 96	4	Bontang	2223
Seri Balqis	152,000	MISC	Mitsubishi	Mar-09	Malaysia	Steam	GT NO 96	4	NLNG	2224
Seri Begawan	152,900	MISC	Mitsubishi	Nov-07	Malaysia	Steam	GT NO 96	4	Bintulu	2221
Seri Bijaksana	152,300	MISC	Mitsubishi	Apr-08	Malaysia	Steam	GT NO 96	4	Bintulu	2222
Seri Camar	150,000	MISC	HHI	Feb-18	Malaysia	Ultra Steam Turbine	Moss	4	Pacific Northwest	2732
Seri Camellia	159,800	MISC	HHI	Sep-16	Malaysia	Ultra Steam Turbine	TZ MK. III Flex	4	Pacific Northwest	2729
Seri Cemara	150,200	MISC	HHI	Apr-18	Malaysia	Ultra Steam Turbine	Moss	4	Portfolio	2735
Seri Cempaka	162,000	MISC	HHI	Aug-17	Malaysia	Ultra Steam Turbine	TZ MK. III Flex	4	Pacific Northwest	2731
Seri Cenderawasih	162,000	MISC	HHI	Feb-17	Malaysia	Ultra Steam Turbine	Moss	4	Pacific Northwest	2730
Sestao Knutsen	136,947	Norspan LNG IV AS	Navantia Cadiz	Oct-07	Spain	Steam	GT NO 96	4	Portfolio	331
Sevilla Knutsen	173,400	Norspan LNG VI AS	Daewoo	May-10	Spain	Diesel/Gas-Electric	GT NO 96	4	Portfolio	2269
Shagra	268,000	Nakilat SHI 1751 Inc.	Samsung	Nov-09	M. Islnds.	Diesel	TZ Mk. III	10	Qatargas IV	1751
Shahamah	135,496	Shahamah Inc.	Kawasaki	Oct-94	Liberia	Steam	Moss	5	Das Island	1438
Shen Hai	147,200	Shanghai LNG Shipping Co.	Hudong Zhonghua	Dec-12	H.K., China	Steam	GT NO 96	4	Bintulu	H1621A
Shinshu Maru	180,000	Mitsui O.S.K. Lines	Kawasaki	Feb-19	Japan	DERST (aka STaGE)	Moss	4	Freeport	1734
Simaisma	145,889	Greenwell Corporation	Daewoo	Jul-06	Bermuda	Steam	GT NO 96	8	RasGas II	2235
Singapore Energy	138,000	Sea Breeze Leasing	Samsung	Feb-03	Isle of Man	Steam	TZ Mk. III	4	Portfolio	1416
SK Audace	174,000	Milestone LNG Transport	Samsung	Aug-17	Panama	X-DF	TZ Mk. III Flex	4	Portfolio	2080
SK Resolute	180,000	Milestone LNG Transport	Samsung	Nov-17	Panama	X-DF	TZ Mk. III Flex	4	Ichthys	2081
SK Serenity	174,000	SK Shipping	Samsung	Feb-18	South Korea	TFDE	KC-1	4	Sabine Pass	2153
SK Spica	174,117	SK Shipping	Samsung	Mar-18	South Korea	TFDE	KC-1	–	Sabine Pass	2154

SK Splendor	138,370	Optima Leasing	Samsung	May-00	Panama	Steam	TZ Mk. III	4	Oman LNG	1258
SK Stellar	138,375	Stellar Shipholding	Samsung	Dec-00	Panama	Steam	TZ Mk. III	4	RasGas I	1259
SK Summit	138,003	Omnia Enterprises	Daewoo	Aug-99	Panama	Steam	GT NO 96	4	RasGas I	2202
SK Sunrise	138,306	Methane Navigation S.A.	Samsung	Aug-03	Panama	Steam	TZ Mk. III	4	RasGas II	1405
SK Supreme	138,225	Celeste Maritime	Samsung	Feb-00	Panama	Steam	TZ Mk. III	4	RasGas I	1207
