The LNG industry

GIIGNL Annual Report

2023

Profile

GIIGNL is a non-profit organisation whose objective is to promote the development of activities related to LNG: purchasing, importing, processing, transportation, handling, regasification and its various uses.

The Group constitutes a forum for exchange of information and experience among its 85 members in order to enhance the safety, reliability, efficiency and sustainability of LNG import activities and in particular, the operation of LNG import terminals.

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The LNG industry in 2022

Jean Abiteboul
President

The invisible hand of the market…

The outbreak of the Russia-Ukraine conflict in February 2022 has dried up gas markets, which have already been short since mid-2021 because of the relative scarcity of LNG. Europe has transformed from a balancing market into a firm LNG demand center. Expanding production capacity in the United States has provided additional volumes to replace a significant part of the Russian pipe gas. Nevertheless, the surge in European LNG demand has squeezed the global LNG market. **The resulting prices signals, without any need of political intervention, have efficiently led to LNG flows reconfiguration from Asia to Europe and to demand adjustments in both regions.** As a result, global LNG trade grew by 4.5%, reaching 389.2 MT in 2022.

LNG's contribution to global energy security was in full display in 2022 and is now at its highest since the Fukushima accident of 2011. The volatility and record gas prices have renewed the appetite for long-term commitments, with more than 81 MTPA of new contracts signed in 2022. Most volumes have been contracted on an FOB basis, and in significant part by Asian buyers (25 MTPA). The majority of the other long-term contracts have been signed by portfolio companies which happened to be crucial for European security of supply.

On the demand side, El Salvador joined the group of LNG importers with the start-up of the floating terminal for the LNG-to-power project in Acajutla. Eight other new LNG receiving terminals started operations around the world, five of which being located in Asia.

LNG imports into Europe increased by 60% to 120 MT, notably enabling gas storage to reach the filling targets set by the European Commission in its Gas Storage Regulation. The surge of European LNG demand was also facilitated by reduced imports from other regions, mainly in Asia where they fell by 8% to 252 MT. The decline by 20% of Chinese LNG imports is due to the impact on gas demand of Covid-related restrictions as well as to the switch to coal on top of increases in domestic gas production and pipeline imports. Other Asian countries such as Pakistan and Bangladesh faced gas shortages due to a lack of gas pipeline imports, decreasing domestic production and high LNG prices. Another consequence of the price volatility has been the delay in the start-up of imports into new markets, including the Philippines and Vietnam.

On the supply side, the United States reinforced its position as a top 3 global supplier and key provider of destination-flexible LNG, adding more than 8 MT of new volumes to the global market. It remained Europe's leading LNG supplier with a 43% market share, followed by Qatar and Russia. However, global LNG supply in 2022 had limited growth because of outages on existing facilities and the limited number of under-construction LNG plants that came online. However, Mozambique joined the ranks of LNG exporters in 2022 with the start-up of Coral South FLNG.

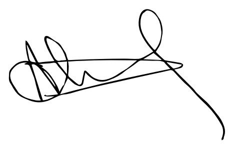
In 2023, the growth of the LNG market is expected to slow down due to limited new liquefaction capacity coming online. A mild winter 2022-2023 and gas demand destruction in Europe left storages levels well above the usual ones. Nevertheless, Europe is still set to compete with Asia over additional LNG imports to offset lower pipeline supplies from Russia compared to 2022. In response, some European nations have launched new LNG receiving infrastructure alongside increasing capacity at existing terminals. Germany became an LNG importer in early 2023 following the commissioning of three FSRUs and more projects are expected to come online later this and next year. The country has the highest number of LNG terminals under construction in Europe, potentially adding around 17 MTPA of import capacity. **Nevertheless, having the necessary infrastructure in place without corresponding long-term commitments does not necessarily guarantee European security of supply.** A rebound in LNG demand in China would put additional pressure on the market, although it could turn into more pipeline gas or alternative sources of energy.

…and the political and regulatory bodies struggling to combine energy security and sustainability.

The European energy crisis has been a stark reminder of the crucial importance of the energy trilemma fundamentals of availability and affordability, overshadowing sustainability, the fundamental given most attention before the crisis. Record high gas and LNG prices have triggered emergency policy measures, such as the EU price cap on wholesale gas markets and joint procurement mechanism (the EU Energy platform). Such emergency measures that aimed at limiting gas price spikes while ensuring security of supply should remain a short term solution in order to limit their impact on gas markets, which have proven to be efficient.

Looking ahead, by 2026, more than 100 MTPA of new liquefaction capacity is expected to come online. Before these projects ramp up, the market is expected to remain tight, taking into account the strong demand increase expected over the next decade.

Even though the role of LNG was recognized in the energy security of Europe in 2022, it has also been key for the energy transition for many years. It has facilitated the coal to gas switch in many regions, and has provided necessary flexibility to power systems with fast developing renewables. GIIGNL with the whole industry remains deeply involved in the monitoring and reduction of GHG emissions. **This pivotal role of LNG in the energy transition should be acknowledged by political decision makers and other stakeholders, in order to avoid counterproductive pressure on investors and lenders that could hurdle the financing of additional LNG projects. Such investments are necessary to ensure a sustainable but also a reliable and socially acceptable energy mix.**



Key figures 2022

389.2 MT
imported vs. 372.3 MT in 2021

+4.5%
growth vs. 2021

20
exporting countries

45
importing markets

9
new LNG regasification terminals

65%
of global LNG demand in Asia

1,068 MTPA
total regasification capacity*

38%
of global LNG volumes supplied from the Pacific Basin

476 MTPA
total liquefaction capacity*

* At the end of 2022

135 MT
imported on a spot or short-term* basis or 35% of total trade

Contents

*Quantities delivered under contracts of a duration of 4 years or less

Executive summary

In 2022, global LNG imports reached 389.2 MT, an increase of 16.9 MT compared with the previous year. European buyers had to turn to the LNG market to replace pipeline supplies from Russia, which shifted global LNG trade flows, while Asian countries turned to alternative energy sources at the expense of LNG. The annual growth rate reached 4.5%, with Europe absorbing most of the supply increase. Record high prices led to changes in import strategies and triggered LNG demand destruction in price sensitive countries, such as India, Pakistan and Bangladesh. The most significant decrease was seen in China due to Covid-related lockdowns, increased domestic production and pipeline imports, which resulted in a remarkable drop in spot LNG purchases. El Salvador joined the ranks of LNG importers. In total, 45 markets imported LNG volumes from 20 exporting countries.

2022 was another record year for long-term LNG contracting, with more than 81 MTPA of new contracts signed during the year, most of which with US volumes. Most volumes have been contracted on an FOB basis, and in significant part by Asian buyers. The majority of the other long-term contracts have been signed by portfolio players.

In 2022 global liquefaction capacity reached 476.5 MTPA at year-end. New capacity amounted to 14.9 MTPA. 10 MTPA Calcasieu Pass LNG export project started commissioning in the United States. The 1.5 MTPA Portovaya LNG plant started operations in Russia. The 3.4 MTPA Coral South FLNG produced it's first LNG shipment offshore Mozambique. In addition, the 4.2 MTPA Snøhvit LNG resumed operations in Norway. Three FIDs were taken in 2022, for a total capacity of around 26 MTPA: 10.4 MTPA Corpus Christi Stage 3 liquefaction project and 13.3 MTPA first phase of the Plaquemines LNG in the United States and a 2 MTPA FLNG facility in Malaysia.

At the end of 2022, global regasification capacity reached 1,068 MTPA. 9 new regasification terminals started commercial operations in 2022 totaling 23.4 MTPA of capacity. El Salvador started importing LNG through the 2 MTPA FSRU-based Acajutla LNG terminal. One FSRU project started operations in Brazil. Two projects were commissioned in Europe, one floating-based in Netherlands and a small-scale onshore terminal in Finland. 5 new terminals started operations in Asia: two land-based terminals in China, one in Thailand, one in Japan and a small-scale offshore project in Indonesia. Other regasification capacity additions included the second phase at the Al-Zour terminal in Kuwait, capacity additions in Europe (in France, Poland, Italy and Croatia), and one expansion program completed in China.

The total LNG tanker fleet consisted of 734 vessels at the end of 2022. It included 49 FSRUs and 70 vessels of equal or less than 30,000 cubic meters. Total cargo capacity at the end of 2022 stood at 108.7 million cubic meters. In 2022, the average spot charter rate for a 160,000 cubic meters LNG carrier stood at around $131,500/day, compared to an average of around $89,200/day in 2021. A total of 35 vessels were delivered in 2022, compared with 68 vessels in 2021. The number of new orders reached to a total of 178 units, compared with 111 new orders in 2021.

LNG trade in 2022

In 2022, global LNG imports reached **389.2 MT,** an increase of 16.9 MT compared with the previous year. European buyers had to turn to the LNG market to replace pipeline supplies from Russia, which shifted global LNG trade flows, while Asian countries turned to alternative energy sources at the expense of LNG. The annual growth rate reached 4.5%, with Europe absorbing most of the supply increase. Record high prices led to changes in import strategies and triggered LNG demand destruction in price sensitive countries, such as India, Pakistan and Bangladesh. The most significant decrease was seen in China due to Covid-related lockdowns, increased domestic production and pipeline imports, which resulted in a remarkable drop in spot LNG purchases.

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Modest increase in LNG supply despite growing demand

In 2022, the United States continued to lead LNG supply increases, adding 8.4 MT of LNG to the market, from a total of 16.9 MT globally. LNG supplies from the United States grew by 12.6% thanks to the ramp up of Train 6 of the Sabine Pass liquefaction project and the commissioning of Calcasieu Pass. However, maintenance at some liquefaction sites and the outage at the Freeport facility led to a lower-than-expected supply increase from the United States. Start-up of the Portovaya LNG project in Russia (+0.3 MT out of a total increase of +2.5 MT in total for the country) contributed to new LNG supply. Increased production in Qatar (+2.1 MT), Malaysia (+2.7 MT) and the restart of Hammerfest LNG in Norway (+2.5 MT) provided additional LNG volumes to a tightening market.Indonesia, Papua New Guinea, Peru, Trinidad & Tobago, Egypt, Equatorial Guinea, and Oman also contributed to incremental LNG supplies in smaller quantities. In addition, Coral South FLNG in Mozambique came onstream towards the end of the year.

The greatest declines in LNG exports were recorded by Nigeria (-2.2 MT) due to security issues and extensive flooding, which led to the declaration of force majeure and cancellation of some LNG cargoes. Algeria recorded a 15% decline (-1.7 MT) due to stronger domestic gas demand and pipeline gas exports, followed by Brunei (-0.8 MT) which experienced a decline in feedstock.

The three basins, the Atlantic, Pacific and the Middle East, all experienced growth in 2022, adding 10.5 MT, 4 MT and 2.5 MT respectively. The Pacific Basin remained the largest source of LNG supplies to the global market with 148 MT or 38% market share, closely followed by the Atlantic Basin with 146 MT or 37% share, and the Middle East with 96 MT or 25% market share. As production and exports from the US continue to increase, the supply gap between the Pacific and the Atlantic Basins has substantially narrowed over the last two years from 29 MT in 2020, to 8.6 MT in 2021 and only 2 MT in 2022.

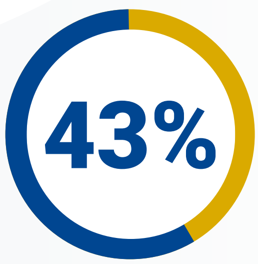
Qatar and Australia remain the leading exporting countries with 79 MT and 78.5 MT respectively. The United States came third, supplying 75.4 MT of LNG. It is likely to become the largest LNG exporter in 2023. Russia came fourth with 32 MT, followed by Malaysia with 27.6 MT. In a similar trend to 2021, Qatar, Australia and the United States together accounted for almost 60% of global LNG supply.

Demand destruction in Asia triggered by high LNG prices and lockdowns in China, drove LNG to other destinations.

For the first time since 2015, Asia recorded a decrease in LNG imports with demand falling by 7.6% (-20.6 MT) compared to the previous year. LNG imports decreased in major LNG importing countries, in China and Japan. Price sensitive countries such as India, Bangladesh and Pakistan also experienced strong declines in LNG import volumes. Slower economic growth and switching to coal for power generation due to high LNG prices were the main reasons for demand destruction in the region.

China experienced the greatest decline in LNG imports, which dropped from 79.3 MT in 2021 to 63.3 MT in 2022, a 20% reduction. Demand for LNG fell as a result of high regional spot prices, which triggered more pipeline imports and domestic gas production. A Covid outbreak at the beginning of the year and ensuing restrictions also contributed to demand reduction.

of US volumes delivered to Europe, 24% to Asia, 6% to Americas.



of European LNG imports comes from the USA, 16% from Qatar.

+60%

Increase in European LNG imports versus 2021

Japan overtook China as the largest LNG importer in 2022. However, LNG imports into Japan also declined by 2.2 MT (-3%) due to increasing nuclear generation and high storage levels which helped cope with high power demand. Mild weather conditions during the winter period also constrained the need for additional LNG imports.

LNG imports into South Korea remained relatively stable, recording a slight increase of 0.3 MT (or +0.6%), as weaker demand in the power sector due to strong nuclear generation and higher coal use as a more competitive source of energy was largely offset, by robust natural gas demand, notably in the residential sector.

India also registered a significant decline in LNG imports, which were down by 4 MT (or -17%) compared to 2021 as the country relied on domestic gas production and coal-fired power generation. Gas power plant low load factor also impacted LNG consumption. In addition, the country experienced a slowdown of its economy and a depreciation of its currency which made shipments more expensive in an already tight market.

Other Asian countries also suffered important declines in their LNG consumption. In Pakistan and Bangladesh LNG imports fell by 16% (-1.3 MT) and 13.1% (-0.7 MT) respectively, due to demand destruction as expensive LNG was replaced with more polluting fuels.

Notwithstanding the high LNG price environment, some Asian markets increased their LNG imports in 2022. LNG imports into Thailand increased by 1.7 MT (+26%) as recent domestic gas production issues accelerated LNG import growth. A second LNG receiving terminal was commissioned in 2022 to meet the growing demand. Taiwan also experienced an increase in LNG imports by 0.5 MT (+2.7%) triggered by policies of a nuclear free Taiwan by 2025 and of reduction of the use of coal. Malaysia experienced an increase of 0.7 MT in 2022. LNG imports into Singapore increased by 0.6 MT, offsetting a disruption in pipeline gas supplies from Indonesia. The chartering of additional LNG floating storage in application of temporary measures, introduced by the Energy Markets Authority, to secure the country's energy supply, has also contributed to LNG imports growth. Finally, LNG imports into Indonesia increased by 0.03 MT due to declines in feedstock production. Its growth in imports was supported by the start-up of a small-scale floating LNG receiving terminal.

Despite the drop in LNG imports, Asia continues to be the leading importing region with a 65% share of global LNG imports, declining from 73.2% in 2021. As we observed in 2022, LNG demand shifted westbound to ensure energy security across Europe.

In light of announcements by European countries to reduce their exposure to Russian gas, Europe was obliged to increase LNG imports, among other alternative gas sources. LNG imports into Europe were supported by the accelerated development of LNG receiving infrastructure in Northwest Europe. Overall, in 2022, net LNG imports into Europe increased by 44.7 MT, up by 60% compared to 2021. The strong demand in Europe pushed spot LNG prices to historic levels leading to a change in trade patterns, attracting LNG cargoes away from Asia.

France (+12.4 MT, an increase of 101%), the United Kingdom (+7.8 MT, an increase of 71%), the Netherlands (+6.3 MT, an increase of 111%), Spain (+5.5 MT, an increase of 40%) and Belgium (+4.7 MT, an increase of 141%) recorded the largest growth in imports.

Imports into the American region in 2022 dropped by 39.6% (-7.1 MT) to 10.9 MT. Latin American countries experienced a surge in LNG imports in 2021 due to historic droughts but reduced them in 2022 given the better availability of hydropower. Imports into Brazil dropped by 72.6% (-5.1 MT) due to strong rainfalls which strengthened hydro reservoir levels during the year. Argentina also experienced a 34.1% decline in LNG imports (-0.9 MT) with high LNG prices triggering an increase in domestic production. The country is now seeking opportunities to export LNG. Chile was the largest LNG importer in the American region in 2022 with a total of 2.5 MT of net LNG imports, however it also experienced a decline of 21.7% (-0.7 MT) compared to 2021, as pipeline gas imports from Argentina increased. Mexican imports recorded a drop of 0.2 MT (a 35.3% reduction) as the country increased natural gas imports by pipeline from the USA, continuing its trend towards becoming less reliant on LNG imports.

Colombia, Jamaica, Panama and the United States experienced increases in LNG imports in 2022. El Salvador joined the LNG importing market in 2022 with 0.3 MT of LNG imported through the Acajutla floating LNG terminal.

In the Middle East, LNG imports decreased slightly compared to 2021 (-0.03 MT or -0.4%).The LNG imports' growth in Kuwait (+0.6 MT or +11.4%) was supported by the commissioning of the second phase of the Al Zour LNG terminal. UAE experienced a decline in its LNG imports. Jordan resumed importing LNG in June 2022 for the first time since October 2020. Israel did not import any cargoes in 2022 and is not expected to import LNG because the contract for the charter of an FSRU has ended.

Spot and short term LNG have been attracted by Europe

In 2022, spot and short-term transactions reached 135 MT (-1.5 MT or -1.1%) compared with the previous year). This volume represented 35% of total trade, compared with 36.6% in 2021. Faced with a severe energy crisis, Europe relied on spot and short-term LNG imports to help replace Russian pipeline gas.

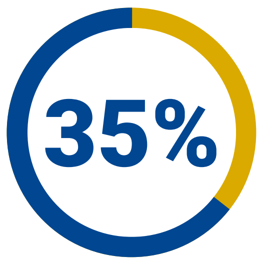
Spot and short-term LNG trade was muted in Asia in 2022, largely due to high spot prices. As such, flexible volumes were freed to meet European LNG and gas demand.

The United States remains the leading exporter of spot and short-term LNG with a 34% share in global spot and short-term volumes. Australia kept its second position for the third consecutive year with a 15% market share in 2022. Following the restart of exports from Hammerfest LNG, Norway increased spot and short-term sales from 0.2 MT to 2 MT compared to the previous year.

"True" spot volumes (i.e, volumes delivered within three months from the transaction date) reached 28% of total imports in 2022 or 108 MT, a decrease of 6% compared to 2021 (116 MT).

In 2022, re-exports of LNG increased to 4.1 MT compared with 3.5 MT in 2021. In 2022, 15 countries re-exported LNG and 26 countries received re-exported volumes. Spain remains the leader in terms of volumes reloaded (1.4 MT in 2022 vs 1 MT in 2021), followed by Indonesia (0.7 MT) and China (0.5 MT). The reloaded volumes from Spain were mostly destined for the European region.

Asia, driven by China and Japan, remains the main destination for reloaded volumes globally.



of volumes imported on a spot or short-term basis.

28%

of volumes imported on a spot basis.