SM Eagle	174,000	Korea Line Corp.	Daewoo	May-17	Panama	ME-GI	GT NO 96 GW	4	Sabine Pass	2449
SM Seahawk	174,000	Korea Line Corp.	Daewoo	Jun-17	Panama	ME-GI	GT NO 96 GW	4	Sabine Pass	2450
Sohar LNG	137,248	Energy Spring LNG Carriers	Mitsubishi	Oct-01	Malta	Steam	Moss	5	Oman LNG	2162
Sohshu Maru	177,000	Mitsui O.S.K. Lines	Kawasaki	Jul-19	Japan	DERST (aka STaGE)	Moss	4	Freeport	1735
Solaris	155,000	GasLog	Samsung	Jul-14	Bermuda	Diesel/Gas-Electric	TZ Mk. III	4	Portfolio	2042
Sonangol Benguela	160,500	Sonangol Benguela Ltd.	Daewoo	Dec-11	Bahamas	–	GT NO 96	4	Soyo	2282
Sonangol Etosha	160,500	Sonangol Etosha Ltd.	Daewoo	Sep-11	Bahamas	–	GT NO 96	4	Soyo	2281
Sonangol Sambizanga	160,500	Sonangol Sambizanga Ltd.	Daewoo	Aug-11	Bahamas	–	GT NO 96	4	Soyo	2280
Southern Cross	172,000	Mitsui O.S.K. Lines	Hudong Zhonghua	Jul-15	H.K., China	ME-GI	GT NO 96	4	PNG LNG	H1671A
Soyo	160,276	Mint LNG I	Samsung	Aug-11	Bahamas	–	TZ Mk. III	4	Soyo	1810
Spirit of Hela	177,000	Nefertiti LNG Shipping Co.	Hyundai Samho	Nov-10	Bahamas	Diesel Electric	TZ Mk. III	4	PNG LNG	S324
Stena Blue Sky	145,700	Blue Sky LNG	Daewoo	Aug-06	Panama	Steam	GT NO 96	4	Spot	2233
Stena Clear Sky	171,800	Clear Sky LNG Shipping	Daewoo	May-11	U.K.	Diesel/Gas-Electric	GT NO 96	4	Portfolio	2278
Stena Crystal Sky	171,800	Stena Drilling Cyprus	Daewoo	May-11	U.K.	Diesel/Gas-Electric	GT NO 96	4	Portfolio	2268
Symphonic Breeze	145,394	Reborn Maritime	Kawasaki	Dec-07	Bahamas	Steam	Moss	4	Portfolio	H1587
Taitar No 1	145,000	NiMic No 1 S.A.	Mitsubishi	Oct-09	Panama	–	Moss	4	RasGas	2241
Taitar No 2	145,000	NiMic No 2 S.A.	Kawasaki	Dec-09	Panama	–	Moss	4	RasGas	1625
Taitar No 3	145,000	NiMic No 3 S.A.	Mitsubishi	Dec-09	Panama	–	Moss	4	RasGas	2242
Taitar No 4	147,000	NiMic No 4 S.A.	Kawasaki	Aug-10	Panama	–	Moss	4	RasGas	1626
Tangguh Batur	145,700	LNG North-South Shipping Co.	Daewoo	Dec-08	Singapore	Steam	GT NO 96	4	Tangguh	2242
Tangguh Foja	155,000	Ocean 1919 Shipping No. 1	Samsung	Nov-08	Panama	–	TZ Mk. III	4	Tangguh	1619
Tangguh Hiri	155,000	Tangguh Hiri Finance Ltd.	HHI	Dec-08	Isle of Man	–	TZ Mk. III	4	Tangguh	1780
Tangguh Jaya	155,000	Ocean 1919 Shipping No. 2	Samsung	Dec-08	Panama	–	TZ Mk. III	4	Tangguh	1620
Tangguh Palung	155,000	Ocean 1919 Shipping No. 3	Samsung	Mar-09	Panama	–	TZ Mk. III	4	Tangguh	1634