LNG imports in 2022 (net of re-exports)

Market	10^6 T	Global Share	Var. 2022/2021 Mt	Var. 2022/2021 %
Japan	72.16	18.5%	-2.19	-2.9%
China	63.32	16.3%	-15.9	-20.1%
South Korea	47.19	12.1%	0.27	0.6%
Taiwan	19.96	5.1%	0.52	2.7%
India	19.90	5.1%	-4.13	-17.2%
Thailand	8.27	2.1%	1.72	26.2%
Pakistan	6.91	1.8%	-1.29	-15.7%
Bangladesh	4.43	1.1%	-0.67	-13.1%
Singapore	3.70	1.0%	0.58	18.6%
Indonesia	3.34	0.9%	0.03	1.0%
Malaysia	2.72	0.7%	0.70	34.8%
Myanmar	0.00	0.0%	-0.22	-100.0%
ASIA	251.89	64.7%	-20.62	-7.6%
France	24.75	6.4%	12.42	100.6%
Spain	19.30	5.0%	5.48	39.7%
United Kingdom	18.82	4.8%	7.78	70.5%
Netherlands	11.90	3.1%	6.27	111.3%
Turkey	10.63	2.7%	0.64	6.4%
Italy	9.95	2.6%	3.07	44.6%
Belgium	8.00	2.1%	4.69	141.4%
Poland	4.36	1.1%	1.53	54.0%
Portugal	4.15	1.1%	0.04	1.0%
Greece	2.75	0.7%	1.11	67.8%
Lithuania	2.19	0.6%	1.07	94.9%
Croatia	1.83	0.5%	0.63	52.2%
Malta	0.34	0.1%	0.06	19.4%
Finland	0.24	0.1%	0.04	20.5%
Sweden	0.23	0.1%	-0.13	-36.0%
Russia	0.10	0.0%	0.10	N/A
Norway	0.13	0.0%	-0.09	-41.7%
Gibraltar	0.03	0.0%	-0.03	-50.9%
EUROPE	119.71	30.8%	44.66	59.5%
Chile	2.46	0.6%	-0.68	-21.7%
Brazil	1.92	0.5%	-5.08	-72.6%
Argentina	1.66	0.4%	-0.86	-34.1%
Dominican Republic	1.45	0.4%	-0.02	-1.4%
Puerto Rico	1.04	0.3%	-0.48	-31.6%
Jamaica	0.65	0.2%	0.12	23.9%
United States	0.47	0.1%	0.05	11.4%
Mexico	0.40	0.1%	-0.22	-35.3%
El Salvador	0.27	0.1%	0.27	#N/A
Panama	0.23	0.1%	0.03	12.6%
Canada	0.23	0.1%	-0.27	-53.7%
Colombia	0.07	0.0%	0.03	56.4%
AMERICAS	10.85	2.8%	-7.12	-39.6%
Kuwait	5.95	1.5%	0.61	11.4%
United Arab Emirates	0.68	0.2%	-0.51	-42.9%
Jordan	0.07	0.0%	0.07	N/A
Egypt	0.04	0.0%	-0.01	-25.9%
Israel	0.00	0.0%	-0.18	-100.0%
MIDDLE EAST & AFRICA	6.74	1.7%	-0.03	-0.4%
GLOBAL NET IMPORTS	389.19	100.0%	16.89	4.5%

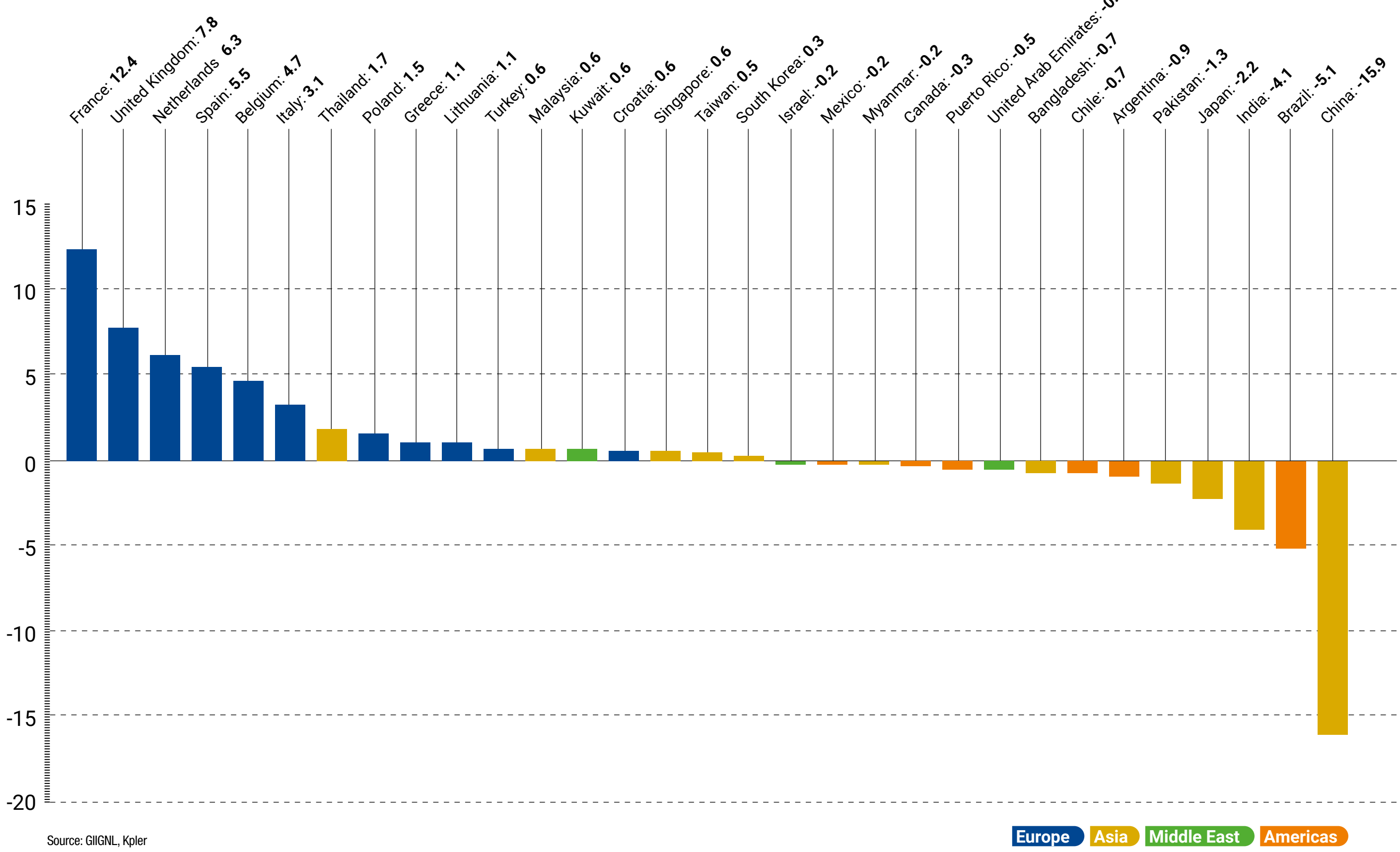
Source: GIIGNL, Kpler

Source of LNG imports in 2022

Country	10^6 T	Global Share	Var. 2022/2021 Mt	Var. 2022/2021 %
Australia	78.50	20.2%	-0.02	0.0%
Malaysia	27.60	7.1%	2.66	10.7%
Indonesia	14.00	3.6%	0.18	1.3%
Russia (Asia)	11.32	2.9%	1.17	11.5%
Papua New Guinea	8.39	2.2%	0.09	1.1%
Brunei	4.76	1.2%	-0.83	-14.8%
Peru	3.30	0.8%	0.75	29.3%
PACIFIC BASIN	147.87	38.0%	4.00	2.8%
United States	75.44	19.4%	8.41	12.6%
Russia (Europe)	20.75	5.3%	1.29	6.6%
Nigeria	14.22	3.7%	-2.20	-13.4%
Algeria	10.04	2.6%	-1.74	-14.8%
Trinidad and Tobago	7.76	2.0%	1.57	25.4%
Egypt	6.78	1.7%	0.22	3.4%
Equatorial Guinea	3.54	0.9%	0.82	30.2%
Angola	3.19	0.8%	-0.44	-12.1%
Norway	2.72	0.7%	2.49	1.053.2%
Cameroon	1.19	0.3%	-0.01	-1.1%
Mozambique	0.04	0.0%	0.04	#N/A
Argentina	0.00	0.0%	0.00	#N/A
ATLANTIC BASIN	145.68	37.4%	10.45	7.7%
Qatar	79.04	20.3%	2.08	2.7%
Oman	11.14	2.9%	0.92	9.0%
United Arab Emirates	5.46	1.4%	-0.56	-9.3%
MIDDLE EAST	95.64	24.6%	2.45	2.6%
TOTAL	389.19	100.0%	16.89	4.5%

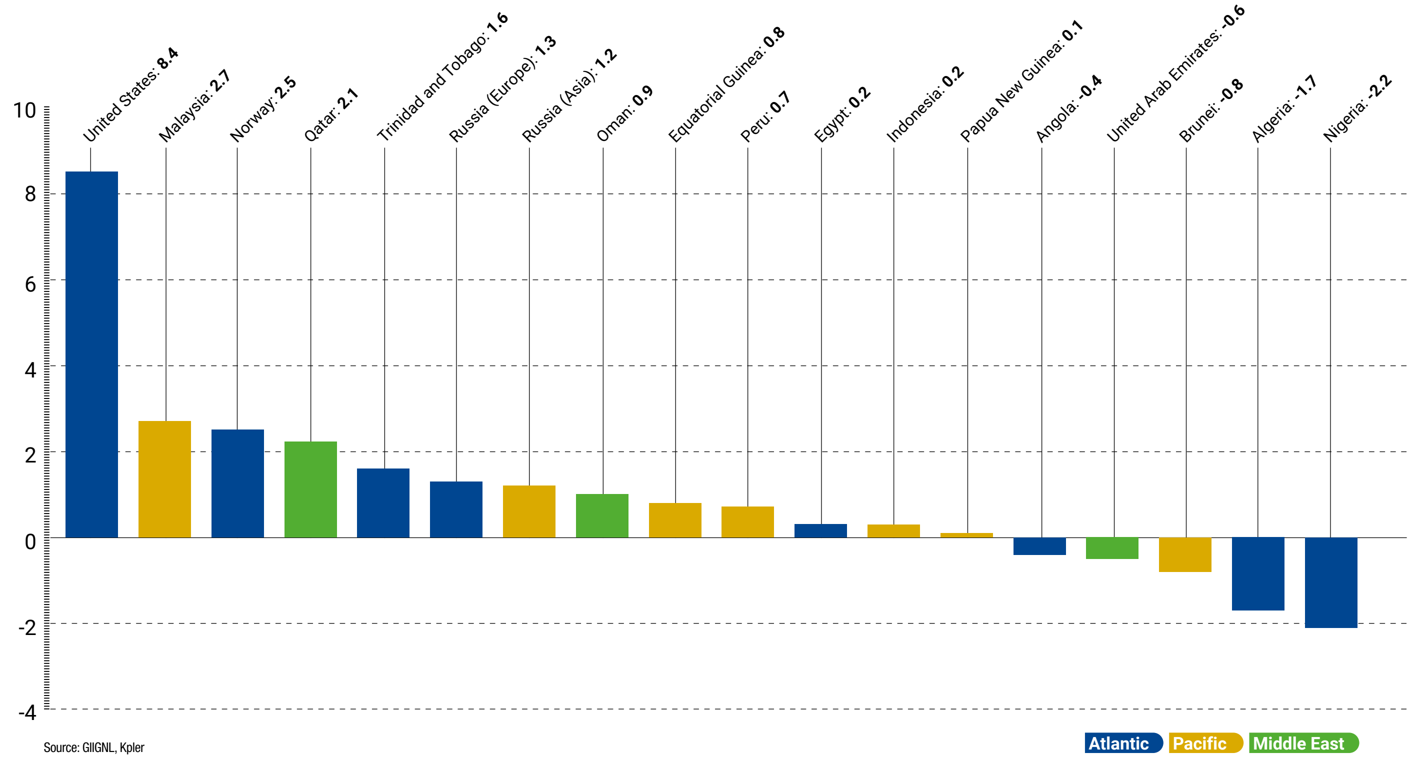
Source: GIIGNL, Kpler

LNG IMPORTS: 2022 VS. 2021 (MT)



Source: GIIGNL, Kpler

SOURCE OF LNG IMPORTS: 2022 VS. 2021 (MT)



Source: GIIGNL, Kpler

Quantities (in MT) received in 2022

Markets	Algeria	Angola	Australia	Brunei	Cameroon	Egypt	Equatorial Guinea	Indonesia	Malaysia	Mozambique	Nigeria	Norway
Bangladesh	0.07					0.07	0.06		0.08		0.26	
China	0.07		21.61	0.33		0.34	0.36	3.38	7.64		0.47	
India	0.20	0.66	0.43		0.39	0.13	0.13	0.07	0.07		0.95	
Indonesia	0.01		0.38			0.01		3.17			0.03	
Japan	0.12		30.45	3.21		0.18	0.12	2.42	12.19		0.97	
Malaysia			2.04	0.78		0.01			0.06			
Pakistan	0.07	0.06				0.06			0.06		0.29	
Singapore		0.06	2.44			0.07	0.07	0.08				
South Korea	0.06		11.81	0.19	0.07	0.62	0.20	3.18	5.38		0.56	
Taiwan			7.46	0.06			0.17	1.10	0.52		0.27	
Thailand	0.07	0.07	1.42	0.19		0.18	0.07	0.11	1.61		0.30	
ASIA	**0.68**	**0.86**	**78.04**	**4.76**	**0.46**	**1.67**	**1.19**	**13.50**	**27.60**		**4.10**	
Belgium	0.06	0.07			0.14	0.07	0.06					0.09
Croatia						0.21						
Finland						0.02						0.01
France	3.07	0.80			0.14	0.49	0.13	0.07			0.88	0.76
Gibraltar												
Greece	0.36				0.00	0.35		0.04			0.22	0.14
Italy	1.04	0.07				0.48	0.24				0.12	0.06
Lithuania						0.07						0.66
Malta												
Netherlands	0.14	0.67	0.07		0.22	0.37	0.20				0.07	0.45
Norway												0.10
Poland						0.06					0.13	
Portugal							0.07				2.13	
Russia					0.02							
Spain	0.36	0.20	0.03		0.21	0.98	0.39			0.04	4.08	0.10
Sweden												0.08
Turkey	3.74	0.07				1.59	0.07	0.07			0.56	
UK	0.44	0.47	0.02			0.13					0.41	0.18
EUROPE	**9.21**	**2.34**	**0.12**		**0.73**	**4.82**	**1.16**	**0.18**		**0.04**	**8.59**	**2.62**
Argentina	0.07					0.08	0.15					0.07
Brazil							0.05				0.06	
Canada							0.05					
Chile			0.20				0.93					
Colombia												
Dominican Rep.												
El Salvador								0.02				
Jamaica											0.32	0.02
Mexico								0.30				
Panama												
Puerto Rico											0.06	
USA												
AMERICAS	**0.07**		**0.20**			**0.08**	**1.18**	**0.32**			**0.44**	**0.10**
Egypt						0.04						
Jordan						0.07						
Kuwait	0.07		0.14			0.11					1.08	
UAE												
MIDDLE EAST	**0.07**		**0.14**			**0.22**					**1.08**	
GLOBAL NET IMPORTS	**10.04**	**3.19**	**78.50**	**4.76**	**1.19**	**6.78**	**3.54**	**14.00**	**27.60**	**0.04**	**14.22**	**2.72**

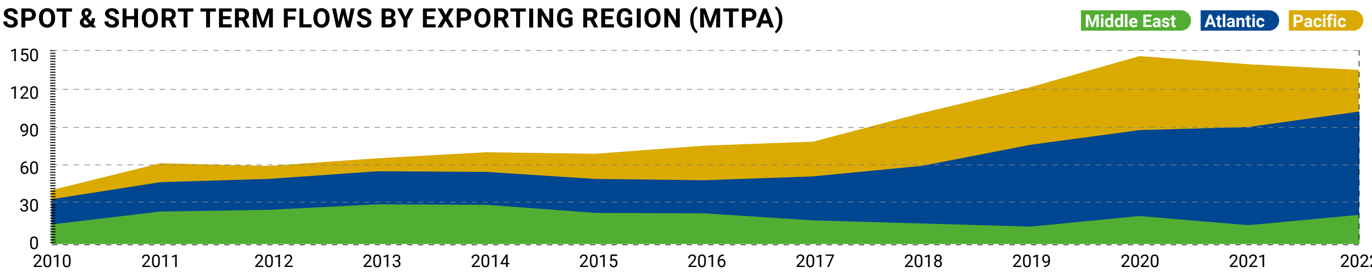
Oman	Papua New Guinea	Peru	Qatar	Russia (Asia)	Russia (Europe)	Trinidad and Tobago	UAE	USA	Re-exports Received	Re-exports Loaded	Net imports	Markets
			3.64					0.25			4.43	Bangladesh
0.89	2.55	0.20	15.98	2.03	4.71	0.41	0.12	2.11	0.64	-0.54	63.32	China
0.91			10.54		0.41	0.11	2.64	2.20	0.07		19.90	India
0.02				0.12	0.15			0.13		-0.69	3.34	Indonesia
2.53	3.86	0.20	2.88	6.79	0.06	0.11	1.33	4.14	0.58		72.16	Japan
	0.04									-0.20	2.72	Malaysia
0.01			6.10				0.19	0.06			6.91	Pakistan
			0.35		0.14	0.07		0.53	0.08	-0.19	3.70	Singapore
4.89	0.60	0.67	9.98	1.86	0.31	0.13	0.37	5.90	0.46	-0.07	47.19	South Korea
0.33	1.31	0.17	5.20	0.51	0.58		0.18	2.04	0.06		19.96	Taiwan
0.64	0.03		2.32		0.07	0.53	0.13	0.47	0.06		8.27	Thailand
10.22	8.39	1.24	57.00	11.32	6.44	1.36	4.97	17.84	1.94	-1.69	251.89	ASIA
			4.16		1.92			1.58	0.02	-0.16	8.00	Belgium
			0.07					1.54	0.01		1.83	Croatia
					0.20				0.02	-0.01	0.24	Finland
0.07		0.07	1.47		5.24	0.30	0.06	11.17	0.04	-0.01	24.75	France
									0.03		0.03	Gibraltar
0.07					0.14			1.38	0.04		2.75	Greece
0.07			4.56		0.14	0.24		2.24	0.70		9.95	Italy
					0.05			1.41	0.01		2.19	Lithuania
						0.24		0.11			0.34	Malta
			0.09		1.74	0.37		7.19	0.45	-0.12	11.90	Netherlands
					0.01				0.01		0.13	Norway
			1.65			0.07		2.44			4.36	Poland
					0.22	0.36		1.37			4.15	Portugal
					0.07						0.10	Russian Fed.
0.38		0.13	1.01		3.72	0.81		8.30	0.01	-1.44	19.30	Spain
					0.07				0.08	0.00	0.23	Sweden
0.08			0.07		0.29	0.22		3.93	0.03	-0.07	10.63	Turkey
		1.70	5.63		0.36	0.25		9.11	0.13		18.82	UK
0.66		1.90	18.72		14.17	2.85	0.06	51.74	1.59	-1.81	119.71	EUROPE
			0.04			0.04		1.21			1.66	Argentina
			0.09					1.67	0.05		1.92	Brazil
		0.16				0.03					0.23	Canada
						0.85		0.59		-0.11	2.46	Chile
						0.01		0.06			0.07	Colombia
						0.64		0.92		-0.11	1.45	Dominican Rep.
						0.25					0.27	El Salvador
			0.01			0.56		0.07	0.02	-0.36	0.65	Jamaica
								0.06	0.03		0.40	Mexico
								0.22	0.01		0.23	Panama
0.12						0.44			0.42		1.04	Puerto Rico
						0.47					0.47	USA
0.12		0.16	0.14			3.29		4.79	0.54	-0.58	10.85	AMERICAS
											0.04	Egypt
											0.07	Jordan
0.14			2.57		0.14	0.27	0.36	1.06			5.95	Kuwait
			0.61				0.07				0.68	UAE
0.14			3.18		0.14	0.27	0.43	1.06	0.00	0.00	6.74	MIDDLE EAST
11.14	8.39	3.30	79.04	11.32	20.75	7.76	5.46	75.44	4.07	-4.07	389.19	GLOBAL NET IMPORTS

Source: GIIGNL, Kpler

Spot and short-term quantities* (in MT) received in 2022

Markets	Algeria	Angola	Australia	Brunei	Cameroon	Egypt	Equatorial Guinea	Indonesia	Malaysia	Mozambique	Nigeria	Norway
Bangladesh	0.07					0.07	0.06		0.08		0.26	
China	0.07		4.65	0.33		0.28	0.07	1.07	2.53		0.42	
India	0.06	0.66	0.07		0.02	0.13	0.07	0.07			0.79	
Indonesia	0.01		0.14			0.01		0.58				
Japan			5.13	0.25		0.12	0.06	0.89	1.92		0.25	
Malaysia			0.06	0.06		0.01			0.06			
Pakistan	0.07					0.06			0.06			
Singapore		0.06	0.19					0.00				
South Korea			5.10	0.06	0.07	0.36		1.05	1.61		0.37	
Taiwan			3.34				0.06	0.98	0.45		0.06	
Thailand	0.07	0.07	1.10	0.19		0.06		0.11	0.25		0.12	
ASIA	0.35	0.79	19.79	0.89	0.10	1.10	0.33	4.75	6.96		2.27	
Belgium	0.06	0.07			0.14	0.07	0.06					0.09
Croatia						0.21						
Finland						0.02						0.01
France	1.14	0.80			0.14	0.35		0.07			0.20	0.25
Gibraltar												
Greece					0.00						0.13	0.14
Italy	1.04	0.07				0.48	0.24				0.12	0.06
Lithuania						0.07						0.66
Malta												
Netherlands	0.14	0.67			0.22	0.30	0.20				0.07	0.45
Norway												0.01
Poland						0.06					0.13	
Portugal							0.07					
Russia												
Spain	0.28	0.20			0.21	0.32	0.19			0.04	0.53	0.10
Sweden												0.05
Turkey	1.03	0.07				1.59	0.07	0.07			0.56	
UK	0.07	0.47				0.11					0.29	0.13
EUROPE	3.75	2.34			0.71	3.57	0.83	0.14		0.04	2.03	1.94
Argentina	0.07					0.08	0.15					0.07
Brazil							0.05				0.06	
Canada							0.05					
Chile			0.07				0.31					
Colombia												
Dominican Rep.												
Jamaica											0.32	0.02
Mexico												
Panama												
Puerto Rico												
USA												
AMERICAS	0.07		0.07			0.08	0.55				0.38	0.10
Egypt						0.04						
Jordan						0.07						
Kuwait	0.07					0.11					1.08	
UAE												
MIDDLE EAST	0.07					0.22					1.08	
GLOBAL NET IMPORTS	4.25	3.13	19.86	0.89	0.80	4.97	1.71	4.89	6.96	0.04	5.77	2.04

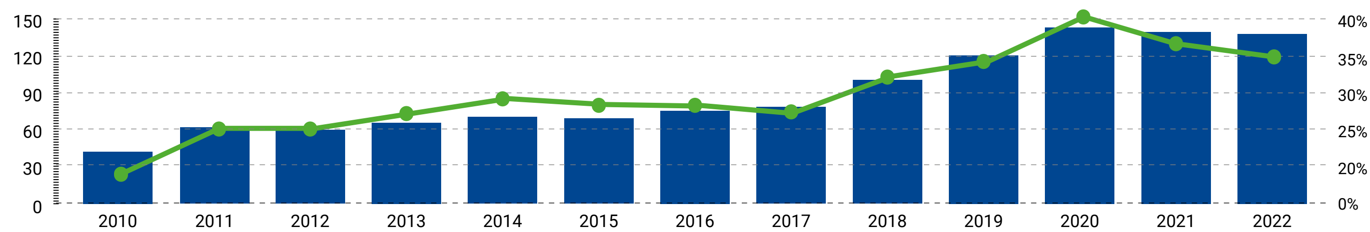
SPOT & SHORT TERM FLOWS BY EXPORTING REGION (MTPA)



Oman	Papua New Guinea	Peru	Qatar	Russia (Asia)	Russia (Europe)	Trinidad and Tobago	UAE	USA	Re-exports Received	Re-exports Loaded	2021 Net imports	Markets
								0.25			0.79	**Bangladesh**
0.59	**0.74**	0.06	**4.49**	2.03	**2.68**	**0.06**	0.12	**1.70**	0.64	**-0.54**	22.00	**China**
0.57			**1.45**		**0.34**		2.39	**0.45**	0.07		7.14	**India**
0.02					**0.06**			**0.01**		**-0.69**	0.16	**Indonesia**
0.88	**0.29**	0.07	**0.68**	0.32			0.90	**1.13**	0.58		13.48	**Japan**
	0.04									**-0.20**	0.02	**Malaysia**
0.01			**1.06**				0.12	**0.06**			1.45	**Pakistan**
					0.14			**0.28**	0.08	**-0.19**	0.56	**Singapore**
0.68	**0.60**	0.14	**0.45**	0.19	**0.06**	**0.06**	0.37	**1.82**	0.46	**-0.07**	13.41	**South Korea**
0.33	**0.37**	0.06	**0.07**	0.06			0.18	**0.23**	0.06		6.25	**Taiwan**
0.58	**0.03**		**0.31**				0.13	**0.36**	0.06		3.42	**Thailand**
3.67	2.06	0.33	8.50	2.61	3.29	0.11	4.22	6.29	1.94	-1.69	68.67	**ASIA**
			0.55		**0.27**			**1.03**	0.02	**-0.16**	2.19	**Belgium**
			0.07					**1.41**	0.01		1.70	**Croatia**
					0.20				0.02	**-0.01**	0.24	**Finland**
0.07					**0.07**		0.06	**7.90**	0.04	**-0.01**	11.08	**France**
									0.03		0.03	**Gibraltar**
0.07					**0.14**			**0.84**	0.04		1.37	**Greece**
0.07					**0.14**	**0.24**		**2.08**	0.70		5.23	**Italy**
					0.05			**1.40**	0.01		2.17	**Lithuania**
						0.24					0.24	**Malta**
					1.74	**0.17**		**4.49**	0.45	**-0.12**	8.78	**Netherlands**
					0.01				0.01		0.04	**Norway**
						0.07		**2.22**			2.49	**Poland**
						0.36		**0.70**			1.13	**Portugal**
					0.07						0.07	**Russia**
0.06			**0.23**		**0.42**	**0.23**		**3.27**	0.01	**-1.44**	4.66	**Spain**
					0.07				0.08	**0.00**	0.21	**Sweden**
0.08			**0.07**		**0.29**	**0.22**		**3.86**	0.03	**-0.07**	7.84	**Turkey**
			0.06		**0.14**	**0.05**		**5.87**	0.13		7.30	**UK**
0.34			0.98		3.63	1.57	0.06	35.06	1.59	-1.81	56.78	**EUROPE**
			0.04			**0.04**		**1.21**			1.66	**Argentina**
								1.59	0.05		1.76	**Brazil**
											0.05	**Canada**
						0.17		**0.36**		**-0.11**	0.80	**Chile**
						0.01		**0.06**			0.07	**Colombia**
								0.11		**-0.11**	0.00	**Dominican Rep.**
			0.01					**0.04**	0.02	**-0.36**	0.06	**Jamaica**
								0.06	0.03		0.10	**Mexico**
								0.06	0.01		0.08	**Panama**
0.12						**0.22**			0.42		0.76	**Puerto Rico**
						0.47					0.47	**United States**
0.12			0.04			0.91		3.51	0.54	-0.58	5.81	**AMERICAS**
											0.04	**Egypt**
											0.07	**Jordan**
			0.11		**0.14**		0.36	**0.88**			2.76	**Kuwait**
			0.61				0.07				0.68	**UAE**
			0.72		0.14		0.43	0.88	0.00	0.00	3.55	**MIDDLE EAST**
4.14	2.06	0.33	10.25	2.61	7.06	2.60	4.71	45.74	4.07	-4.07	134.81	**GLOBAL NET IMPORTS**

* Quantities delivered under contracts of a duration of 4 years or less. Source: GIIGNL, Kpler

SHARE OF SPOT & SHORT TERM VS. TOTAL LNG TRADE (MTPA/%)



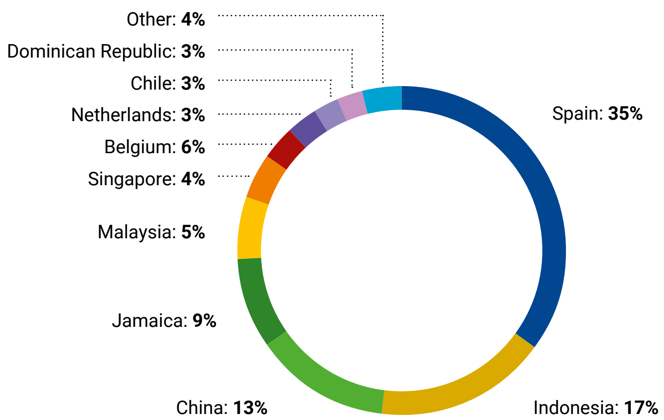
Re-exports (in MT)

(Based on cargoes received in 2022)

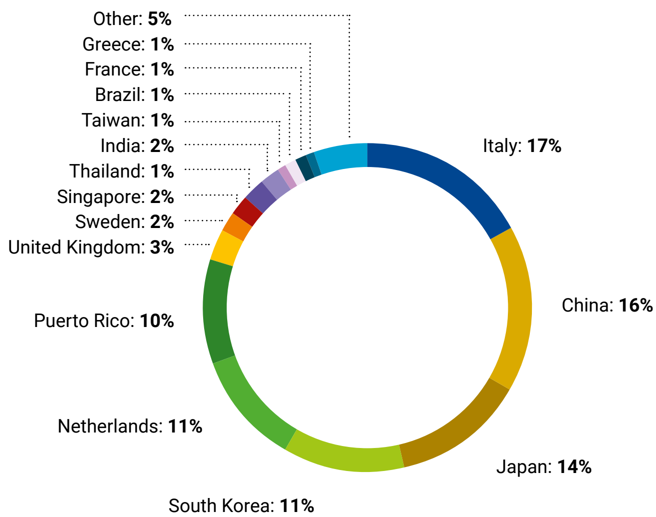
From ▸ To ▾	Belgium	Chile	China	Dominican Republic	France	Indonesia	Jamaica	Malaysia	Netherlands	Singapore	South Korea	Spain	Sweden	Turkey	Finland	Total
China	0.07					**0.33**			0.06	**0.05**	0.06	**0.07**				**0.64**
India														**0.07**		**0.07**
Japan			0.13			**0.25**		**0.06**		**0.14**						**0.58**
Singapore								**0.08**								**0.08**
South Korea			0.29			**0.11**		**0.06**				**0.01**				**0.46**
Taiwan		**0.06**														**0.06**
Thailand			0.06													**0.06**
ASIA	0.07	**0.06**	0.47			**0.69**		**0.20**	0.06	**0.19**	0.06	**0.08**		**0.07**		**1.94**
Belgium												**0.01**			**0.01**	**0.02**
Croatia												**0.01**				**0.01**
Finland	0.01								0.00			**0.01**				**0.02**
France												**0.04**				**0.04**
Gibraltar									0.02			**0.01**				**0.03**
Greece												**0.04**				**0.04**
Italy	0.00		0.07	**0.06**	0.01							**0.56**				**0.70**
Lithuania	0.00											**0.01**				**0.01**
Netherlands	0.02											**0.44**				**0.45**
Norway	0.00								0.01			**0.00**	0.00			**0.01**
Spain											0.01					**0.01**
Sweden	0.04						0.02		0.03			**0.00**				**0.08**
Turkey				**0.03**												**0.03**
United Kingdom		**0.05**							0.00			**0.07**				**0.13**
EUROPE	0.08	**0.05**	0.07	**0.09**	0.01		0.02		0.07		0.01	**1.20**	0.00		**0.01**	**1.59**
Brazil	0.01											**0.04**				**0.05**
Jamaica												**0.02**				**0.02**
Mexico							0.03									**0.03**
Panama												**0.01**				**0.01**
Puerto Rico				**0.02**			0.31					**0.09**				**0.42**
AMERICAS	0.01			**0.02**			0.34					**0.16**				**0.54**
GRAND TOTAL	**0.16**	**0.11**	**0.54**	**0.11**	**0.01**	**0.69**	**0.36**	**0.20**	**0.12**	**0.19**	**0.07**	**1.44**	**0.00**	**0.07**	**0.01**	**4.07**

Source: GIIGNL, Kpler

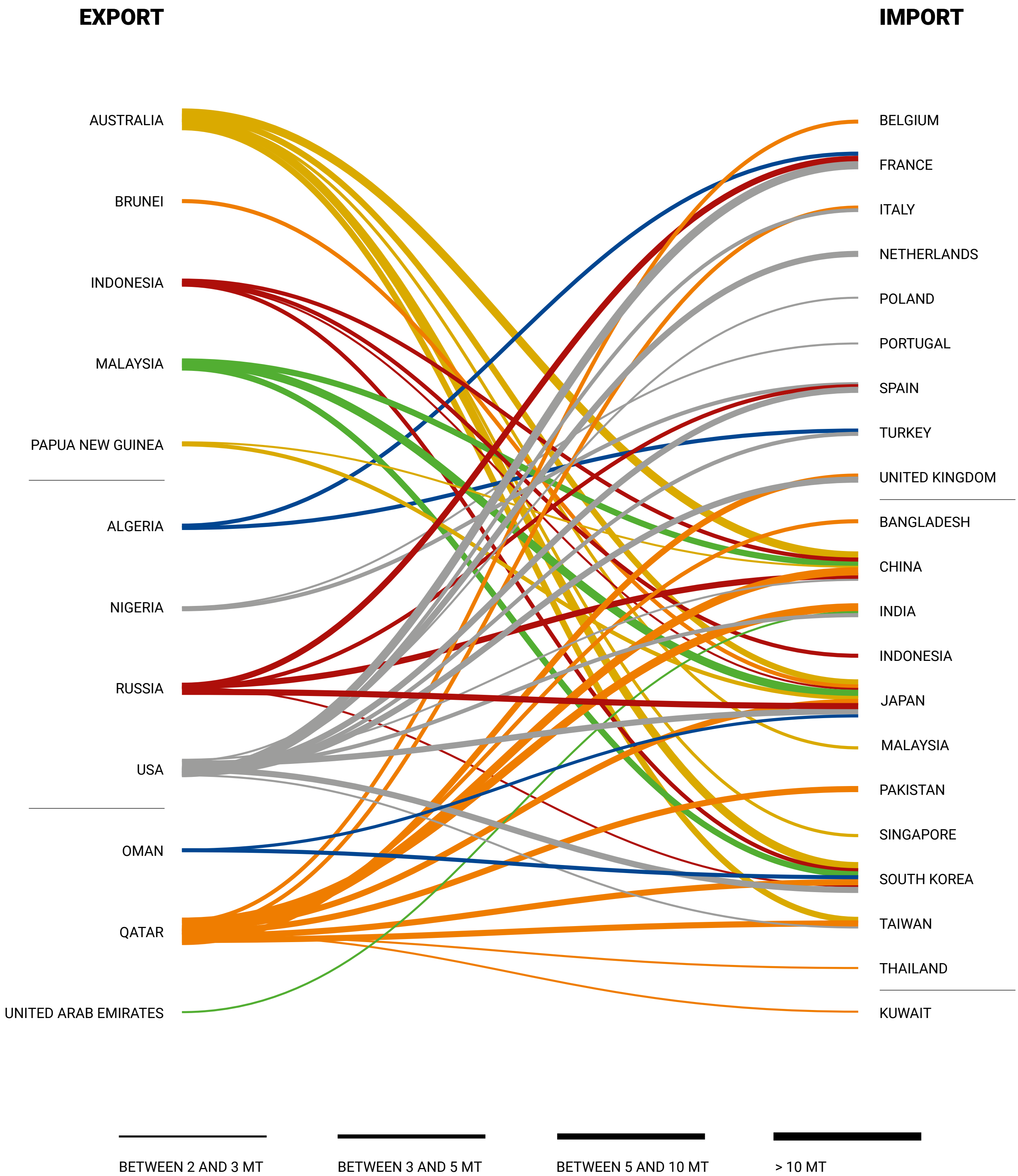
RE-EXPORTS LOADED IN 2022



RE-EXPORTS RECEIVED IN 2022



Major LNG flows in 2022



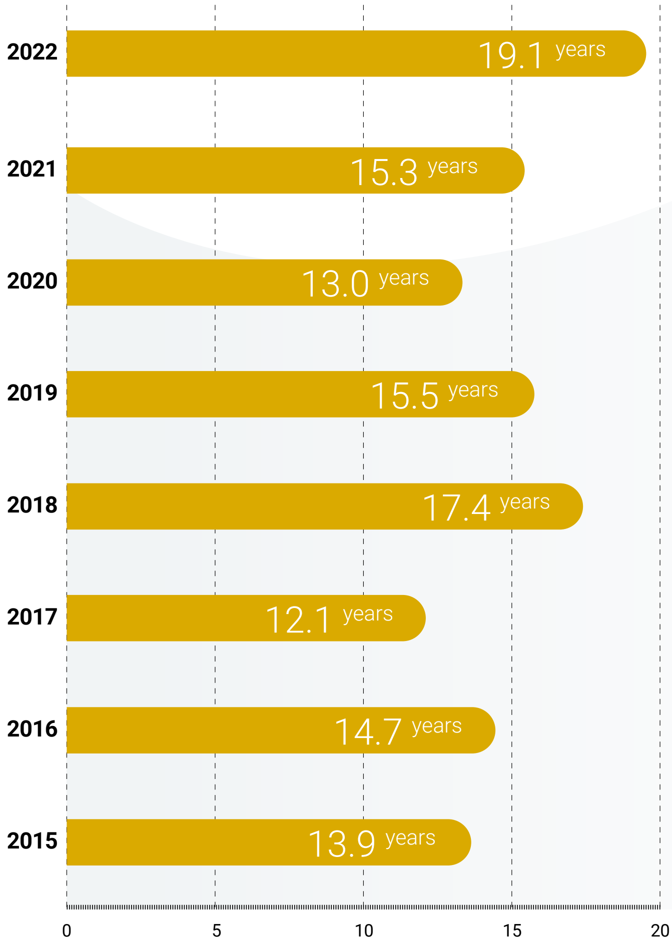
Contracts signed in 2022

Export Country	Import market	Seller	Buyer	ACQ (MTPA)	Start date	Duration	Delivery Format	Comments
LONG & MEDIUM TERM CONTRACTS (> 4 YEARS)								
Australia/NWS	Portfolio	**Beach Energy**	**BP Singapore**	0.75	**2023**	**5**	FOB	Based on HoA signed in 2021. 3.75 MT over 5 years from Waitsia Stage 2 project, start with commercial operations
BP Portfolio	China	**BP Singapore**	**Shenzhen Energy**		**2024**		DES	For gas fired power plants which start in 2024
Mexico/Puerto Libertad/ Saguaro LNG	China	**Mexico Pacific**	**Guangzhou Development Group**	2	**2027**	**20**	DES	Start with commercial operations at Saguaro LNG
Mexico/Puerto Libertad/ Saguaro LNG	Portfolio	**Mexico Pacific**	**Shell**	2.6	**2027**	**20**	FOB	
Oman/Qalhat	Japan	**Oman LNG**	**JERA**	0.8	**2025**	**10**	FOB	Key Term Sheet. Up to 12 cargoes per year
PTTGL Portfolio	Thailand	**PTTGL**	**PTT**	1	**2026**	**15**	DES	From Jan 2026 to Dec 2040
Qatar/NFE	China	**QatarEnergy**	**Sinopec**	4	**2026**	**27**	DES	
Qatar/NFE	Germany	**QatarEnergy**	**ConocoPhillips**	1	**2026**	**15**	DES	
Qatar/NFS	Germany	**QatarEnergy**	**ConocoPhillips**	1	**2027**	**15**	DES	
Russia/Novatek Portfolio/ Arctic LNG 2	China	**Novatek**	**ENN (Singapore)**	0.6	**2025**	**11**	DES	Start with commercial operations at Arctic LNG 2. LNG delivered to Zhoushan terminal.
Russia/Novatek Portfolio/ Arctic LNG 2	China	**Novatek**	**Zhejiang Energy**	1	**2024**	**15**	DES	Delivered to Zheijiang Energy's LNG terminals
Shell Portfolio	Singapore	**Shell**	**CMA CGM**		**2023**		DES	Start in H2 2023
TotalEnergies Portfolio	Singapore	**TotalEnergies**	**Sembcorp**	0.25	**2025**	**5**	DES	
TotalEnergies Portfolio	South Korea	**TotalEnergies**	**Hanwha Energy**	0.6	**2024**	**15**	DES	LNG delivered to the Tongyeong LNG terminal to supply the nearby Hanwha & Hyundai Development Corporation's (HDC) 1 GW power plant
TotalEnergies Portfolio	Dominican Republic	**TotalEnergies**	**AES**	0.56	**2023**	**10,8**	DES	From 1 April 2023 to 31 Dec 2033, 308.4 Tbtu
United States/ Commonwealth LNG	Portfolio	**Commonwealth LNG**	**Woodside**	2.5	**2026**	**20**	FOB	Based on HoA signed in Jan 2022
United States/Corpus Christi	Multiple	**Cheniere Marketing**	**Equinor**	1.75	**2026**	**15**	FOB	Start in H2 2026, full annual volume from H2 2027. 0.9 MTPA subject to FID on additional capacity beyond CC Stage III
United States/Corpus Christi	Multiple	**Cheniere Marketing**	**PetroChina**	1.8	**2026**	**24**	FOB	Start in 2026, full annual volume from 2028. 0.9 MTPA subject to FID on additional capacity beyond CC Stage III
United States/Corpus Christi	Multiple	**Cheniere Marketing**	**Posco**	0.4	**2026**	**20**	FOB	
United States/Corpus Christi	Multiple	**Corpus Christi Liquefaction**	**PTTGL**	1	**2026**	**20**	FOB/DES	
United States/Corpus Christi	Portfolio	**Cheniere Marketing**	**Chevron**	1	**2027**	**15**	FOB	Subject to FID on additional capacity beyond CC Stage III
United States/CP2	Germany	**Venture Global**	**EnBW**	0.75	**2026**	**20**	FOB	
United States/CP2	Japan	**Venture Global**	**INPEX**	1	**2026**	**20**	FOB	
United States/CP2	Portfolio	**Venture Global**	**Chevron**	1	**2026**	**20**	FOB	
United States/CP2	Portfolio	**Venture Global**	**ExxonMobil**	1	**2026**	**20**	FOB	
United States/CP2	Portfolio	**Venture Global**	**New Fortress Energy**	1	**2026**	**20**	FOB	
United States/Delfin LNG	Portfolio	**Delfin LNG**	**Vitol**	0.5	**2026**	**15**	FOB	