Tangguh Sago	155,000	Teekay Shipping (Canada) Limited	Hyundai Samho	Dec-08	Bahamas	Diesel/Gas-Electric	TZ Mk. III	4	Tangguh	S298
Tangguh Towuti	145,700	LNG East-West Shipping Co.	Daewoo	Oct-08	Singapore	Steam	GT NO 96	4	Tangguh	2241
Tembek	216,200	Overseas LNG S1 Corp.	Samsung	Nov-07	M. Islnds.	Diesel	TZ Mk. III	4	Qatargas II	1605
Tenergy	170,520	Briety Shipping Inc	HHI	Jan-22	Greece	X-DF	TZ Mk. III	4	Portfolio	3157
Tessala	170,000	Hyproc Shipping Co.	HHI	Feb-17	Algeria	Diesel/Gas-Electric	TZ Mk. III Flex	–	Arzew	2813
Torben Spirit	173,400	Teekay LNG Partners	Daewoo	Nov-16	Bahamas	ME-GI	GT NO 96 GW	–	Portfolio	2411
Trader	138,000	K Line LNG Shipping (UK) Ltd.	Samsung	Nov-02	Isle of Man	Steam	TZ Mk. III	4	Portfolio	1380
Traiano Knutsen	180,000	Hai Kuo Shipping 1901 G Ltd.	HHI	Jul-20	Belgium	ME-GI	TZ Mk. III Flex	4	Portfolio	3086
Trinity Arrow	154,982	Luster Maritime S.A. & Cypress Maritime Panama & Los Halillos Shipping Co.	Koyo Dockyard	Feb-08	Panama	Steam	TZ Mk. III	4	Portfolio	2258
Trinity Glory	154,000	Cypress Maritime Consortium	Koyo Dockyard	Nov-08	Panama	Steam	TZ Mk. III	4	Bontang	2260
Tristar Ruby	155,000	RBSSAF (19) Ltd.	HHI	Apr-08	Isle of Man	Diesel/Gas-Electric	TZ Mk. III	4	Portfolio	1778
Umm Al Amad	210,200	J5 Nakilat No. 7 Ltd.	Daewoo	Sep-08	M. Islnds.	Diesel	GT NO 96	18	RasGas III	2253
Umm Al Ashtan	137,000	Umm Al Ashtan Ltd.	STX	May-97	Liberia	Steam	Moss	4	Das Island	1333
Umm Bab	145,000	Sea Trade International Inc.	Daewoo	Nov-05	Greece	Steam	GT NO 96	4	RasGas II	2228
Umm Slal	266,000	Nakilat Umm Slal Inc.	Samsung	Nov-08	M. Islnds.	–	TZ Mk. III	5	Qatargas II	1676
Valencia Knutsen	173,400	Norspan LNG VII AS	Daewoo	Sep-10	Spain	–	GT NO 96	4	Portfolio	2274
Velikiy Novgorod	170,200	Sovcomflot	STX	Dec-13	Liberia	–	GT NO 96	4	Portfolio	1910
Vivit Americas LNG	174,000	Cardiff LNG Zeta Owning LLC	HHI	Oct-20	Malta	X-DF	TZ Mk. III Flex	4	Portfolio	3037
Vivit City LNG	174,103	Kaiser SA	Hyundai Samho	Dec-21	Liberia	X-DF	TZ Mk. III Flex	4	Portfolio	8025
Vladimir Rusanov	174,000	Mitsui O.S.K. Lines	Daewoo	Jan-18	Bahamas	ME-GI	GT NO 96 GW	4	Yamal	2424
Vladimir Vize	172,000	China Shipping Development Co.	Daewoo	Sep-18	H.K., China	ME-GI	GT NO 96 GW	4	Yamal	2426
Vladimir Voronin	172,652	Teekay Corp.	Daewoo	Jul-19	Bahamas	ME-GI	GT NO 96 GW	4	Yamal	2431
WilForce	155,900	Wilforce LLC	Daewoo	Sep-13	Norway	–	GT NO 96	4	–	H2289
WilPride	155,900	Wilpride LLC	Daewoo	Nov-13	Norway	–	GT NO 96	4	–	H2290