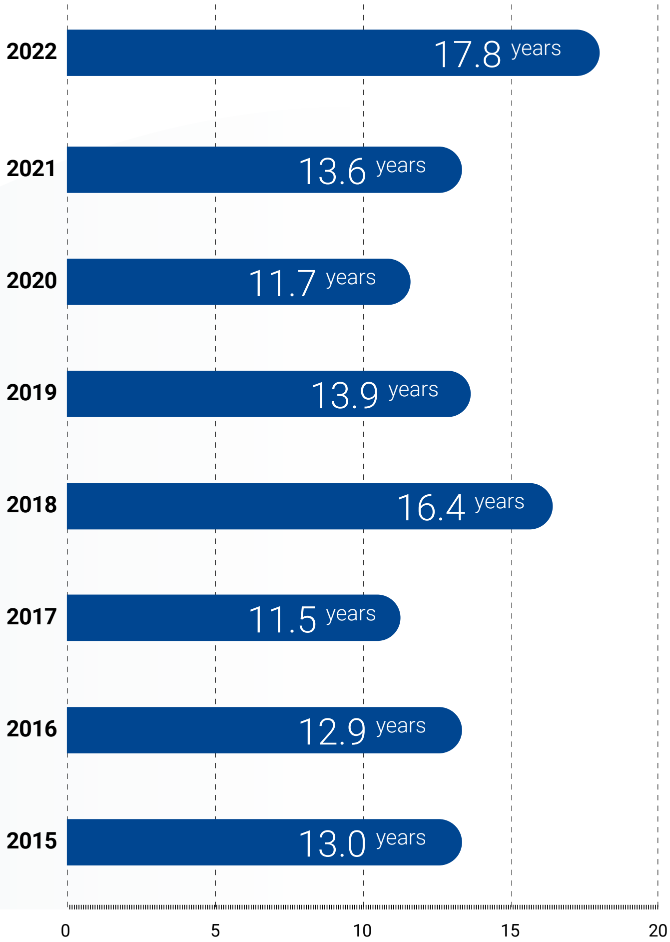
Export Country	Import market	Seller	Buyer	ACQ (MTPA)	Start date	Duration	Delivery Format	Comments
United States	South Korea	BP	KOGAS	1.58	2025	18	DES	From Jan 2025 to Dec 2042
United States/Golden Pass	Portfolio	Golden Pass LNG	ExxonMobil	4.7	2026	20		Start from the commercial operation date of Golden Pass T3. Contract with Ocean LNG cancelled.
United States/Golden Pass	Portfolio	Golden Pass LNG	QatarEnergy	10.9	2026	20		Start from the commercial operation date of Golden Pass T3. Contract with Ocean LNG cancelled.
United States/ Lake Charles LNG	China	Energy Transfer	China Gas	0.7	2026	25	FOB	
United States/ Lake Charles LNG	China	Energy Transfer	ENN	0.9	2026	20	FOB	Start with commercial operations at Lake Charles LNG
United States/ Lake Charles LNG	China	Energy Transfer	ENN (Singapore)	1.8	2026	20	FOB	Start with commercial operations at Lake Charles LNG
United States/ Lake Charles LNG	Portfolio	Energy Transfer	Gunvor	2	2026	20	FOB	
United States/ Lake Charles LNG	Portfolio	Energy Transfer	Shell	2.1	2026	20	FOB	
United States/ Lake Charles LNG	South Korea	Energy Transfer	SK Gas Trading	0.4	2027	18	FOB	From Jan 2027 to Dec 2045
United States/ Plaquemines LNG	Germany	Venture Global	EnBW	0.75	2026	20	FOB	
United States/ Plaquemines LNG	Portfolio	Venture Global	Chevron	1	2025	20	FOB	
United States/ Plaquemines LNG	Portfolio	Venture Global	ExxonMobil	1	2026	20	FOB	
United States/ Plaquemines LNG	Portfolio	Venture Global	New Fortress Energy	1	2025	20	FOB	
United States/ Plaquemines LNG	Portfolio	Venture Global	Petronas	1	2026	20	FOB	
United States/ Plaquemines LNG	Portfolio	Venture Global	Shell	2	2025	20	FOB	
United States/ Plaquemines LNG and CP2	Germany	Venture Global	EnBW	0.5	2026	20	FOB	
United States/Port Arthur	Multiple	Sempra Infrastructure - PALNG	ConocoPhillips	5	2027	20	FOB	Start with commissioning
United States/Port Arthur	Multiple	Sempra Infrastructure - PALNG	ENGIE	0.88	2027	15	FOB	Start with commissioning
United States/Port Arthur	Multiple	Sempra Infrastructure - PALNG	INEOS	1.4	2027	20	FOB	Based on HoA signed in June 2022; Start with commissioning
United States/Port Arthur	Multiple	Sempra Infrastructure - PALNG	RWE	2.25	2027	15	FOB	Based on HoA signed in May 2022; Start with commissioning
United States/Rio Grande LNG	China	NextDecade	China Gas	1	2027	20	FOB	
United States/Rio Grande LNG	China	NextDecade	ENN (Singapore)	2	2027	20	FOB	Start with commercial operations at Rio Grande LNG
United States/Rio Grande LNG	China	NextDecade	Guangdong Energy	1	2027	20	DES	Based on binding HoA signed in March 2022. Option to take extra 0.5 MTPA on FOB
United States/Rio Grande LNG	Multiple	NextDecade	ENGIE	1.75	2027	15	FOB	Start with commissioning at Rio Grande LNG
United States/Rio Grande LNG	Multiple	NextDecade	Galp Trading SA	1	2027	20	FOB	
United States/Rio Grande LNG	Portfolio	NextDecade	ExxonMobil	1	2027	20	FOB	
United States/Sabine Pass	Portfolio	Sabine Pass Liquefaction	Chevron	1	2026	16.5	FOB	
Woodside Portfolio	Europe (incl Germany)	Woodside	Uniper	0.8	2023	9	DES	Flexible SPA for up to 12 cargoes per year

Export Country	Import market	Seller	Buyer	ACQ (MTPA)	Start date	Duration	Delivery Format	Comments
HEADS OF AGREEMENT								
United States/ Cameron LNG Phase 2	Multiple	**Sempra Infrastructure**	**TotalEnergies, Mitsui, Mitsubishi and NYK**	*			FOB	*50.2% of the projected T4 production capacity and 25% of projected T1 -T3 debottlenecking capacity under tolling agreements, with the remaining capacity allocated equally to the existing Cameron LNG Phase 1 customers
United States/ Cameron LNG Phase 2	Poland	**Sempra Infrastructure**	**ORLEN**	2	**2027**	**20**	FOB	Based on MoU signed in 2021
United States/Delfin LNG	Portfolio	**Delfin Midstream**	**Centrica**	1	**2027**	**15**	FOB	
United States/Delfin LNG	Portfolio	**Delfin Midstream**	**Devon Energy**	2			FOB	1 MTPA from first FLNG unit with an option to add 1 MTPA from first or future LNG units
United States/Port Arthur LNG and Cameron LNG Phase 2	Multiple	**Sempra Infrastructure**	**Williams**	3		**20**	FOB	Contemplates two 20-year SPAs for approx. 3 MTPA in aggregate.
United States/ Port Arthur LNG Phase I	Poland	**Sempra Infrastructure**	**ORLEN**	1	**2027**	**20**	FOB	Based on MoU signed in 2021. Converted to an SPA in 2023.
United States/ Port Arthur Phase II	Multiple	**Sempra Infrastructure**	**INEOS**	0.2			FOB	
MEMORANDUMS OF UNDERSTANDING								
Mexico/Vista Pacifco LNG	Mexico, Baja California Sur	**Sempra Infrastructure - VPLNG**	**Comisión Federal de Electricidad (CFE)**					
Mexico/Vista Pacifco LNG		**Sempra Infrastructure - VPLNG**	**TotalEnergies**	*				*1/3 of the project's LT export production
UAE/Das Island	Germany	**ADNOC**	**RWE**		**2023**			LNG can be delivered through either floating or land-based regasification terminals
TERMINAL CAPACITY								
France/Fos Cavaou	Elengy	**ENGIE**	**France**	2	**2025**	**16**	DES	From Jan 2025 to Dec 2040
Netherlands/Eemshaven	Gasunie	**ENGIE**	**Netherlands**	0.8	**2023**	**5**	DES	From Jan 2023 to Aug 2027
Netherlands/Eemshaven	EemsEnergy Terminal	**Shell**	**Netherlands**	2.9	**2022**	**5**		
Netherlands/Eemshaven	EemsEnergy Terminal	**Cez**	**Netherlands**	2.2	**2022**	**5**		

VOLUME WEIGHTED AVERAGE DURATION OF LONG & MEDIUM TERM CONTRACTS



AVERAGE DURATION OF LONG & MEDIUM TERM CONTRACTS



Medium-term and long-term contracts in force in 2022*

Export Country	Loading Point	Seller	Buyer	ACQ (MTPA)	Start date	End date	Delivery Format	Comments
ATLANTIC BASIN								
Algeria	**Skikda-Bethioua**	Sonatrach	**Botaş**	4	**1994**	**2024**	DES	ACQ 1994 - 2014: 3.2 MTPA; 2015 - 2024: 4 MTPA
	Skikda-Bethioua	Sonatrach	**Cepsa Gas**	0.77	**2002**	**2022**	DES	
	Skikda-Bethioua	Sonatrach	**DEPA**	0.34	**2000**	**2022**	CIF	
	Skikda-Bethioua	Sonatrach	**ENGIE**	1.5	**1972**		DES	Contract extended, duration not disclosed
	Skikda-Bethioua	Sonatrach	**TotalEnergies**	2	**1972**	**2023**	DES	
Cameroon	**Kribi FLNG**	SNH	**Gazprom**	1.2	**2018**	**2026**	FOB	
Egypt	**Damietta**	Damietta LNG	**BP**	1	**2005**	**2025**	FOB	
	Damietta	Damietta LNG	**ENI**	2.5	**2005**	**2029**	Tolling	Former Union Fenosa Gas contract
	Idku	ELNG T1	**TotalEnergies**	3.6	**2005**	**2025**	FOB	
	Idku	ELNG T2	**Shell**	3.6	**2006**	**2026**	FOB	
Equatorial Guinea	**Punta Europa**	EGLNG	**Shell**	3.4	**2007**	**2024**	FOB	
Nigeria	**Bonny Island**	Nigeria LNG T1-3	**ENI**	1.5	**2021**	**2031**		
	Bonny Island	Nigeria LNG T1-3	**Galp Trading SA**	1	**2021**	**2031**	DES	
	Bonny Island	Nigeria LNG T1-3	**TotalEnergies**	0.75	**2021**	**2031**	DES	From Oct 2021 to Sep 2031
	Bonny Island	Nigeria LNG T1-3	**TotalEnergies**	0.75	**2021**	**2031**	FOB	
	Bonny Island	Nigeria LNG T1-3	**TotalEnergies**	0.375	**2021**	**2031**	DES	
	Bonny Island	Nigeria LNG T1-3	**Vitol**	0.5	**2021**	**2031**	DES	
	Bonny Island	Nigeria LNG T3	**Galp Energia**	0.73	**2003**	**2023**	DES	
	Bonny Island	Nigeria LNG T3	**Naturgy Energy Group**	1.99	**2002**	**2024**	DES	
	Bonny Island	Nigeria LNG T4 & 5	**Endesa**	0.75	**2006**	**2026**	DES	
	Bonny Island	Nigeria LNG T4 & 5	**ENI**	1.15	**2007**	**2027**	DES	
	Bonny Island	Nigeria LNG T4 & 5	**Galp Energia**	1.42	**2006**	**2026**	DES	
	Bonny Island	Nigeria LNG T4 & 5	**Pavilion Energy**	0.38	**2007**	**2027**	DES	
	Bonny Island	Nigeria LNG T4 & 5	**Shell**	2.3	**2006**	**2026**	DES	
	Bonny Island	Nigeria LNG T4 & 5	**Shell**	1.13	**2006**	**2026**	DES	
	Bonny Island	Nigeria LNG T4 & 5	**TotalEnergies**	0.23	**2006**	**2029**	DES	
	Bonny Island	Nigeria LNG T6	**Shell**	3.1	**2008**	**2027**	DES	
	Bonny Island	Nigeria LNG T6	**TotalEnergies**	0.9	**2008**	**2029**	DES	
Norway	**Hammerfest**	-	**RWE Supply & Trading**	0.12	**2010**	**-**	FOB	0.06-0.12 MTPA; until depletion
	Hammerfest	Equinor	**Pavilion Energy**	1.13	**2006**	**2026**	DES	Pavilion Energy novation of Iberdrola contract
	Hammerfest	Neptune Energy	**TotalEnergies**	0.5	**2007**	**-**	FOB	Until depletion
	Hammerfest	TotalEnergies	**TotalEnergies**	0.7	**2007**	**-**	FOB	Until depletion
Russia	**Sabetta**	Yamal LNG	**CNPC**	3	**2018**	**2038**	DES	
	Sabetta	Yamal LNG	**Gazprom Marketing & Trading**	2.9	**2018**	**2038**	FOB	for 20+ years; at Zeebrugge transshipment point
	Sabetta	Yamal LNG	**Naturgy Energy Group**	2.5	**2018**	**2038**	DES	
	Sabetta	Yamal LNG	**Novatek**	2.5	**2018**	**2038**	FOB	
	Sabetta	Yamal LNG	**TotalEnergies**	4	**2018**	**2032**	FOB	
Trinidad & Tobago	**Point Fortin**	Atlantic LNG T2 & 3	**EDP**	0.74	**2003**	**2023**	FOB	Naturgy/EDP swap: Naturgy buys 0.74 MTPA on a FOB basis in 2021
	Point Fortin	Atlantic LNG T2 & 3	**ENGIE**	0.35	**2002**	**2023**	FOB	
	Point Fortin	Atlantic LNG T2 & 3	**Naturgy Energy Group**	0.65	**2003**	**2023**	FOB	
	Point Fortin	Atlantic LNG T2 & 3	**Shell**	1.7	**2003**	**2023**	FOB	
	Point Fortin	Atlantic LNG T2 & 3	**Shell**	2	**2006**	**2023**	FOB	
	Point Fortin	Atlantic LNG T4	**BP**	2.5	**2006**	**2026**	FOB	

(*) Duration above 4 years

Export Country	Loading Point	Seller	Buyer	ACQ (MTPA)	Start date	End date	Delivery Format	Comments
Trinidad & Tobago	Point Fortin	Atlantic LNG T4	Shell	1.5	2006	2026	FOB	
	Point Fortin	Atlantic LNG T4	Shell	1.15	2014	2026	FOB	
United States	Cameron	Cameron LNG	Mitsubishi	4	2019	2039	Tolling	
	Cameron	Cameron LNG	Mitsui	4	2019	2039	Tolling	
	Cameron	Cameron LNG	TotalEnergies	4	2019	2039	Tolling	
	Cameron	Diamond Gas International	Toho Gas	0.2	2020	2038	DES	3 cargoes per year
	Cameron	Diamond Gas International	Tohoku Electric	0.2	2022	2040	DES	
	Cameron	Diamond Gas International	Tokyo Gas	0.2	2020	2039	DES	3 cargoes per year
	Cameron	Mitsui	Toho Gas	0.3	2019	2039	DES	
	Cameron	Mitsui	Tokyo Gas	0.52	2020	2040	DES	8 cargoes per year
	Cameron	Mitsui	TotalEnergies	0.5	2019	2029	FOB	
	Cameron	TotalEnergies	CPC	0.8	2019	2038	DES	
	Cameron	TotalEnergies	Marubeni	0.5	2019	2039	FOB	
	Cameron	TotalEnergies	Tohoku Electric	0.27	2018	2038	DES	
	Corpus Christi	Cheniere	Cheniere Marketing	*	2019	-	FOB	*Excess from Corpus Christi
	Corpus Christi	Cheniere	EDF	0.77	2020	2040	FOB	
	Corpus Christi	Cheniere	EDP	0.77	2020	2040	FOB	
	Corpus Christi	Cheniere	Endesa	2.25	2019	2039	FOB	
	Corpus Christi	Cheniere	ENGIE	0.9	2021	2041	FOB	
	Corpus Christi	Cheniere	Iberdrola	0.8	2019	2040	FOB	Back-to-back sale to Pavilion
	Corpus Christi	Cheniere	Naturgy Energy Group	1.5	2020	2040	FOB	
	Corpus Christi	Cheniere	Pertamina	0.76	2020	2040	FOB	
	Corpus Christi	Cheniere	Pertamina	0.76	2019	2039	FOB	
	Corpus Christi	Cheniere	Sinochem	1.8	2022	2040	FOB	Start July 2022; Initial volume 0.9 MTPA, which increases to 1.8 MTPA
	Corpus Christi	Cheniere	Woodside	0.85	2020	2040	FOB	
	Cove Point	GAIL GLOBAL (USA) LNG	GAIL	2.3	2018	2038	FOB	
	Cove Point	Pacific Summit Energy	Kansai Electric	0.8	2018	2037	FOB	
	Cove Point	ST Cove Point	Pacific Summit Energy	0.9	2018	2037	FOB	
	Cove Point	ST Cove Point	Tokyo Gas	1.4	2018	2038	FOB	
	Elba Island	Elba Island	Shell	2.5	2020	2040	FOB	
	Freeport	Freeport LNG	BP	4.4	2020	2040	Tolling	
	Freeport	Freeport LNG	JERA	2.3	2019	2039	Tolling	Inherited from Chubu in 2016
	Freeport	Freeport LNG	Osaka Gas	2.3	2019	2039	Tolling	
	Freeport	Freeport LNG	SK E&S	2.2	2020	2040	Tolling	
	Freeport	Freeport LNG	TotalEnergies	2.2	2020	2040	Tolling	
	Sabine Pass	Cheniere	Centrica	1.75	2019	2039	FOB	
	Sabine Pass	Cheniere	Cheniere Marketing	*	2016	-	FOB	*Excess from Sabine Pass
	Sabine Pass	Cheniere	GAIL	3.5	2018	2038	FOB	
	Sabine Pass	Cheniere	KOGAS	3.5	2017	2037	FOB	Kogas resells 0.7 MTPA to TotalEnergies
	Sabine Pass	Cheniere	Naturgy Energy Group	3.5	2017	2037	FOB	
	Sabine Pass	Cheniere	Shell	5.5	2016	2036	FOB	Revised in 2012 (2 MTPA added to 3.5)
	Sabine Pass	Cheniere	TotalEnergies	2	2019	2039	FOB	
		Cheniere	TotalEnergies	0.8	2018	2023	DES	TotalEnergies novation of ENGIE contract. 0.72-0.8 MTPA: delivery of 12 cargoes per year to Montoir-de-Bretagne

(*) Duration above 4 years

Medium-term and long-term contracts in force in 2022*

Export Country	Loading Point	Seller	Buyer	ACQ (MTPA)	Start date	End date	Delivery Format	Comments
MIDDLE EAST								
Oman	Qalhat	Oman LNG	BP	1.13	2018	2024	FOB	
	Qalhat	Oman LNG	Itochu	0.7	2006	2025	FOB	
	Qalhat	Oman LNG	KOGAS	4.06	2000	2024	FOB	
	Qalhat	Oman LNG	Osaka Gas	0.66	2000	2024	FOB	
	Qalhat	Qalhat LNG	Naturgy Energy Group	1.65	2006	2025	DES	Former Union Fenosa Gas contract
	Qalhat	Qalhat LNG	Osaka Gas	0.8	2009	2026	FOB	
Qatar	Ras Laffan	Qatar Energy	CNOOC	3.5	2022	2036		
	Ras Laffan	Qatar Energy	CPC	1.25	2022	2036	DES	From January 2022 to December 2036
	Ras Laffan	Qatar Energy	Kuwait Petroleum Corporation	3	2022	2037	DES	Delivered to Al-Zour terminal.
	Ras Laffan	Qatar Energy	Pakistan State Oil	3	2022	2031	DES	
	Ras Laffan	Qatar Energy	Shell	1	2022	2031	DES	Supplied from QatarGas I; delivery to Chinese terminals
	Ras Laffan	Qatar Energy	Sinopec	2	2022	2032	DES	Start January 2022
	Ras Laffan	Qatar Energy	Suntien Green (S&T International)	1	2022	2037	DES	Delivered to Tangshan Suntien terminal
	Ras Laffan	Qatar Energy	Vitol	1.25	2021		DES	
	Ras Laffan	Qatargas I	Naturgy Energy Group	0.75	2005	2022	DES	
	Ras Laffan	Qatargas I	Naturgy Energy Group	0.75	2006	2022	FOB	
	Ras Laffan	Qatargas II T1	Pakistan State Oil	3.75	2016	2031	DES	
	Ras Laffan	Qatargas II T1/T2	PetroChina	3.4	2018	2040	DES	
	Ras Laffan	Qatargas II T2	TotalEnergies	1.85	2009	2034	DES	
	Ras Laffan	Qatargas II T2	TotalEnergies	1.5	2009	2034	DES	
	Ras Laffan	Qatargas II T2	TotalEnergies	1.85	2009	2034	DES	
	Ras Laffan	Qatargas III	CNOOC	2	2011	2035	DES	
	Ras Laffan	Qatargas III	JERA	0.7	2013	2028	DES	Inherited from Chubu in 2016
	Ras Laffan	Qatargas III	Kansai Electric	0.5	2013	2027	DES	
	Ras Laffan	Qatargas III	ORLEN	1.1	2015	2034	DES	
	Ras Laffan	Qatargas III	ORLEN	0.9	2018	2034	DES	
	Ras Laffan	Qatargas III	PTT	2	2015	2034	DES	
	Ras Laffan	Qatargas III	RWE Supply & Trading	1.1	2017	2024	DES	
	Ras Laffan	Qatargas III	Tohoku Electric	0.18	2016	2030	DES	
	Ras Laffan	Qatargas IV	Centrica	2	2014	2023	DES	Extension of the previous 4.5-year contract; Nominal quantity (ACQ) 2014/2018: 3 MTPA; 2019/2023: 2 MTPA
	Ras Laffan	Qatargas IV	OMV	1.1	2019	2024	DES	
	Ras Laffan	Qatargas IV	PetroChina	3	2011	2036	DES	
	Ras Laffan	Qatargas IV	Petronas	1.1	2014	2023	DES	Extension of the previous 5-year contract; Nominal quantity (ACQ) 2014/2018: 1.14 MTPA; 2019/2023: 1.1 MTPA
	Ras Laffan	Qatargas IV	Shell	1.1	2019	2023	DES	Jan 2019 - Dec 2023
	Ras Laffan	Qatargas IV	Shell	1	2020		DES	Destination Kuwait; duration not disclosed
	Ras Laffan	RasGas I	Endesa	0.75	2005	2025	DES	
	Ras Laffan	RasGas I	KOGAS	4.92	1999	2024	FOB	
	Ras Laffan	RasGas II	Petronet LNG	5	2004	2028	FOB	
	Ras Laffan	RasGas II	Petronet LNG	2.5	2009	2028	FOB	
	Ras Laffan	RasGas II T2	Edison	4.6	2009	2034	DES	
	Ras Laffan	RasGas II T3	CPC	3	2008	2032	FOB	
	Ras Laffan	RasGas II T3	EDF Trading	3.4	2007	2027	DES	
	Ras Laffan	RasGas II T3	ENI	2.05	2007	2027	DES/FOB	Former Distrigas contract
	Ras Laffan	RasGas III	GAIL, IOCL, BPCL and GSPC	1	2016	2028	CFR	Former buyer: Petronet LNG
	Ras Laffan	RasGas III T1	KOGAS	2.1	2007	2026	DES	

(*) Duration above 4 years

Export Country	Loading Point	Seller	Buyer	ACQ (MTPA)	Start date	End date	Delivery Format	Comments
Qatar	**Ras Laffan**	RasGas III T2	**CPC**	1.5	**2013**	**2032**	DES	
	Ras Laffan	RasGas III T2	**KOGAS**	2	**2012**	**2032**	DES	
	Ras Laffan	RasGas III T2	**Petrobangla**	2.5	**2018**	**2033**	DES	
Yemen	**Balhaf**	Yemen LNG T1 & 2	**TotalEnergies**	2	**2009**	**2029**	DES	
	Balhaf	Yemen LNG T2	**TotalEnergies**	2.55	**2009**	**2029**	FOB	
PACIFIC BASIN								
Australia	**Ashburton North (Wheatstone)**	Chevron	**JERA**	0.4	**2017**	**2036**	DES	Inherited from TEPCO in 2016
	Ashburton North (Wheatstone)	Chevron, Kufpec, Woodside	**JERA**	3.3	**2017**	**2036**	DES	Inherited from TEPCO in 2016; Nominal quantity (ACQ) 2017-2018: 1.7 MTPA; 2018-2027: 3.3 MTPA
	Ashburton North (Wheatstone)	Chevron, Kufpec, Woodside	**JERA**	0.9	**2017**	**2036**	FOB	Inherited from TEPCO in 2016
	Ashburton North (Wheatstone)	Chevron, Kufpec, Woodside	**JERA**	1	**2017**	**2036**	FOB	Inherited from Chubu in 2016; Nominal quantity (ACQ) 2018 0.4 MTPA; 2019: 0.7 MTPA; 2020: 0.8 MTPA; from 2021: 1 MTPA
	Ashburton North (Wheatstone)	Chevron, Kufpec, Woodside	**Kyushu Electric**	0.83	**2017**	**2036**	FOB	0.7 MTPA + 0.13 MTPA
	Ashburton North (Wheatstone)	Chevron, Kufpec, Woodside	**Tohoku Electric**	0.92	**2017**	**2036**	DES	
	Ashburton North (Wheatstone)	PE Wheatstone	**JERA**	0.7	**2017**	**2036**	DES	Inherited from TEPCO in 2016; Nominal quantity (ACQ) 2017-2018: 0.5 MTPA; 2018-2027: 0.7 MTPA
	Barrow Island (Gorgon LNG)	Chevron	**ENEOS Corporation**	0.3	**2015**	**2030**	DES	
	Barrow Island (Gorgon LNG)	Chevron	**GS Caltex**	0.5	**2016**	**2036**	DES	
	Barrow Island (Gorgon LNG)	Chevron	**JERA**	1.44	**2015**	**2039**	FOB/DES	Inherited from Chubu in 2016
	Barrow Island (Gorgon LNG)	Chevron	**Kyushu Electric**	0.3	**2015**	**2029**	DES	
	Barrow Island (Gorgon LNG)	Chevron	**Osaka Gas**	1.5625	**2014**	**2039**	FOB	
	Barrow Island (Gorgon LNG)	Chevron	**Tokyo Gas**	1.25	**2016**	**2039**	FOB	1.1 MTPA + 0.15 MTPA
	Barrow Island (Gorgon LNG)	ExxonMobil	**PetroChina**	2.25	**2016**	**2036**	DES	
	Barrow Island (Gorgon LNG)	ExxonMobil	**Petronet LNG**	1.425	**2016**	**2035**	DES	
	Barrow Island (Gorgon LNG)	Shell	**BP**	0.5	**2016**	**2036**	FOB	
	Curtis Island	GLNG	**KOGAS**	3.5	**2016**	**2036**	FOB	
	Curtis Island	GLNG	**Petronas**	3.5	**2015**	**2035**	FOB	
	Curtis Island	QCLNG	**CNOOC**	3.6	**2014**	**2034**	DES	
	Curtis Island	QCLNG	**Shell**	3.8	**2014**	**2034**	FOB	
	Curtis Island	QCLNG	**Tokyo Gas**	1.2	**2015**	**2035**	DES	
	Curtis Island (APLNG)	APLNG	**Kansai Electric**	1	**2016**	**2035**	FOB	
	Curtis Island (APLNG)	APLNG	**Sinopec**	7.6	**2016**	**2036**	FOB	
	Darwin	Ichthys LNG	**CPC**	1.75	**2018**	**2032**	DES	
	Darwin	Ichthys LNG	**INPEX**	0.9	**2018**	**2032**	FOB	
	Darwin	Ichthys LNG	**JERA**	0.49	**2018**	**2032**	FOB	Inherited from Chubu in 2016
	Darwin	Ichthys LNG	**JERA**	1.05	**2018**	**2032**	FOB	Inherited from TEPCO in 2016
	Darwin	Ichthys LNG	**Kansai Electric**	0.8	**2018**	**2032**	FOB	
	Darwin	Ichthys LNG	**Kyushu Electric**	0.3	**2018**	**2032**	FOB	
	Darwin	Ichthys LNG	**Osaka Gas**	0.8	**2018**	**2032**	FOB	
	Darwin	Ichthys LNG	**Toho Gas**	0.28	**2018**	**2032**	FOB	
	Darwin	Ichthys LNG	**Tokyo Gas**	1.05	**2018**	**2032**	FOB	
	Darwin	Ichthys LNG	**TotalEnergies**	0.9	**2018**	**2033**	FOB	

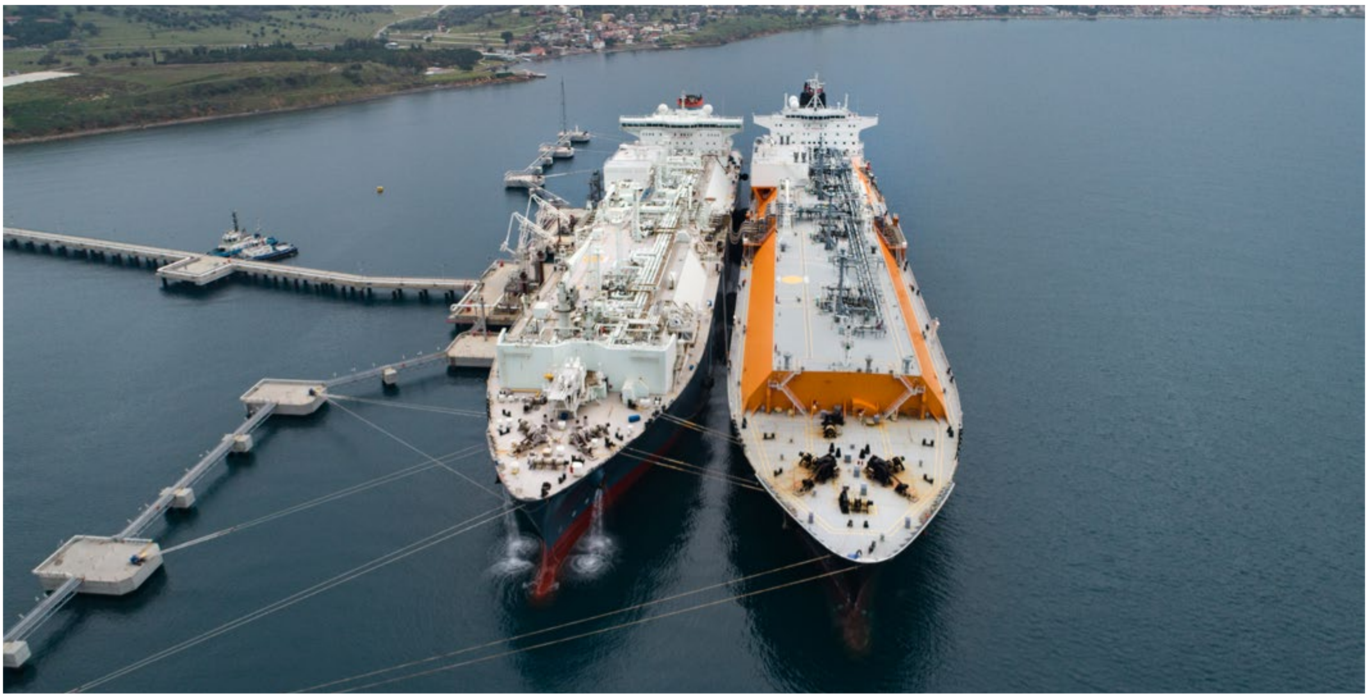
(*) Duration above 4 years

Medium-term and long-term contracts in force in 2022*

Export Country	Loading Point	Seller	Buyer	ACQ (MTPA)	Start date	End date	Delivery Format	Comments
Australia	**Darwin**	Santos, ENI, INPEX, JERA, Tokyo Gas	**JERA, Tokyo Gas**	3	**2006**	**2022**	FOB	Inherited from TEPCO in 2016
	Pluto	Pluto LNG	**Kansai Electric**	2	**2011**	**2025**	FOB/DES	1.75-2 MTPA
	Pluto	Pluto LNG	**Tokyo Gas**	1.5	**2012**	**2025**	FOB/DES	
	Prelude	INPEX	**JERA**	0.56	**2019**	**2025**	DES	Inherited from TEPCO in 2016, from INPEX equity volumes
	Prelude	INPEX	**Shizuoka Gas**	0.07	**2019**	**2025**	DES	From INPEX equity volumes
	Prelude	KOGAS	**KOGAS**	0.36	**2019**	-	FOB	
	Prelude	OPIC Australia	**CPC**	0.18	**2019**	-	FOB	
	Prelude	Shell	**Shell**	2.43	**2019**	-	FOB	
	Withnell Bay	Woodside, Shell, BP Australia, Chevron, Japan Australia LNG (Mitsubishi & Mitsui)	**GDLNG**	3.3	**2006**	**2031**	FOB	
	Withnell Bay		**JERA**	0.3	**2009**	**2024**	DES	Inherited from TEPCO in 2016
	Withnell Bay		**JERA**	0.6	**2009**	**2029**	DES	Inherited from Chubu in 2016
	Withnell Bay		**Kansai Electric**	0.925	**2009**	**2024**	DES	0.5-0.925 MTPA
	Withnell Bay		**Kansai Electric**	0.2	**2009**	**2024**	DES	0.2-0.7 MTPA
	Withnell Bay		**Kyushu Electric**	0.7	**2009**	**2023**	FOB	
	Withnell Bay		**Osaka Gas**	1	**2004**	**2033**	FOB	
	Withnell Bay		**Shizuoka Gas**	0.13	**2004**	**2029**	FOB	
	Withnell Bay		**Toho Gas, Tokyo Gas**	1.37	**2004**	**2029**	FOB	
	Withnell Bay		**Tokyo Gas**	0.53	**2017**	**2024**	DES	
Brunei	**Lumut**	Brunei LNG	**JERA, Osaka Gas, Tokyo Gas**	3.4	**2013**	**2023**	DES	Inherited from TEPCO in 2016
	Lumut	Brunei LNG	**Petronas**	0.9	**2013**	**2023**	DES	
	Lumut	Brunei LNG	**Shell**	0.8	**2013**	**2023**	FOB	
Indonesia	**Bontang**	Pertamina	**Nusantara Regas**	0.8	**2012**	**2022**	FOB	2016-2020: 1 MTPA; 2021-2022: 0.8 MTPA
	Bontang	Pertamina	**PPT ETS**	0.8	**2019**	**2025**	FOB	Start Aug. 2019
	Bontang	Pertamina, ENI Muara bakau	**ENI**	1	**2017**	**2027**	FOB	
	Bontang	Pertamina, ENI Muara bakau	**Pertamina**	1.4	**2017**	**2024**	FOB	
	Donggi-Senoro	PT Donggi-Senoro LNG	**JERA**	1	**2015**	**2027**	DES	Inherited from Chubu in 2016
	Donggi-Senoro	PT Donggi-Senoro LNG	**KOGAS**	0.7	**2015**	**2027**	FOB	
	Donggi-Senoro	PT Donggi-Senoro LNG	**Kyushu Electric**	0.3	**2015**	**2027**	DES	
	Tangguh	Tangguh PSC Contractor Parties	**CNOOC**	2.6	**2009**	**2033**	FOB	
	Tangguh	Tangguh PSC Contractor Parties	**Kansai Electric**	1	**2014**	**2035**	DES	
	Tangguh	Tangguh PSC Contractor Parties	**PLN**	2.49	**2015**	**2033**	DES	44 cargoes per year
	Tangguh	Tangguh PSC Contractor Parties	**Posco**	0.55	**2005**	**2024**	DES	
	Tangguh	Tangguh PSC Contractor Parties	**Sempra LNG**	3.7	**2008**	**2029**	DES	3.4 MTPA divertible
	Tangguh	Tangguh PSC Contractor Parties	**SK E&S**	0.6	**2006**	**2026**	DES	
	Tangguh	Tangguh PSC Contractor Parties	**Tohoku Electric**	0.12	**2010**	**2024**	DES	
Malaysia	**Bintulu**	Malaysia LNG	**Hiroshima Gas**	0.1	**2016**	**2031**	FOB	
	Bintulu	Malaysia LNG	**Hokkaido Electric Power**	0.13	**2018**	**2028**	DES	
	Bintulu	Malaysia LNG	**Hokuriku Electric**	0.4	**2018**	**2028**	DES	
	Bintulu	Malaysia LNG	**Osaka Gas**	0.8	**2009**	**2023**	DES	
	Bintulu	Malaysia LNG	**Tokyo Gas**	0.5	**2018**	**2031**	FOB/DES	Nominal quantity (ACQ) 2018-2023: up to 0.5 MTPA; 2024-2031: up to 0.9 MTPA
	Bintulu	Malaysia LNG Dua	**ENEOS Corporation**	0.38	**2015**	**2025**	DES	
	Bintulu	Malaysia LNG Dua	**Gas Bureau, City of Sendai**	0.16	**2018**	**2027**	DES	
	Bintulu	Malaysia LNG Dua	**JERA**	0.4	**2011**	**2031**	DES	Inherited from Chubu in 2016
	Bintulu	Malaysia LNG Dua	**Shizuoka Gas**	0.33	**2016**	**2025**	DES	
	Bintulu	Malaysia LNG Dua	**Tohoku Electric**	0.37	**2016**	**2026**	DES	

(*) Duration above 4 years

Export Country	Loading Point	Seller	Buyer	ACQ (MTPA)	Start date	End date	Delivery Format	Comments
Malaysia	Bintulu	Malaysia LNG Dua	Tokyo Gas	0.9	2015	2025	DES	
	Bintulu	Malaysia LNG Satu	Saibu Gas	0.45	2014	2028	DES	
	Bintulu	Malaysia LNG Satu	Shikoku Electric	0.36	2010	2025	DES	
	Bintulu	Malaysia LNG Tiga	CNOOC	3	2009	2029	DES	
	Bintulu	Malaysia LNG Tiga	KOGAS	2	2008	2028	DES	
	Bintulu	Malaysia LNG Tiga	Osaka Gas, Toho Gas, Tokyo Gas	0.8	2004	2024	DES/FOB	
	Bintulu	Malaysia LNG Tiga	Toho Gas	0.4	2007	2027	DES	
	Bintulu	Malaysia LNG Tiga	Tohoku Electric	0.5	2005	2025	DES	
Mozambique	Coral South FLNG	Coral South FLNG	BP	3.4	2022	2042	FOB	
Papua New Guinea	Port Moresby	PNG LNG	CPC	1.2	2014	2033	DES	
	Port Moresby	PNG LNG	JERA	1.8	2014	2034	DES/FOB	Inherited from TEPCO in 2016
	Port Moresby	PNG LNG	Osaka Gas	1.5	2014	2034	DES/FOB	
	Port Moresby	PNG LNG	Sinopec	2	2014	2034	DES	
	Port Moresby	PNG LNG	BP Singapore	0.45	2018	2023	DES	2018-2021: 0.45 MTPA; 2022-2023: 0.9 MTPA
Peru	Pampa Melchorita	Peru LNG	Shell	4.2	2014	2028	FOB	
Russia	Prigorodnoye	Sakhalin Energy LLC	CPC	0.75	2017	2022	DES	
	Prigorodnoye	Sakhalin Energy LLC	Gazprom Global LNG	1	2009	2028	DES	
	Prigorodnoye	Sakhalin Energy LLC	Hiroshima Gas	0.21	2008	2028	FOB	
	Prigorodnoye	Sakhalin Energy LLC	JERA	1.5	2009	2029	FOB	Inherited from TEPCO in 2016
	Prigorodnoye	Sakhalin Energy LLC	JERA	0.5	2011	2026	DES	Inherited from Chubu in 2016
	Prigorodnoye	Sakhalin Energy LLC	KOGAS	1.5	2008	2028	FOB	
	Prigorodnoye	Sakhalin Energy LLC	Kyushu Electric	0.5	2009	2031	DES	
	Prigorodnoye	Sakhalin Energy LLC	Osaka Gas	0.2	2008	2031	FOB	
	Prigorodnoye	Sakhalin Energy LLC	Saibu Gas	0.065	2014	2028	DES	
	Prigorodnoye	Sakhalin Energy LLC	Toho Gas	0.5	2009	2033	DES	
	Prigorodnoye	Sakhalin Energy LLC	Tohoku Electric	0.42	2010	2030	FOB	
	Prigorodnoye	Sakhalin Energy LLC	Tokyo Gas	1.1	2009	2031	FOB	



(*) Duration above 4 years

Portfolio contracts

Export Country	Seller	Buyer	ACQ (MTPA)	Start date	End date	Delivery Format	Comments
ADNOC LNG Portfolio	ADNOC LNG	**Vitol**	1.8	**2022**	**2028**		Delivery to South and Southeast Asia
BP Portfolio	BP	**Guangzhou Gas**	0.65	**2022**	**2034**	DES	
	BP	**AES**	0.75	**2003**	**2023**	DES	Related to BP/ALNG T2 & 3 contract; Sourced from Point Fortin
	BP	**CNOOC**	1	**2019**	**2039**	DES	
	BP	**CNOOC**	0.5	**2019**	**2034**	FOB	
	BP	**Glencore**	0.39	**2020**	**2025**	DES	
	BP	**JERA**	1.2	**2017**	**2034**	DES	Inherited from TEPCO in 2016
	BP	**JERA**	0.5	**2012**	**2028**	DES	Inherited from Chubu in 2016
	BP	**Kansai Electric**	0.5	**2017**	**2035**	DES	
	BP	**Kansai Electric**	*	**2018**	**2041**	DES	Total maximum quantity of LNG during contract duration : approx 13 MT
	BP	**Pavilion Energy**	0.4	**2020**	**2040**	DES/FOB	
	BP	**PTT**	1	**2017**	**2037**	DES	
	BP	**Sempra LNG**	*	**2021**		DES	Evergreen Ex-ship MSPA with no firm ACQ, LNG sourced from Atlantic LNG and delivered to ECALNG
Centrica Portfolio	Centrica	**ORLEN**	0.13	**2018**	**2023**	DES	Up to 9 cargoes; Sourced from Sabine Pass
Cheniere Portfolio	Cheniere	**ENN (Singapore)**	0.9	**2022**	**2035**	FOB	From July 2022 to June 2035
	Cheniere	**CPC**	2	**2021**	**2045**	DES	
	Cheniere	**PetroChina**	0.3	**2018**	**2043**	FOB	Two SPAs with an aggregate volume of ~1.2 MTPA. A portion began in 2018, the balance will begin in 2023. Both continue through 2043. Sourced from Corpus Christi
	Cheniere	**ORLEN**	1.45	**2019**	**2043**	DES	In 2019-2022 the volume of supplies totals ~0.52 MT; 1.45 MTPA starting from 2023
	Cheniere	**Trafigura**	1	**2019**	**2034**	FOB	
	Cheniere	**Vitol**	0.7	**2018**	**2033**	FOB	
Chevron Portfolio	Chevron	**CPC**		**2022**		DES	Sourced from Australia
	Chevron	**Hokkaido Gas**	0.1	**2022**	**2027**	DES	Approximately 0.5 MT over 5 years from April 2022 to March 2027
	Chevron	**CPC**	1.12	**2017**	**2022**	DES	
	Chevron	**ENN**	0.64	**2018**	**2028**	DES	
	Chevron	**GS Caltex**		**2019**			Start Oct. 2019.
	Chevron	**JOVO**	0.5	**2018**	**2023**	DES	
ENI Portfolio	ENI	**Pakistan LNG Limited**	0.75	**2017**	**2032**	DES	
	ENI	**Pavilion Energy**	0.5	**2012**	**2025**	DES	Pavilion Energy novation of Iberdrola contract
	ENI	**Uniper**	0.58	**2007**	**2022**	DES	
Equinor Portfolio	Equinor	**Litgas**	0.256	**2015**	**2025**	DES	
Exxon Portfolio	ExxonMobil	**Zhejiang Energy**	1	**2022**	**2042**	DES	
Gunvor Portfolio	Gunvor	**Pakistan LNG Limited**	0.78	**2017**	**2022**	DES	60 cargoes in total (12 per year) - New MT contract
JERA Portfolio	JERA	**Centrica**	0.5	**2019**	**2024**	DES	Flexible sales arrangement
	JERA	**INPEX**	*	**2013**	**2024**	DES	*Total quantity of LNG during contract duration: 20 cargoes. Inherited from Chubu in 2016.
	JERA	**Shizuoka Gas**	0.26	**2014**	**2032**	DES	Inherited from TEPCO in 2016
	JERA	**Shizuoka Gas**	0.07	**2022**	**2027**	DES	From April 2022 to March 2027
KOGAS Portfolio	KOGAS	**TotalEnergies**	0.7	**2017**	**2037**	FOB	Sourced from Sabine Pass
Kyushu Electric Portfolio	Kyushu Electric	**Nippon Gas**	0.05	**2016**	**2031**	DES	
Mitsui Portfolio	Mitsui	**Hokkaido Gas**	0.2	**2019**	**2028**	DES	3 cargoes per year + carbon neutral LNG supply agreement signed in 2021
	Mitsui	**Kuwait Petroleum Corporation**	1.5	**2020**	**2035**	DES	
Naturgy Portfolio	Naturgy Energy Group	**Endesa**	0.75	**2017**	**2037**	DES	Sourced from Sabine Pass
	Naturgy Energy Group	**Puerto Rico Electric Power Authority (PREPA)**	1.47	**2020**	**2032**	DES	
	Naturgy Energy Group	**Repsol**	0.7	**2016**	**2036**	FOB	
New Fortress Energy Portfolio	New Fortress Energy	**CFEnergia**	0.28	**2022**		DES	Gas supply agreement: to supply regasified LNG through Pichilingue terminal
	New Fortress Energy	**Unigel**	0.8	**2022**	**2027**	DES	Gas supply agreement: to supply regasified LNG through Sergipe/ Suape terminals
Novatek Portfolio	Novatek	**Gunvor**	0.5	**2018**	**2038**	FOB	
	Novatek	**Shell**	0.9	**2019**	**2041**	FOB	At Montoir transshipment point. Sourced from Yamal LNG
	Novatek	**TotalEnergies**	1	**2018**	**2041**	DES	Inherited from ENGIE; for transshipment at Montoir. Sourced from Yamal LNG
Oman Trading Portfolio	Oman Trading International	**Petrobangla**	1	**2019**	**2029**	DES	
Origin Energy Portfolio	Origin Energy Limited	**ENN**	0.28	**2018**	**2028**	DES	