Woodside Chaney	174,000	Maran Gas Maritime	Daewoo	Jul-19	Greece	ME-GI	GT NO 96 GW	4	Portfolio	2457
Woodside Charles Allen	173,400	Hai Kuo Shipping 2027G Ltd.	Daewoo	Oct-20	Greece	ME-GI	GT NO 96 GW	4	Portfolio	2486
Woodside Donaldson	165,500	Malt Singapore Pvt. Ltd.	Samsung	Oct-09	Singapore	Diesel/Gas-Electric	TZ Mk. III	4	Pluto	1632
Woodside Goode	159,800	Armour Company Ltd.	Daewoo	Nov-13	Greece	Diesel Electric	GT NO 96 GW	4	RasGas	H2295
Woodside Rees Withers	173,400	Maran Gas Maritime	Daewoo	Oct-19	Greece	ME-GI	GT NO 96 GW	4	–	2466
Woodside Rogers	159,800	Margie Seaway Corp.	Daewoo	Jul-13	Greece	Diesel/Gas-Electric	GT NO 96 GW	4	Pluto	H2288
Yakov Gakkel	172,658	DSME Hull No.2434 LLC	Daewoo	Nov-19	Bahamas	ME-GI	GT NO 96 GW	4	Yamal	2434
Yamal Spirit	174,000	Teekay LNG Partners	Hyundai Samho	Jan-19	Bermuda	ME-GI	TZ Mk. III Flex	–	Freeport	S857
Yari LNG	159,800	Cardiff LNG	Daewoo	Nov-14	Malta	TFDE	GT NO 96 L03	4	Spot	2401
Yenisei River	155,000	Navajo Marine	HHI	Jul-13	M. Islnds.	–	TZ Mk. III	4	Yamal	2556
Yiannis	169,932	Onerato Marine SA	Daewoo	Sep-21	Greece	ME-GI	GT NO 96 GW	4	Portfolio	2501
YK Sovereign	127,125	SK Shipping	HHI	Dec-94	Panama	Steam	Moss	4	MLNG	761
Zarga	268,000	Nakilat SHI 1752 Inc.	Samsung	Jan-10	M. Islnds.	–	TZ Mk. III	5	Qatargas IV	1752
Zekreet	137,482	Mitsui O.S.K. Lines	Mitsui E&S	Dec-98	Japan	Steam	Moss	5	Qatargas I	1432



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Fleet – LNG Bunkering

Name	Built	Capacity	Registered Owner	Builder	Flag	Engine Type	Cargo System	No. of tanks	Project
Seagas	Sep-74	170	Linde Gas AB	Havyard Leirvik	Sweden	Diesel	Cylinder	1	Stockholm Viking Line
Coral Methane	Apr-09	7,551	Coral Methane Shipping BV	AVIC Dingheng	Netherlands	Gas-Diesel	Cylinder	4	Portfolio
Oizmendi	Jul-09	600	Itsas Gas Bunker Supply SL	Astilleros Zamakona	Spain	Diesel	Cylinder	2	Huelva
Green Zeebrugge	Feb-17	5,000	LNG Link Investment AS	Hanjin Heavy Industries	Belgium	Diesel/Gas-Electric	Cylinder	2	Zeebrugge
Cardissa	Jun-17	6,500	Shell Western LNG BV	STX	Netherlands	Diesel/Gas-Electric	Cylinder	1	Portfolio
Coralius	Aug-17	5,800	Sirius Veder Gas AB	Bodewes Shipyards	Sweden	DFDE	Cylinder	4	Portfolio
Kairos	Oct-18	7,500	Uranos Vermögensverwaltung	Hyundai Mipo	Cyprus	Gas-Diesel	Type C	4	Portfolio
Bunker Breeze	Oct-18	6,050	Molucas Naviera AIE	Astilleros Zamakona	Spain	Gas-Diesel	Cylinder	4	Algeciras