(*) Duration above 4 years

Export Country	Seller	Buyer	ACQ (MTPA)	Start date	End date	Delivery Format	Comments
Osaka Gas Portfolio	Osaka Gas	**Hiroshima Gas**	0.13	**2016**	**2031**	DES	0.05-0.13 MTPA
	Osaka Gas	**Nippon Gas**	0.08	**2006**	**2034**	DES	
	Osaka Gas	**Shizuoka Gas**	0.3	**2015**	**2034**	DES	
	Osaka Gas	**Uniper**	1	**2019**	**2039**	FOB	Sourced from Freeport
Pavilion Portfolio	Pavilion Energy	**Glencore**	0.72	**2012**	**2026**	DES	Before 2020 Iberdrola/Ørsted contract
Pertamina Portfolio	Pertamina	**Petronas**		**2020**	**2025**	DES/FOB	MSPA; From Jan 2020 to Jan 2025
	Pertamina	**Posco**		**2019**	**2024**	FOB/DES	MSPA; Start Dec. 2019
	Pertamina	**TotalEnergies**	0.4	**2020**	**2030**	FOB	Sourced from Corpus Christi
Petronas Portfolio	Petronas	**JOVO**	0.5	**2016**	**2023**	DES	
	Petronas	**KOMIPO**	0.24	**2020**	**2025**	DES	Sourced from Malaysia LNG
	Petronas	**PTT**	1.2	**2017**	**2032**	DES	
	Petronas	**Shenergy**	1.5	**2022**	**2034**	DES	
	Petronas	**S-Oil**	0.7	**2018**	**2033**	DES	Sourced from Malaysia LNG
	Petronas	**Toho Gas**	0.54	**2017**	**2027**	DES	7-9 cargoes per year: 0.42 to 0.54 MTPA
SEFE Portfolio	SEFE	**GAIL**	2.5	**2018**	**2041**		Former Gazprom contract
Shell Portfolio	Shell	**EDP (Energía del Pacífico)**	0.5	**2022**	**2034**	DES	Imports to El Salvador LNG-to-Power project
	Shell	**Kuwait Petroleum Corporation**		**2020**	**2034**	DES	
	Shell	**MFGK Croatia**	0.2	**2021**	**2027**	DES	0.25 Bcma delivered to Krk terminal for export to Hungary
	Shell	**PetroChina**		**2021**	**2026**		LNG supplied is carbon neutral
	Shell	**Tokyo Gas**	0.5	**2020**	**2030**	DES	HoA; Start Apr. 2020
	Shell	**BBE**	0.8	**2003**	**2023**		
	Shell	**CFE**	3.08	**2011**	**2027**	DES	
	Shell	**CNOOC**	5	**2015**	**2035**	DES	Sourced from Australia and USA
	Shell	**CPC**	2	**2017**	**2036**	DES	
	Shell	**DUSUP**	1	**2010**	**2025**	DES	
	Shell	**ENEOS Corporation**	0.2	**2015**	**2031**	DES	Sourced from Nigeria, Russia and Australia
	Shell	**GNL Chile**	3	**2009**	**2030**	DES	Includes the 1 MTPA contract with Enel Generacion Chile (subsidiary of Enel Group)
	Shell	**GSPC**	1.3	**2015**	**2034**	DES	Up to 2.5 MTPA
	Shell	**JERA**	0.72	**2014**	**2034**	DES	Inherited from Chubu in 2016, maximum 12 cargoes per year
	Shell	**JERA**	0.35	**2014**	**2035**	DES	Inherited from Chubu in 2016 by JERA; and from BG by Shell
	Shell	**KOGAS**	3.64	**2013**	**2038**	DES	
	Shell	**Naturgy Energy Group**	1.16	**2006**	**2023**	DES	
	Shell	**Osaka Gas**	0.8	**2012**	**2038**	DES	
	Shell	**PetroChina**	2	**2016**	**2036**	DES	
	Shell	**PTT**	1	**2017**	**2032**	DES	
	Shell	**Singapore LNG**	3	**2013**	**2033**	DES	
	Shell	**SOCAR**	0.3	**2016**	**2026**	DES	
Tokyo Gas Portfolio	Tokyo Gas	**Hokkaido Gas**	0.4	**2012**	**2023**	DES	0.3-0.4 MTPA
	Tokyo Gas	**Saibu Gas**	0.3	**2014**	**2029**	DES	
TotalEnergies Portfolio	TotalEnergies	**Arcelor Mittal Nippon Steel**	0.5	**2022**	**2026**	DES	Delivery to Dahej or Hazira terminals from January 2022 to December 2026
	TotalEnergies	**MSC Cruises**	0.05	**2022**	**2031**	DES	For bunkering in Marseille from January 2022 to December 2031
	TotalEnergies	**AES (Dominican Republic)**	0.7	**2017**	**2029**	DES	
	TotalEnergies	**AES (Panama)**	0.4	**2018**	**2028**	DES	
	TotalEnergies	**Chugoku Electric**	0.27	**2019**	**2036**	DES	
	TotalEnergies	**CMA CGM**	0.27	**2022**	**2031**		
	TotalEnergies	**CMA CGM**	0.29	**2020**	**2031**		Start Nov 2020; Rotterdam (Gate)
	TotalEnergies	**CNOOC**	1.5	**2010**	**2029**	DES	Extension to 1.5 MTPA as of 2020
	TotalEnergies	**Engie Energia Chile**	0.27	**2012**	**2026**	DES	
	TotalEnergies	**Engie Energia Chile**	0.2	**2018**	**2032**	DES	
	TotalEnergies	**ENN**	0.5	**2019**	**2028**	DES	
	TotalEnergies	**Guanghui Energy**	0.7	**2020**	**2030**	DES	Start Jun. 2020
	TotalEnergies	**INPEX**	0.2	**2018**	**2032**	DES	
	TotalEnergies	**KOGAS**	2	**2014**	**2031**	DES	
	TotalEnergies	**Pavilion Energy**	0.14	**2018**	**2027**	FOB	
	TotalEnergies	**Pertamina**	0.4	**2020**	**2035**	DES	1 MTPA starting from 2024
	TotalEnergies	**Shell**	0.53	**2019**	**2023**	DES	
	TotalEnergies	**Shenergy**	1.4	**2021**	**2041**	DES	From July 2021 to July 2041
Vitol Portfolio	Vitol	**KOMIPO**	0.4	**2015**	**2024**		
Woodside Portfolio	Woodside	**RWE Supply & Trading**	0.6	**2017**	**2022**	DES	0.3-0.6 MTPA
	Woodside	**Uniper**	0.9	**2021**	**2034**	DES	1.8 MTPA starting from April 2026
	Woodside Trading Singapore	**Pertamina**	0.6	**2019**	**2039**	DES	0.6-1.1 MTPA; provisions to increase up to 1.1 MTPA from 2024 to 2038
		New Fortress Energy	0.6	**2021**	**2027**	FOB	0.6-1 MTPA

(*) Duration above 4 years

LNG shipping

734
vessels at the end of 2022

The total LNG tanker fleet consisted of **734 vessels** at the end of 2022. It included 49 FSRUs and 70 vessels (43 LNGBVs + 27 Small Scale LNG carriers) of equal or less than 30,000 cubic meters. Total cargo capacity at the end of 2022 stood at 108.7 million cubic meters. Total operational capacity (vessels known to be in service) amounted to 107.8 million cubic meters.

In 2022, the average spot charter rate for 160,000 cubic meters LNG carrier stood at around $131,500/day, compared to an average of around $89,200/day in 2021.

A total of 35 vessels were delivered in 2022, compared with 68 vessels in 2021. The number of new orders reached a total of 178 units, compared with 111 new orders in 2021. At the end of 2022, the orderbook consisted of 332 units (53.8 million cubic meters) including 5 FSRUs and 23 LNGBVs. The orderbook represented 49% of the existing LNG carrier fleet. 63 of the units on order were scheduled for delivery in 2023. It included 4 FSRUs and 13 LNGBVs.

LNG VESSELS SCRAPPED IN 2022

1 ship was demolished during the year:

Built	Vessel Name	IMO Number	Type	Capacity (m^3)	CCS*	Owner	Builder	Manager
1979	Dahlia (ex Ocean Quest)	7391214	LNG Carrier	126,540	Membrane	Hong Kong LNG	Newport News SB	OSM Maritime

LNG CARRIERS LAID-UP, IDLE OR OTHERWISE OUT OF SERVICE AT THE END OF 2022

7 vessels were laid-up, idle or otherwise out of service at the end of the year :

Built	Vessel Name	IMO Number	Type	Capacity (m^3)	CCS*	Owner	Builder	Manager
1978	Bering Energy	7390155	LNG Carrier	126,400	Moss	Sinokor Merchant	General Dynamics	Sinokor Ship Mngt
1978	LNG Capricorn	7390208	LNG Carrier	126,300	Moss	Nova Shpg & Log	General Dynamics	Nova Carriers
1979	Coral Energy	7390179	LNG Carrier	126,400	Moss	Sinokor Merchant	General Dynamics	Sinokor Ship Mngt
1979	LNG Taurus	7390167	LNG Carrier	126,300	Moss	Nova Shpg & Log	General Dynamics	Nova Carriers
1983	Adriatic Energy	8110203	LNG Carrier	125,568	Moss	Sinokor Merchant	MHI	Synergy Maritime
1989	Grace Energy	8702941	LNG Carrier	127,590	Moss	Sinokor Merchant	MHI	WSM Singapore
2000	Golar Mazo	9165011	LNG Carrier	136,867	Moss	New Fortress Energy	MHI	Golar Management

LNG CARRIERS DELIVERED IN 2022

35 ships were delivered during the year, including 1 FSRU and 7 ships (6 LNGBVs and 1 LNG Carrier) of less than 30,000 cubic meters.
The average capacity of vessels delivered (excluding FSRU and ships of less than 30,000 cubic meters) amounted to 169,199 cubic meters.

Built	Vessel Name	IMO Number	Type	Capacity (m^3)	CCS*	Owner	Builder	Manager
2022	LNGT Powership Asia (ex NW Shearwater)	8608705	FSRU	127,500	Moss	KARMOL	Sembcorp	MOL LNG Transport (E)
2022	Alicante Knutsen	9904194	LNG Carrier	174,000	Membrane	Knutsen OAS Shipping	Hyundai Samho HI	Knutsen OAS Shipping
2022	BW Cassia	9896933	LNG Carrier	174,000	Membrane	BW LNG	Daewoo (DSME)	BW LNG
2022	BW ENN Snow Lotus	9896921	LNG Carrier	174,000	Membrane	BW LNG	Daewoo (DSME)	BW Fleet Mngt Norway
2022	Clean Cajun	9886732	LNG Carrier	200,000	Membrane	Dynagas Ltd	Hyundai HI (Ulsan)	Dynagas Ltd
2022	Clean Copano	9886744	LNG Carrier	200,000	Membrane	Dynagas Ltd	Hyundai HI (Ulsan)	Dynagas Ltd
2022	Coral Nordic	9919890	LNG Carrier	30,000	Other	Anthony Veder	Jiangnan SY Group	Anthony Veder
2022	Elisa Aquila	9884473	LNG Carrier	174,000	Membrane	Nippon Yusen Kaisha	Hyundai Samho HI	Gazocean S.A.
2022	Global Sealine	9880477	LNG Carrier	174,000	Membrane	Global Shipping	Daewoo (DSME)	Nakilat Shipping
2022	Grace Freesia	9903920	LNG Carrier	174,000	Membrane	Nippon Yusen Kaisha	Hyundai Samho HI	NYK LNG Shipmngt.
2022	Huelva Knutsen	9904209	LNG Carrier	174,000	Membrane	Knutsen OAS Shipping	Hyundai Samho HI	Knutsen OAS Shipping

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* Cargo Containment System

Built	Vessel Name	IMO Number	Type	Capacity (m³)	CCS*	Owner	Builder	Manager
2022	John A. Angelicoussis	9901350	LNG Carrier	174,000	Membrane	Maran Gas Maritime	Daewoo (DSME)	Maran Gas Maritime
2022	Lagenda Serenity	9905980	LNG Carrier	79,960	Membrane	K-Line	Hudong Zhonghua	K Marine SM
2022	Lagenda Suria	9905978	LNG Carrier	79,958	Membrane	K-Line	Hudong Zhonghua	K Marine SM
2022	Lech Kaczynski	9922976	LNG Carrier	174,000	Membrane	Knutsen OAS Shipping	Hyundai HI (Ulsan)	Knutsen OAS Shipping
2022	Malaga Knutsen	9904182	LNG Carrier	174,000	Membrane	Knutsen OAS Shipping	Hyundai Samho HI	Knutsen OAS Shipping
2022	Minerva Amorgos	9885855	LNG Carrier	174,000	Membrane	Minerva Marine	Samsung HI	Minerva Marine
2022	Orion Bohemia (ex Orion Song)	9902926	LNG Carrier	174,000	Membrane	Oceonix Services Ltd	Hyundai HI (Ulsan)	B. Schulte (Hellas)
2022	Orion Sea	9889904	LNG Carrier	174,000	Membrane	Oceonix Services Ltd	Samsung HI	B. Schulte (Hellas)
2022	Orion Monet (ex Orion Star)	9888766	LNG Carrier	174,000	Membrane	Oceonix Services Ltd	Samsung HI	B. Schulte (Hellas)
2022	Orion Sun	9889916	LNG Carrier	174,000	Membrane	Oceonix Services Ltd	Samsung HI	Oceonix Services Ltd
2022	Prism Diversity	9904651	LNG Carrier	180,000	Membrane	SK Shipping	Hyundai Samho HI	
2022	Santander Knutsen	9904170	LNG Carrier	174,000	Membrane	Knutsen OAS Shipping	Hyundai Samho HI	Knutsen OAS Shipping
2022	Shaolin	9915894	LNG Carrier	174,199	Membrane	United Liquefied Gas	Hudong Zhonghua	COSCO Shanghai LNG
2022	SM Albatross	9902902	LNG Carrier	174,026	Membrane	Korea Line LNG	Hyundai HI (Ulsan)	KLC SM
2022	SM Bluebird	9902914	LNG Carrier	174,026	Membrane	Korea Line LNG	Hyundai HI (Ulsan)	KLC SM
2022	Tenergy	9892456	LNG Carrier	174,000	Membrane	Tsakos Energy Nav	Hyundai HI (Ulsan)	B. Schulte (Hellas)
2022	Vivit Arabia LNG	9902756	LNG Carrier	174,000	Membrane	H-Line Shipping	Hyundai Samho HI	H-Line Shipping
2022	Wu Dang	9915909	LNG Carrier	174,199	Membrane	United Liquefied Gas	Hudong Zhonghua	COSCO Shanghai LNG
2022	Avenir Achievement	9886768	LNGBV	20,000	Other	Avenir LNG	CIMC SOE	Hoegh LNG Fleet M.
2022	Avenir Ascension	9868974	LNGBV	7,500	Other	Avenir LNG	CIMC SOE	Hoegh LNG Fleet M.
2022	Haugesund Knutsen	9918767	LNGBV	5,000	Other	Knutsen OAS Shipping	Armon (Gijon)	Knutsen OAS Shipping
2022	K LNG Dream	9922811	LNGBV	500	Other	S Korea Fisheries	EK Heavy Industries	S Korea Fisheries
2022	K. Lotus	9901362	LNGBV	18,137	Other	Korea Line LNG	Hyundai Mipo	KLC SM
2022	Xin Ao Pu Tuo Hao	9870628	LNGBV	8,500	Other	Xinao Energy Shpg	Dalian Shipbuilding	Tianjin SW Maritime

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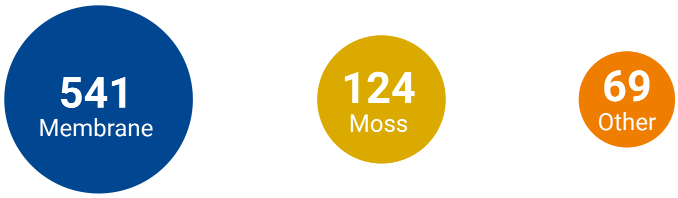
* Cargo Containment System

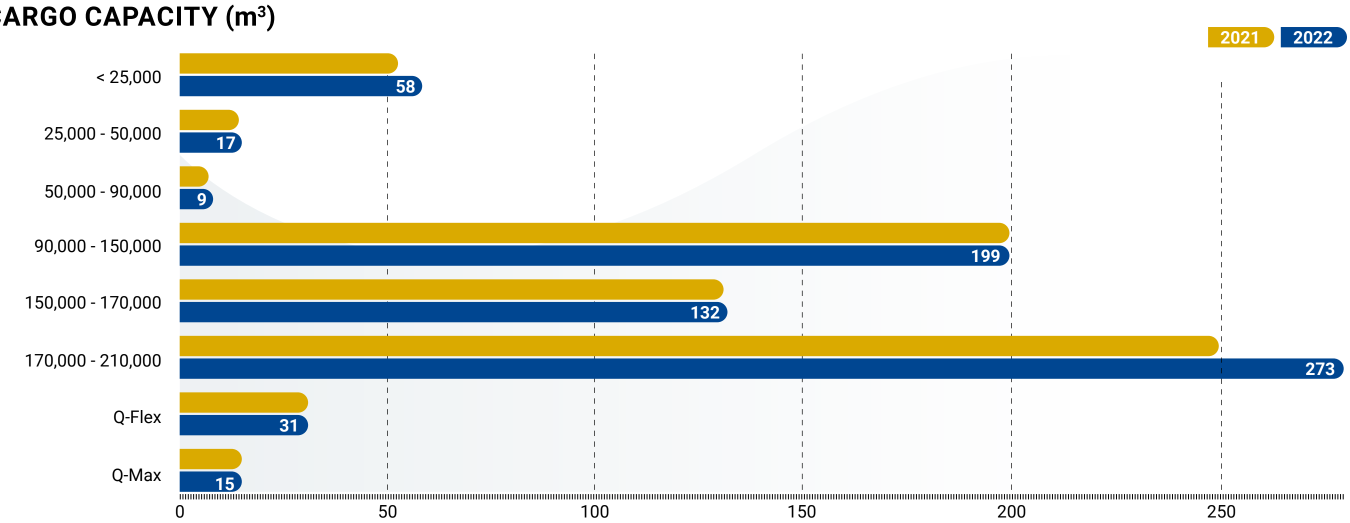
LNG fleet statistics

At the end of 2022, the fleet could be classified as follows:

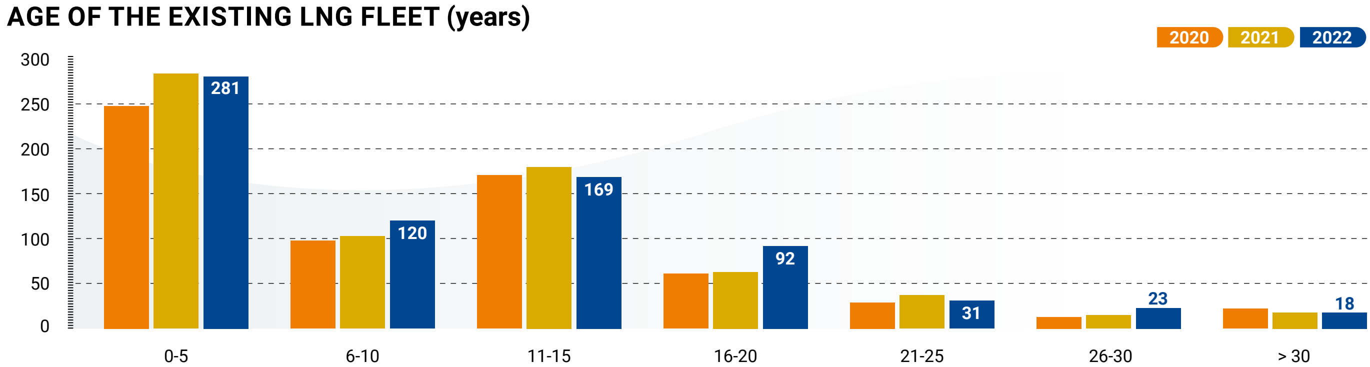
CONTAINMENT SYSTEM



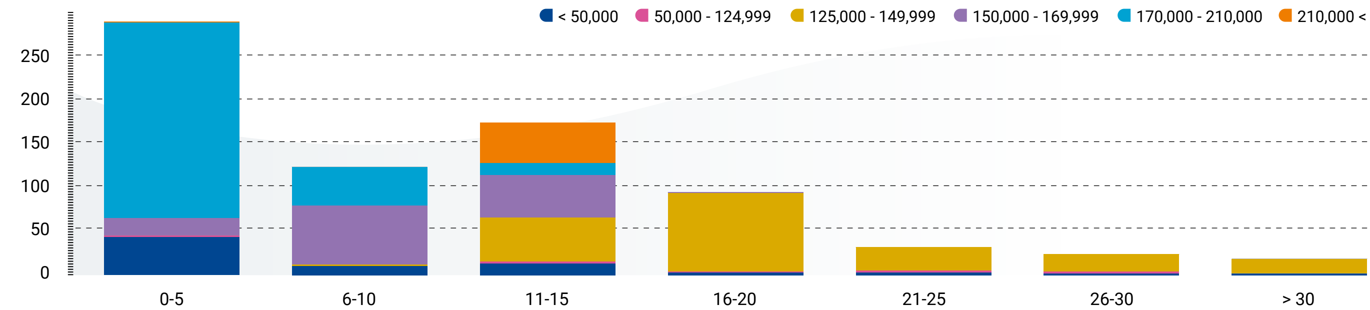
CARGO CAPACITY (m³)



AGE OF THE EXISTING LNG FLEET (years)



CARGO CAPACITY (in m³) AND AGE (years)



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FSRU fleet

The total FSRU fleet consisted of **49 units** at the end of 2022. Total FSRU cargo capacity at the end of 2022 stood at around 7.3 million cubic meters.

The orderbook comprised 5 FSRUs including 4 scheduled for 2023 delivery.

FSRU FLEET AT THE END OF 2022

Built/ Converted	Vessel Name	Storage Capacity (m^3)	CCS*	Nominal Send-out Capacity (MTPA)	Owner	Builder	Location
1977/2010	Energos Freeze (ex Golar Freeze)	**125,000**	Moss	**3.6**	Energos Infrastructure	Keppel Shipyard	Laid up
1977/2012	Nusantara Regas Satu (ex Khannur)	**125,000**	Moss	**3.0**	Energos Infrastructure	Jurong Shipyard	Nusantara, Indonesia
1981/2008	Golar Spirit	**129,000**	Moss	**1.8**	New Fortress Energy	Keppel Shipyard	Laid up
2003/2013	FSRU Toscana	**137,500**	Moss	**2.8**	OLT Offshore	Drydocks World Dubai	Toscana, Italy
2004/2009	Energos Winter (ex Golar Winter)	**138,000**	Membrane	**3.8**	Energos Infrastructure	Keppel Shipyard	Pecem, Brazil
2005	Excellence	**138,000**	Membrane	**3.8**	Excelerate Energy	DSME	Moheshkhali, Bangladesh
2005	Excelsior	**138,000**	Membrane	**3.5**	Excelerate Energy	DSME	LNGC (Bahia Blanca, Argentina)
2006	Summit LNG (ex Excelerate)	**138,000**	Membrane	**3.8**	Excelerate Energy	DSME	Summit LNG, Bangladesh
2008	Explorer	**150,900**	Membrane	**6.0**	Excelerate Energy	DSME	Jebel Ali, Dubai, UAE
2009	Express	**151,000**	Membrane	**3.8**	Excelerate Energy	DSME	Ruwais, Abu Dhabi, UAE
2009	Exquisite	**150,900**	Membrane	**4.8**	Nakilat-Excelerate Energy	DSME	Port Qasim Karachi, Pakistan
2009	Neptune (ex GDF Suez Neptune)	**145,130**	Membrane	**3.8**	Höegh LNG	SHI	Lubmin, Germany
2010	Cape Ann (ex GDF Suez Cape Ann)	**145,130**	Membrane	**3.7**	Höegh LNG	SHI	Laid up
2010	Exemplar	**150,900**	Membrane	**4.8**	Excelerate Energy	DSME	Inkoo, Finland
2010	Expedient	**150,900**	Membrane	**5.2**	Excelerate Energy	DSME	GNL Escobar, Argentina
2014	Experience	**173,400**	Membrane	**6.0**	Excelerate Energy	DSME	Guanabara Bay, Brazil
2014	Energos Eskimo (ex Golar Eskimo)	**160,000**	Membrane	**3.8**	Energos Infrastructure	SHI	Aqaba, Jordan
2014	Energos Igloo (ex Golar Igloo)	**170,000**	Membrane	**5.8**	Energos Infrastructure	SHI	Eemshaven, Netherlands
2014	Höegh Gallant	**170,000**	Membrane	**2.8**	Höegh LNG	HHI	Old Harbour, Jamaica
2014	Independence	**170,000**	Membrane	**2.9**	Höegh LNG	HHI	Klaipeda, Lithuania
2014	PGN FSRU Lampung	**170,000**	Membrane	**2.7**	Höegh LNG	HHI	Lampung LNG, Indonesia
2015	BW Singapore	**170,000**	Membrane	**5.7**	SNAM SpA	SHI	Sumed, Egypt
2015	Golar Tundra	**170,000**	Membrane	**5.5**	SNAM SpA	SHI	Piombino, Italy
2016	Höegh Grace	**170,000**	Membrane	**2.8**	Höegh LNG	HHI	Cartagena, Colombia
2017	BW Integrity	**170,000**	Membrane	**5.0**	BW Gas	SHI	Port Qasim GasPort, Pakistan
2017	Höegh Giant	**170,000**	Membrane	**3.7**	Höegh LNG	HHI	LNGC
2017	Bauhinia Spirit (ex MOL FSRU Challenger)	**263,000**	Membrane	**4.1**	MOL	DSME	Hong Kong
2017	Eemshaven LNG (ex S188)	**25,000**	Other	**4.6**	Exmar Offshore	Wison Zhoushan	Eemshaven, Netherlands
2018	Energos Nanook (ex Golar Nanook)	**170,000**	Membrane	**5.5**	Energos Infrastructure	SHI	Sergipe, Brazil
2018	Höegh Esperanza	**170,000**	Membrane	**3.8**	Höegh LNG	HHI	Wilhelmshaven, Germany
2018	Höegh Gannet	**170,000**	Membrane	**5.7**	Höegh LNG	HHI	Brunsbüttel, Germany
2018	Karunia Dewata	**26,000**	Other	**0.4**	JSK Group	PaxOcean Zhoushan	Benoa, Indonesia
2018	Marshal Vasilevskiy	**174,100**	Membrane	**2.0**	Gazprom	HHI	Kaliningrad, Russia
2009/2019	BW Batangas (ex BW Paris)	**162,500**	Membrane	**4.2**	BW Gas	Keppel Shipyard	LNGC (Philippines)
2019	BW Magna	**173,400**	Membrane	**5.7**	BW Gas	DSME	Port Açu, Brazil
2019	Höegh Galleon	**170,000**	Membrane	**3.7**	Höegh LNG	SHI	LNGC
2019	Turquoise P	**170,000**	Membrane	**5.7**	Kolin	HHI	Etki, Türkiye
2020	Excelerate Sequoia	**173,400**	Membrane	**5.6**	Excelerate Energy	DSME	Bahia, Brazil
2016/2020	Hua Xiang (ex. Hua Xiang 8)	**14,000**	Other	**0.1**	Zhejiang Huaxiang	Fengshun Ship Hvy	Maleo, Indonesia
2020	Jawa Satu	**170,000**	Membrane	**2.4**	PT Jawa Satu Regas	SHI	Java, Indonesia
2005/2020	LNG Croatia (ex Golar Viking)	**140,208**	Membrane	**2.1**	LNG Hrvatska	Huarun Dadong	Kirk, Croatia
2020	Torman	**28,000**	Other	**2.0**	Access LNG	Jiangnan SY Group	Tema LNG, Ghana
2020	Vasant 1	**180,000**	Membrane	**5.0**	Swan Energy	HHI	Saros, Türkiye
2003/2021	BW Tatiana (ex Gallina)	**137,001**	Moss	**2**	BW Gas Invenergy JV	Keppel Shipyard	El Salvador
2021	Ertugrul Gazi	**170,000**	Membrane	**4.1**	BOTAS	HHI	Dörtyol, Türkiye
1994/2021	LNGT Powership Africa (ex Dwiputra)	**127,386**	Moss	**1**	KARMOL	Sembcorp	Senegal
2021	Transgas Force	**174,000**	Membrane		Dynagas	HZ	LNGC
2021	Transgas Power	**174,000**	Membrane		Dynagas	HZ	LNGC
1991/2022	LNGT Powership Asia (ex NW Shearwater)	**127,500**	Moss	**2.7**	KARMOL	Sembcorp	Sepetiba, Brazil

FSRU ORDERBOOK AT THE END OF 2022

Built	Vessel Name	Storage Capacity (m^3)	CCS*	Nominal Send-out Capacity (MTPA)	Owner	Builder	Location
2002/2023	Etyfa Prometheas (ex Galea)	**136,967**	Moss		DEFA	**COSCO HI (Shanghai)**	Cyprus
2010/2023	Alexandroupoli (ex Gaslog Chelsea)	**153,500**	Membrane	**4.0**	Gaslog	**Keppel Shipyard**	Greece
1994/2023	LNGT Powership Europe (ex LNG Vesta)	**127,547**	Moss		KARMOL	**Keppel Shipyard**	Mozambique
2023	Shanghai Electric Wison FSRP	**170,000**	Membrane		Wison Offshore	**Wison (Nantong)**	
2026	TBN	**170,000**	Membrane		Excelerate Energy	**HHI (Ulsan)**	

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* Cargo Containment System

LNG carrier fleet
more than 30,000 cubic meters

The total LNG Carrier fleet (more than 30,000 cubic meters) consisted of **615 vessels** at the end of 2022.

The orderbook comprised 303 vessels, 44 of which were scheduled for delivery in 2023.

Built	Vessel Name	Capacity (m³)	CCS*	Owner	Builder	Manager
1977	**LNG Aquarius**	**126,300**	Moss	Hanochem Shpg	General Dynamics	PT. Humolco LNG Indonesia
1978	**Bering Energy**	**126,400**	Moss	Sinokor Merchant	General Dynamics	Sinokor Ship Mngt
1978	**Gulf Energy**	**126,300**	Moss	Sinokor Merchant	General Dynamics	Sinokor Ship Mngt
1978	**LNG Capricorn**	**126,300**	Moss	Nova Shpg & Log	General Dynamics	Nova Carriers
1979	**Coral Energy**	**126,400**	Moss	Sinokor Merchant	General Dynamics	Sinokor Ship Mngt
1979	**LNG Taurus**	**126,300**	Moss	Nova Shpg & Log	General Dynamics	Nova Carriers
1983	**Adriatic Energy**	**125,568**	Moss	Sinokor Merchant	MHI	Synergy Maritime
1989	**Grace Energy**	**127,590**	Moss	Sinokor Merchant	MHI	WSM Singapore
1989	**LNG Maleo**	**127,708**	Moss	MOL	Mitsui SB (Chiba)	MOL LNG Transport
1989	**Northwest Sanderling**	**127,525**	Moss	Aust LNG Ship Op	MHI	STASCO (Shell)
1990	**Ekaputra 1**	**137,012**	Moss	Humpuss Intermoda	MHI	PT. Humolco LNG Indonesia
1990	**Northwest Snipe**	**127,747**	Moss	Aust LNG Ship Op	Mitsui SB (Chiba)	STASCO (Shell)
1993	**Artica** (ex Seapeak Arctic, Arctic Spirit)	**89,880**	Other	Seapeak	I.H.I.	Teekay Shipping
1993	**Northwest Sandpiper**	**127,500**	Moss	Aust LNG Ship Op	Mitsui SB (Chiba)	STASCO (Shell)
1993	**Seapeak Polar** (ex Polar Spirit)	**89,880**	Other	Seapeak	I.H.I.	Seapeak Maritime
1994	**Al Khaznah**	**135,496**	Moss	National Gas Shpg.	Mitsui SB (Chiba)	ADNOC Logistics
1994	**Hyundai Utopia**	**125,182**	Moss	Hyundai LNG Shipping	HHI	Hyundai LNG Shipping
1994	**Northwest Stormpetrel**	**127,606**	Moss	Aust LNG Ship Op	MHI	STASCO (Shell)
1994	**Puteri Intan**	**130,405**	Membrane	MISC	Ch. de l'Atlantique	EagleStar Shipmgmt
1994	**Shahamah**	**135,496**	Moss	National Gas Shpg.	KHI	ADNOC Logistics
1994	**YK Sovereign**	**127,125**	Moss	SK Shipping	HHI	SK Shipping
1995	**Ghasha**	**137,514**	Moss	National Gas Shpg.	Mitsui SB (Chiba)	ADNOC Logistics
1995	**HL Pyeong Taek**	**130,600**	Membrane	H-Line Shipping	HHIC	H-Line Shipping
1995	**Ish**	**137,540**	Moss	National Gas Shpg.	MHI	ADNOC Logistics
1995	**Puteri Delima**	**130,405**	Membrane	MISC	Ch. de l'Atlantique	EagleStar Shipmgmt
1995	**Puteri Nilam**	**130,405**	Membrane	MISC	Ch. de l'Atlantique	EagleStar Shipmgmt
1996	**Al Khor**	**137,354**	Moss	Qatar Gas (Nakilat)	MHI	NYK LNG Shipmngt.
1996	**Al Zubarah**	**137,573**	Moss	Qatar Gas (Nakilat)	Mitsui SB (Chiba)	MOL LNG Transport
1996	**Hyundai Greenpia**	**125,000**	Moss	Hyundai LNG Shipping	HHI	Hyundai LNG Shipping
1996	**Mraweh**	**137,000**	Moss	National Gas Shpg.	Kvaerner Masa	ADNOC
1996	**Mubaraz**	**137,000**	Moss	National Gas Shpg.	Kvaerner Masa	ADNOC
1996	**Puteri Zamrud**	**130,405**	Membrane	MISC	Ch. de l'Atlantique	EagleStar Shipmgmt
1997	**Al Hamra**	**137,000**	Moss	National Gas Shpg.	Kvaerner Masa	ADNOC
1997	**Al Rayyan**	**135,358**	Moss	Qatar Gas (Nakilat)	KHI	K-Line Energ Mgmt
1997	**Al Wajbah**	**137,354**	Moss	Qatar Gas (Nakilat)	MHI	MOL LNG Transport
1997	**Portovenere**	**65,000**	Membrane	MISC	Fincantieri Sestri	EagleStar Shipmgmt
1997	**Umm Al Ashtan**	**137,000**	Moss	National Gas Shpg.	Kvaerner Masa	ADNOC
1998	**Al Wakrah**	**135,358**	Moss	Qatar Gas (Nakilat)	KHI	MOL LNG Transport
1998	**Broog**	**135,466**	Moss	Qatar Gas (Nakilat)	Mitsui SB (Chiba)	NYK LNG Shipmngt.
1998	**Lerici**	**65,000**	Membrane	MISC	Fincantieri Sestri	EagleStar Shipmgmt
1998	**Zekreet**	**135,420**	Moss	Qatar Gas (Nakilat)	Mitsui SB (Chiba)	K-Line Energ Mgmt
1999	**Al Bidda**	**135,279**	Moss	Qatar Gas (Nakilat)	KHI	MOL LNG Transport
1999	**Doha**	**137,354**	Moss	Qatar Gas (Nakilat)	MHI	NYK LNG Shipmngt.
1999	**HL Muscat** (ex Hanjin Muscat)	**138,200**	Membrane	H-Line Shipping	HHIC	H-Line Shipping
1999	**Hyundai Technopia**	**135,000**	Moss	Hyundai LNG Shipping	HHI	Hyundai LNG Shipping
1999	**SK Summit**	**138,000**	Membrane	SK Shipping	DSME	SK Shipping
2000	**Al Jasra**	**137,100**	Moss	Qatar Gas (Nakilat)	MHI	NYK LNG Shipmngt.
2000	**Golar Mazo**	**136,867**	Moss	New Fortress Energy	MHI	Golar Management
2000	**HL Ras Laffan**	**138,214**	Membrane	H-Line Shipping	HHIC	H-Line Shipping
2000	**HL Sur** (ex Hanjin Sur)	**138,333**	Membrane	H-Line Shipping	HHIC	H-Line Shipping
2000	**Hyundai Aquapia**	**135,000**	Moss	Hyundai LNG Shipping	HHI	Hyundai LNG Shipping
2000	**Hyundai Cosmopia**	**135,000**	Moss	Hyundai LNG Shipping	HHI	Hyundai LNG Shipping
2000	**Hyundai Oceanpia**	**135,000**	Moss	Hyundai LNG Shipping	HHI	Hyundai LNG Shipping
2000	**K. Acacia**	**138,017**	Membrane	Korea Line LNG	DSME	KLC SM
2000	**K. Freesia**	**135,256**	Membrane	Korea Line LNG	DSME	KLC SM
2000	**LNG Jamal**	**135,333**	Moss	Osaka Gas International Transport Inc	MHI	NYK LNG Shipmngt.
2000	**SK Splendor**	**138,375**	Membrane	SK Shipping	SHI	SK Shipping
2000	**SK Stellar**	**138,375**	Membrane	SK Shipping	SHI	SK Shipping
2000	**SK Supreme**	**138,200**	Membrane	SK Shipping	SHI	SK Shipping
2001	**Sohar LNG**	**137,248**	Moss	MOL Oman Shipping Co JV	MHI	Oman Ship Mngt
2002	**Excalibur**	**138,034**	Membrane	Exmar	DSME	Exmar Shipmngt
2002	**LNG Rivers**	**137,231**	Moss	Bonny Gas Transport	HHI	Nigeria LNG Ltd.
2002	**LNG Sokoto**	**137,231**	Moss	Bonny Gas Transport	HHI	Nigeria LNG Ltd.
2002	**Puteri Delima Satu**	**137,100**	Membrane	MISC	Mitsui SB (Chiba)	EagleStar Shipmgmt
2002	**Seapeak Hispania** (ex Hispania Spirit)	**140,500**	Membrane	Seapeak	DSME	Seapeak Maritime
2002	**Trader II** (ex Trader)	**138,000**	Membrane	Capital Gas	SHI	Capital Gas
2002	**Trader III** (ex Puteri Intan Satu)	**137,489**	Membrane	MISC	MHI	EagleStar Shipmgmt
2002	**Xinhang Energy**	**136,912**	Moss	Xinhang Shipping	MHI	B. Schulte (Sing.)
2003	**BW Boston**	**138,059**	Membrane	BW LNG	DSME	BW Fleet Mngt

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* Cargo Containment System

Built	Vessel Name	Capacity (m^3)	CCS*	Owner	Builder	Manager
2003	**BW Everett**	**138,028**	Membrane	BW LNG	DSME	BW Fleet Mngt
2003	**Castillo de Villalba**	**138,183**	Membrane	Elcano	IZAR (Puerto Real)	Elcano
2003	**Energy Frontier**	**147,599**	Moss	Tokyo LNG Tanker Co.	KHI	MOL LNG Transport
2003	**Golar Arctic**	**140,648**	Membrane	Golar LNG	DSME	Golar Management
2003	**LNG Bayelsa**	**137,500**	Moss	Bonny Gas Transport	HHI	Nigeria LNG Ltd.
2003	**Merchant** (ex British Merchant)	**138,283**	Membrane	Sinokor Merchant	SHI	WSM Singapore
2003	**Methane Princess**	**138,000**	Membrane	Energos Infrastructure	DSME	New Fortress
2003	**Pacific Notus**	**137,006**	Moss	TEPCO	MHI	NYK LNG Shipmngt.
2003	**Puteri Nilam Satu**	**137,585**	Membrane	MISC	MHI	EagleStar Shipmgmt
2003	**Seapeak Catalunya** (ex Catalunya Spirit)	**138,000**	Membrane	Seapeak	IZAR (Sestao)	Seapeak Maritime
2003	**Singapore Energy**	**138,287**	Membrane	Sinokor Merchant	SHI	WSM Malaysia
2003	**SK Sunrise**	**138,306**	Membrane	I.S. Carriers SA	SHI	Iino Marine Service
2004	**Berge Arzew**	**138,088**	Membrane	BW LNG	DSME	BW Fleet Mngt
2004	**Bilbao Knutsen**	**138,000**	Membrane	Knutsen OAS Shipping	IZAR (Sestao)	Knutsen OAS Shipping
2004	**Cadiz Knutsen**	**138,826**	Membrane	Knutsen OAS Shipping	IZAR (Puerto Real)	Knutsen OAS Shipping
2004	**Disha**	**136,026**	Membrane	India LNG Transport	DSME	Shpg Corp of India
2004	**Dukhan**	**137,661**	Moss	MOL	Mitsui SB (Chiba)	MOL LNG Transport (E)
2004	**Fuji LNG**	**149,172**	Moss	TMS Cardiff Gas	KHI	TMS Cardiff Gas
2004	**Fuwairit**	**138,000**	Membrane	MOL	SHI	MOL LNG Transport (E)
2004	**Hongkong Energy** (ex Northwest Swan)	**138,000**	Membrane	Sinokor Merchant	DSME	WSM Singapore
2004	**Lalla Fatma N'Soumer**	**147,845**	Moss	Algeria Nippon Gas	KHI	Hyproc Shipping Co.
2004	**LNG Akwa Ibom**	**141,038**	Moss	Bonny Gas Transport	HHI	Nigeria LNG Ltd.
2004	**LNG River Orashi**	**145,914**	Membrane	BW LNG	DSME	BW Fleet Mngt
2004	**Milaha Ras Laffan**	**138,270**	Membrane	Qatar Shipping	SHI	Pronav Ship Mngt
2004	**Prima Concord** (ex. Methane Kari Elin)	**138,209**	Membrane	Vektor Maritim	SHI	Vektor Maritim
2004	**Puteri Firus Satu**	**137,617**	Membrane	MISC	MHI	EagleStar Shipmgmt
2004	**Puteri Zamrud Satu**	**137,100**	Membrane	MISC	Mitsui SB (Chiba)	EagleStar Shipmgmt
2004	**Raahi**	**136,026**	Membrane	India LNG Transport	DSME	Shpg Corp of India
2004	**Seapeak Galicia** (ex Galicia Spirit)	**140,624**	Membrane	Seapeak	DSME	Seapeak Maritime
2004	**Seapeak Madrid** (ex. Madrid Spirit)	**138,000**	Membrane	Seapeak	IZAR (Puerto Real)	Seapeak Maritime
2004	**Shandong Juniper** (ex Gemmata)	**136,985**	Moss	Shandong Mar. Energy	MHI	Shandong Mar. Energy
2005	**Al Deebel**	**145,130**	Membrane	MOL	SHI	MOL LNG Transport (E)
2005	**Al Thakhira**	**145,130**	Membrane	K-Line	SHI	K Line LNG Shpg.
2005	**Energy Advance**	**147,624**	Moss	Tokyo LNG Tanker Co.	KHI	MOL LNG Transport
2005	**LNG Adamawa**	**142,656**	Moss	Bonny Gas Transport	HHI	Nigeria LNG Ltd.
2005	**LNG Cross River**	**141,000**	Moss	Bonny Gas Transport	HHI	Nigeria LNG Ltd.
2005	**LNG Enugu**	**145,914**	Membrane	BW LNG	DSME	BW Fleet Mngt
2005	**LNG Oyo**	**145,842**	Membrane	BW LNG	DSME	BW Fleet Mngt