LNG London	Apr-19	3,000	LNG Shipping S.A.	Severnav S.A.	Belgium	LNGPac	Cylinder	6	ARA
SM Jeju LNG 1	Sep-19	7,500	Jeju LNG 1 S.A.	Samsung	Panama	Diesel/Gas-Electric	KC-1	1	Portfolio
SM Jeju LNG 2	Jan-20	7,500	Jeju LNG 2 S.A.	Samsung	Panama	Diesel/Gas-Electric	KC-1	1	Portfolio
Gas Agility	Apr-20	18,600	Emerald Green Maritime Ltd.	Hudong Zhonghua	Malta	DFDE	TZ Mk III Flex	2	Rotterdam
Kaguya	Sep-20	3,469	Central LNG Shipping Japan	Kawasaki	Japan	Gas-Diesel	Cylinder	1	JERA TPS
Avenir Advantage	Oct-20	7,500	Avenir L Pte Ltd.	Keppel Nantong	Malta	Gas-Diesel	Type C	2	Portfolio
Avenir Accolade	Nov-20	7,500	Stolt-Nielsen Gas Ltd.	Keppel Nantong	Malta	Gas-Diesel	Type C	2	Portfolio
FueLNG Bellina	Nov-20	7,500	FueLNG Pte Ltd.	Kappel Nantong	Singapore	Diesel/Gas-Electric	Cylinder	2	Portfolio
Dalian No. 1	Dec-20	8,330	Xinao Marine Shipping Co. Ltd.	Dalian Yard	China	Gas-Diesel	Cylinder	2	Portfolio
Marine Vicky	Jan-20	9,900	Sinanju Tankers Pte. Ltd.	Keppel Nantong	Singapore	Gas-Diesel	TBC	TBC	Portfolio
Imperial Gas 92	Oct-17	3,800	Imperial Logistics International BV & Co. KG	Centromost	Germany	Diesel	Cylinder	TBC	Portfolio
Imperial Gas 93	Nov-17	3,800	Imperial Logistics International BV & Co. KG	Centromost	Germany	Diesel	Cylinder	TBC	Portfolio

Fleet – Small-scale/Multipurpose

Name	Built	Capacity	Registered Owner	Builder	Flag	Engine Type	Cargo System	No. of tanks	Project
Akebono Maru	Jun-11	3,500	Chuo Kaiun K.K.	Higaki	Japan	Diesel	Cylinders	2	Japan coastal trade
Aman Sendai	May-97	18,928	Asia LNG Transport	NKK	Malaysia	Steam	TZ Mk. III	3	Malaysia LNG
Coral Acropora	Dec-12	6,573	Coral Acropora Shipping	AVIC Dingheng	Netherlands	Gas-Diesel	Cylinders	4	Portfolio
Coral Actinia	Jan-13	6,573	Coral Actinia Shipping	AVIC Dingheng	Netherlands	Gas-Diesel	Cylinders	4	Portfolio
Coral Alicia	Dec-12	6,573	Coral Alicia Shipping	AVIC Dingheng	Netherlands	Gas-Diesel	Cylinders	4	Portfolio
Coral Anthelia	May-13	6,500	Coral Anthelia Shipping	AVIC Dingheng	Netherlands	Gas-Diesel	Cylinders	4	Portfolio
Coral Energice	Feb-18	18,000	Anthony Veder Chartering	Neptun Werft	Netherlands	Gas-Diesel	TZ MK. III Flex	2	Portfolio
Coral Energy	Dec-12	15,600	Anthony Veder Rederijzaken	Meyer Werft	Netherlands	Gas-Diesel	IMO Type C	3	Portfolio
Coral Favia	Jul-10	10,000	Somargas II Pvt. Ltd.	Wuzhou Shipbuilding	Singapore	Diesel	Cylinders	2	Baltic portfolio
Coral Fraseri	Jan-10	10,000	Innovation Shipping Co.	Wuzhou Shipbuilding	Singapore	Diesel	Cylinders	2	Portfolio
Coral Fungia	Jan-11	10,000	Somargas II Pvt. Ltd.	Wuzhou Shipbuilding	Singapore	Diesel	Cylinders	2	Baltic portfolio
Coral Furcata	Nov-11	10,000	Conception Shipping Company	Wuzhou Shipbuilding	Singapore	Diesel	Cylinders	2	Portfolio
Hai Yang Shi You 301	Apr-15	30,000	COSL	Jiangnan Shipyard	China	Gas-Diesel	Membrane	4	Hainan LNG shuttle
Kakurei Maru	Nov-08	2,536	Tsurumi Sunmarine Co.	Higaki	Japan	Diesel	Cylinders	2	Japan coastal trade
Kakuyu Maru	Nov-13	2,538	Tsurumi Sunmarine Co.	Kawasaki	Japan	Diesel	Cylinders	1	Japan coastal trade
Lucia Ambition	Dec-93	18,927	Asia LNG Transport	NKK	Malaysia	Steam	TZ Mk. III	3	Malaysia-Hainan
North Pioneer	Nov-05	2,500	Japan Liquid & Gas Transport Co. & Japan Railway Agency	Shin Kurushima	Japan	Diesel	Cylinders	2	Japan coastal trade
Pioneer Knutsen	Mar-04	1,100	Knutsen Kyst LNG K/S	Bijlsma Lemmer B.V. Scheepswerf	Norway	LNG-Diesel	Cylinders	2	Norway coastal trade
Ravenna Knutsen	Feb-21	30,000	Norspan LNG 14 AS	Hyundai Mipo	Spain	X-DF	Cylinders	3	Italy coastal trade
Seoul Gas	Jul-98	4,365	Chemgas Schiffahrts GmbH & Co. mt Oste KG	Severnav Shipbuilding	Liberia	Diesel	Cylinders	2	S. Korea-China
Shinju Maru No. 1	Aug-03	2,538	JRTT & NS United Coastal Tankers	Kawasaki	Japan	Diesel	Cylinders	2	Japan coastal trade
Shinju Maru No. 2	Oct-08	2,536	Chuo Kaiun K.K.	Higaki	Japan	Diesel	Cylinders	2	Japan coastal trade
Sun Arrows	Sep-07	19,531	Maple LNG Transport Inc.	Kawasaki	Bahamas	Diesel	Moss	3	Malaysia LNG
Surya Aki	Feb-96	19,538	MCGC International Limited & Hiroshima Gas Co.	Kawasaki	Bahamas	Steam	Moss	3	Thanlyin LNG
Triputra	Dec-00	23,097	Nusantara Shipping	NKK	Indonesia	Steam	TZ Mk. III	3	Pertamina Portfolio
Unikum Spirit	Jun-11	12,000	DHJS Hull No.2007-001 LLC	AVIC Dingheng	Singapore	Diesel	Cylinders	2	Kuantan
Vision Spirit	Sep-11	12,000	I.M. Skaugen Marine Services	AVIC Dingheng	Singapore	Diesel	Cylinders	2	Portfolio

Any observations, additions or suggested revisions to the LNG journal World LNG Carrier Fleet list should be sent to editor@lngjournal.com



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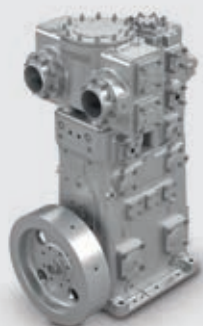
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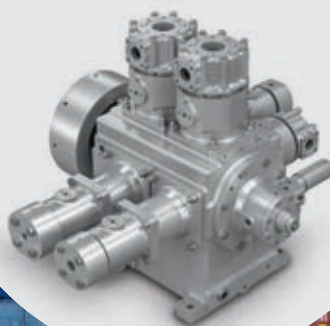
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