Built	Vessel Name	Capacity (m^3)	CCS*	Owner	Builder	Manager
2005	**Lusail**	**145,000**	Membrane	NYK	SHI	NYK LNG Shipmngt.
2005	**Maran Gas Asclepius** (ex Rasgas Asclepius)	**145,822**	Membrane	Maran Nakilat	DSME	Maran Gas Maritime
2005	**Nizwa LNG**	**147,684**	Moss	Asyad Shipping	KHI	Oman Ship Mngt
2005	**Pioneer Spirit** (ex LNG Pioneer)	**138,000**	Membrane	Jovo Group	DSME	Fleet Management
2005	**Puteri Mutiara Satu**	**137,100**	Membrane	MISC	Mitsui SB (Chiba)	EagleStar Shipmgmt
2005	**Salalah LNG**	**145,951**	Membrane	Asyad Shipping	SHI	Oman Ship Mngt
2005	**Seri Alam**	**145,572**	Membrane	MISC	SHI	EagleStar Shipmgmt
2005	**Umm Bab**	**145,000**	Membrane	Maran Nakilat	DSME	Maran Gas Maritime
2006	**Al Marrouna**	**149,539**	Membrane	Seapeak	DSME	Seapeak Maritime
2006	**Arctic Discoverer**	**142,612**	Moss	K-Line	Mitsui SB (Chiba)	K Line LNG Shpg.
2006	**Arctic Lady**	**147,208**	Moss	Hoegh LNG	MHI	Hoegh LNG Fleet M.
2006	**Arctic Princess**	**147,835**	Moss	Hoegh LNG	MHI	Hoegh LNG Fleet M.
2006	**Arctic Voyager**	**142,929**	Moss	K-Line	KHI	K Line LNG Shpg.
2006	**Energos Grand** (ex NFE Grand, Golar Grand)	**145,880**	Membrane	Energos Infrastructure	DSME	New Fortress
2006	**Energos Maria** (ex Golar Maria, Granosa)	**145,958**	Membrane	Energos Infrastructure	DSME	New Fortress
2006	**Energy Progress**	**147,558**	Moss	MOL	KHI	MOL LNG Transport
2006	**GasLog Athens** (ex Methane Lydon Volney)	**145,000**	Membrane	GasLog	SHI	GasLog LNG Services
2006	**Global Energy**	**74,130**	Membrane	Jovo Energy	Aker Yards	Gazocean (NYK)
2006	**Iberica Knutsen**	**138,120**	Membrane	Knutsen OAS Shipping	DSME	Knutsen OAS Shipping
2006	**Ibra LNG**	**147,100**	Membrane	Asyad Shipping	SHI	Oman Ship Mngt
2006	**Ibri LNG**	**147,384**	Moss	Asyad Shipping	MHI	Oman Ship Mngt
2006	**Karadeniz LNGT Powership Anatolia** (ex LNG Unity)	**154,472**	Membrane	Karpowership	Aker Yards	Synergy Maritime
2006	**LNG Benue**	**145,842**	Membrane	BW LNG	DSME	BW Fleet Mngt
2006	**LNG Dream**	**145,000**	Moss	Daigas Group	KHI	NYK LNG Shipmngt.
2006	**LNG Lokoja**	**149,600**	Membrane	BW LNG	DSME	BW Fleet Mngt
2006	**LNG River Niger**	**141,000**	Moss	Bonny Gas Transport	HHI	Nigeria LNG Ltd.
2006	**Methane Jane Elizabeth**	**145,000**	Membrane	GasLog Partners	SHI	GasLog LNG Services
2006	**Methane Rita Andrea**	**145,000**	Membrane	GasLog Partners	SHI	GasLog LNG Services
2006	**Milaha Qatar**	**145,130**	Membrane	Qatar Shipping	SHI	Pronav Ship Mngt
2006	**Prima Carrier** (ex Pacific Eurus)	**136,942**	Moss	PT Prima Ocean Nusantara	MHI	B. Schulte (UK)
2006	**Seri Amanah**	**145,000**	Membrane	MISC	SHI	EagleStar Shipmgmt
2006	**Seri Anggun**	**145,731**	Membrane	MISC	SHI	EagleStar Shipmgmt
2006	**Seri Angkasa**	**145,000**	Membrane	MISC	SHI	EagleStar Shipmgmt
2006	**Simaisma**	**145,700**	Membrane	Maran Nakilat	DSME	Maran Gas Maritime
2006	**Stena Blue Sky**	**145,819**	Membrane	Stena Bulk	DSME	Northern Marine Mngt
2007	**Al Areesh**	**148,786**	Membrane	Seapeak	DSME	Seapeak Maritime
2007	**Al Daayen**	**148,853**	Membrane	Seapeak	DSME	Seapeak Maritime

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* Cargo Containment System

LNG carrier fleet

Built	Vessel Name	Capacity (m³)	CCS*	Owner	Builder	Manager
2007	**Al Gattara**	**216,224**	Membrane	Qatar Gas (Nakilat)	HHI	Nakilat Shipping
2007	**Al Jassasiya**	**145,700**	Membrane	Maran Nakilat	DSME	Maran Gas Maritime
2007	**Al Ruwais**	**210,100**	Membrane	Schulte Group	DSME	Pronav Ship Mngt
2007	**Al Safliya**	**210,134**	Membrane	Schulte Group	DSME	Pronav Ship Mngt
2007	**Cheikh El Mokrani**	**74,365**	Membrane	Hyproc Shipping Co.	Universal SB (Tsu)	Hyproc Shipping Co.
2007	**Clean Energy**	**149,700**	Membrane	Dynagas LNG Partners	HHI	Dynagas
2007	**Cool Rider** (ex Kmarin Emerald, British Emerald)	**154,983**	Membrane	Thenamaris	HHI	Thenamaris LNG
2007	**Ejnan**	**145,000**	Membrane	NYK	SHI	NYK LNG Shipmngt.
2007	**Golden Isaia** (ex Methane Shirley Elisabeth)	**145,127**	Membrane	Sillo Maritime	SHI	WSM Malaysia
2007	**Grace Acacia**	**149,786**	Membrane	NYK	HHI	NYK LNG Shipmngt.
2007	**Grace Barleria**	**149,700**	Membrane	NYK	HHI	NYK LNG Shipmngt.
2007	**Grand Elena**	**145,580**	Moss	NYK	MHI	NYK LNG Shipmngt.
2007	**LNG Alliance** (ex Gaselys)	**154,472**	Membrane	TotalEnergies	Aker Yards	Gazocean (NYK)
2007	**LNG Borno**	**149,600**	Membrane	NYK	SHI	NYK LNG Shipmngt.
2007	**LNG Kano**	**149,600**	Membrane	BW LNG	DSME	BW Fleet Mngt
2007	**LNG Ogun**	**149,600**	Membrane	NYK	SHI	NYK LNG Shipmngt.
2007	**LNG Ondo**	**148,300**	Membrane	BW LNG	DSME	BW Fleet Mngt
2007	**Maran Gas Coronis**	**145,700**	Membrane	Maran Nakilat	DSME	Maran Gas Maritime
2007	**Methane Alison Victoria**	**145,127**	Membrane	GasLog Partners	SHI	GasLog LNG Services
2007	**Methane Heather Sally**	**145,127**	Membrane	Huaxia FL	SHI	GasLog LNG Services
2007	**Methane Nile Eagle**	**145,144**	Membrane	STASCO (Shell)	SHI	GasLog LNG Services
2007	**Neo Energy**	**149,700**	Membrane	Tsakos Energy Nav	HHI	HMM Ocean Service
2007	**Ob River**	**149,700**	Membrane	Dynagas LNG Partners	HHI	Dynagas
2007	**Seri Ayu**	**145,894**	Membrane	MISC	SHI	EagleStar Shipmgmt
2007	**Seri Bakti**	**152,300**	Membrane	MISC	MHI	EagleStar Shipmgmt
2007	**Seri Begawan**	**152,300**	Membrane	MISC	MHI	EagleStar Shipmgmt
2007	**Sestao Knutsen**	**138,114**	Membrane	Knutsen OAS Shipping	CNN - La Naval	Knutsen OAS Shipping
2007	**Symphonic Breeze**	**147,608**	Moss	K-Line	KHI	K Line LNG Shpg.
2007	**Tembek**	**216,000**	Membrane	Qatar Gas (Nakilat)	SHI	Nakilat Shipping
2008	**Al Aamriya**	**210,168**	Membrane	Nakilat, JC	DSME	MOL LNG Transport (E)
2008	**Al Ghariya**	**210,100**	Membrane	Schulte Group	DSME	Pronav Ship Mngt
2008	**Al Gharrafa**	**216,224**	Membrane	Qatar Gas (Nakilat)	HHI	Nakilat Shipping
2008	**Al Ghuwairiya**	**263,249**	Membrane	Qatar Gas (Nakilat)	DSME	Nakilat Shipping
2008	**Al Hamla**	**216,000**	Membrane	Qatar Gas (Nakilat)	SHI	Nakilat Shipping
2008	**Al Huwaila**	**217,000**	Membrane	Seapeak	SHI	Seapeak Maritime
2008	**Al Kharsaah**	**217,000**	Membrane	Seapeak	SHI	Seapeak Maritime
2008	**Al Khuwair**	**217,000**	Membrane	Seapeak	SHI	Seapeak Maritime
2008	**Al Oraiq**	**210,100**	Membrane	Nakilat, JC	DSME	K Line LNG Shpg.
2008	**Al Sahla**	**216,200**	Membrane	Nakilat, JC	HHI	NYK LNG Shipmngt.
2008	**Al Shamal**	**217,000**	Membrane	Seapeak	SHI	Seapeak Maritime
2008	**Al Thumama**	**216,200**	Membrane	Nakilat, JC	HHI	NYK LNG Shipmngt.
2008	**Al Utouriya**	**215,000**	Membrane	Nakilat, JC	HHI	NYK LNG Shipmngt.
2008	**Alto Acrux**	**147,798**	Moss	TEPCO	MHI	NYK LNG Shipmngt.
2008	**Amur River**	**149,743**	Membrane	Dynagas LNG Partners	HHI	Dynagas Ltd
2008	**Bu Samra**	**267,335**	Membrane	Qatar Gas (Nakilat)	SHI	Nakilat Shipping
2008	**Cheikh Bouamama**	**75,558**	Membrane	Hyproc Shipping Co.	Universal SB (Tsu)	Hyproc Shipping Co.
2008	**Cool Rover** (ex British Sapphire)	**155,000**	Membrane	Thenamaris	HHI	Thenamaris LNG
2008	**Dapeng Moon**	**147,210**	Membrane	CLNG	HZ	CLNG
2008	**Dapeng Sun**	**147,236**	Membrane	CLNG	HZ	CLNG
2008	**Duhail**	**210,100**	Membrane	Schulte Group	DSME	Pronav Ship Mngt
2008	**Energy Navigator**	**147,558**	Moss	Tokyo LNG Tanker Co.	KHI	MOL LNG Transport
2008	**Fraiha**	**210,100**	Membrane	Nakilat, JC	DSME	MOL LNG Transport (E)
2008	**Grace Cosmos**	**149,700**	Membrane	NYK	HHI	Gazocean (NYK)
2008	**Grand Aniva**	**145,580**	Moss	Sovcomflot	MHI	SCF Mngt Dubai
2008	**Grand Mereya**	**145,964**	Moss	MOL	Mitsui SB (Chiba)	MOL LNG Transport
2008	**Hyundai Ecopia**	**149,700**	Membrane	HMM Co., Ltd	HHI	HMM Ocean Service
2008	**K. Jasmine**	**145,877**	Membrane	Korea Line LNG	DSME	KLC SM
2008	**K. Mugungwha**	**151,812**	Membrane	Korea Line LNG	DSME	KLC SM
2008	**Kmarin Diamond** (ex British Diamond)	**155,046**	Membrane	BP Shipping	HSHI	BP Shipping
2008	**LNG Barka**	**155,982**	Moss	Asyad Shipping	KHI	NYK LNG Shipmngt.
2008	**LNG Ebisu**	**147,546**	Moss	MOL	KHI	MOL LNG Transport
2008	**LNG Imo**	**148,300**	Membrane	BW LNG	DSME	BW Fleet Mngt
2008	**LNG Kolt**	**153,595**	Membrane	Pan Ocean	HHIC	POS SM Co Ltd
2008	**Mozah**	**267,335**	Membrane	Qatar Gas (Nakilat)	SHI	Nakilat Shipping
2008	**Murwab**	**210,100**	Membrane	Nakilat, JC	DSME	MOL LNG Transport (E)
2008	**Seapeak Arwa** (ex Arwa Spirit)	**165,500**	Membrane	Seapeak	SHI	Teekay Shpg. (Gla)
2008	**Seapeak Marib** (ex Marib Spirit)	**165,500**	Membrane	Seapeak	SHI	Teekay Shpg. (Gla)
2008	**Seapeak Methane** (ex Methane Spirit)	**165,500**	Membrane	Seapeak	SHI	Teekay Shpg. (Gla)
2008	**Seri Balhaf**	**157,721**	Membrane	MISC	MHI	EagleStar Shipmgmt
2008	**Seri Bijaksana**	**152,888**	Membrane	MISC	MHI	EagleStar Shipmgmt
2008	**Tangguh Batur**	**145,700**	Membrane	Sovcomflot	DSME	NYK Shipmngt. Pte.
2008	**Tangguh Foja**	**155,641**	Membrane	K-Line	SHI	K-Line Energ Mgmt
2008	**Tangguh Hiri**	**154,971**	Membrane	Seapeak	HHI	Seapeak Maritime
2008	**Tangguh Jaya**	**155,641**	Membrane	K-Line	SHI	K-Line Energ Mgmt
2008	**Tangguh Towuti**	**145,700**	Membrane	Sovcomflot	DSME	NYK Shipmngt. Pte.
2008	**Trinity Arrow**	**154,982**	Membrane	K-Line	Koyo Dock	K Line LNG Shpg.
2008	**Tristar Ruby**	**155,000**	Membrane	Tristar Energy	HHI	WSM Malaysia
2008	**Umm Al Amad**	**210,100**	Membrane	Nakilat, JC	DSME	K Line LNG Shpg.
2008	**Umm Slal**	**267,335**	Membrane	Qatar Gas (Nakilat)	SHI	Nakilat Shipping
2009	**Al Dafna**	**267,335**	Membrane	Qatar Gas (Nakilat)	SHI	Nakilat Shipping

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* Cargo Containment System

Built	Vessel Name	Capacity (m³)	CCS*	Owner	Builder	Manager
2009	**Al Ghashamiya**	**217,000**	Membrane	Qatar Gas (Nakilat)	SHI	Nakilat Shipping
2009	**Al Karaana**	**210,191**	Membrane	Qatar Gas (Nakilat)	DSME	STASCO (Shell)
2009	**Al Kharaitiyat**	**216,200**	Membrane	Qatar Gas (Nakilat)	HHI	Nakilat Shipping
2009	**Al Khattiya**	**210,196**	Membrane	Qatar Gas (Nakilat)	DSME	STASCO (Shell)
2009	**Al Mafyar**	**267,335**	Membrane	Qatar Gas (Nakilat)	SHI	Nakilat Shipping
2009	**Al Mayeda**	**267,335**	Membrane	Qatar Gas (Nakilat)	SHI	Nakilat Shipping
2009	**Al Nuaman**	**210,184**	Membrane	Qatar Gas (Nakilat)	DSME	STASCO (Shell)
2009	**Al Rekayyat**	**216,200**	Membrane	Qatar Gas (Nakilat)	HHI	Nakilat Shipping
2009	**Al Sadd**	**210,100**	Membrane	Qatar Gas (Nakilat)	DSME	Nakilat Shipping
2009	**Al Samriya**	**261,700**	Membrane	Qatar Gas (Nakilat)	DSME	Nakilat Shipping
2009	**Al Sheehaniya**	**210,166**	Membrane	Qatar Gas (Nakilat)	DSME	Nakilat Shipping
2009	**Aseem**	**155,000**	Membrane	India LNG Transport	SHI	Shpg Corp of India
2009	**BW Brussels**	**162,400**	Membrane	BW LNG	DSME	BW Fleet Mngt
2009	**Cygnus Passage**	**147,200**	Moss	Cygnus LNG Shipping	MHI	NYK LNG Shipmngt.
2009	**Dapeng Star**	**147,210**	Membrane	CLNG	HZ	CLNG
2009	**Energy Confidence**	**153,000**	Moss	Tokyo LNG Tanker Co.	KHI	NYK LNG Shipmngt.
2009	**Lijmiliya**	**261,700**	Membrane	Qatar Gas (Nakilat)	DSME	Nakilat Shipping
2009	**LNG Jupiter**	**155,999**	Moss	NYK	KHI	NYK LNG Shipmngt.
2009	**Mekaines**	**267,335**	Membrane	Qatar Gas (Nakilat)	SHI	Nakilat Shipping
2009	**Mesaimeer**	**216,200**	Membrane	Qatar Gas (Nakilat)	HHI	Nakilat Shipping
2009	**Min Lu**	**147,210**	Membrane	CLNG	HZ	CLNG
2009	**Min Rong**	**147,000**	Membrane	CLNG	HZ	CLNG
2009	**Onaiza**	**210,100**	Membrane	Qatar Gas (Nakilat)	DSME	Nakilat Shipping
2009	**Pacific Enlighten**	**147,200**	Moss	TEPCO	MHI	NYK LNG Shipmngt.
2009	**Seapeak Magellan** (ex Magellan Spirit)	**165,500**	Membrane	Seapeak	SHI	Teekay Shpg. (Gla)
2009	**Seri Balqis**	**157,611**	Membrane	MISC	MHI	EagleStar Shipmgmt
2009	**Shagra**	**267,335**	Membrane	Qatar Gas (Nakilat)	SHI	STASCO (Shell)
2009	**Spirit of Hela**	**173,010**	Membrane	MOL	HSHI	MOL LNG Transport (E)
2009	**Taitar No. 1**	**147,362**	Moss	Nimic Ship Mgmt	MHI	Nimic Ship Mgmt
2009	**Taitar No. 2**	**147,500**	Moss	Nimic Ship Mgmt	KHI	Nimic Ship Mgmt
2009	**Tangguh Palung**	**155,642**	Membrane	K-Line	SHI	K-Line Energ Mgmt
2009	**Tangguh Sago**	**154,971**	Membrane	Seapeak	HSHI	Seapeak Maritime
2009	**Trinity Glory**	**154,999**	Membrane	K-Line	Koyo Dock	Pronav Ship Mngt
2009	**Woodside Donaldson**	**165,936**	Membrane	Seapeak	SHI	Teekay Shpg. (Gla)
2010	**Aamira**	**267,335**	Membrane	Qatar Gas (Nakilat)	SHI	STASCO (Shell)
2010	**Al Bahiya**	**210,185**	Membrane	Qatar Gas (Nakilat)	DSME	STASCO (Shell)
2010	**Barcelona Knutsen**	**173,400**	Membrane	Knutsen OAS Shipping	DSME	Knutsen OAS Shipping
2010	**Castillo de Santisteban**	**173,673**	Membrane	Elcano	STX SB (Jinhae)	Elcano
2010	**GasLog Chelsea**	**153,000**	Membrane	GasLog	HHIC	GasLog LNG Services
2010	**GasLog Savannah**	**155,000**	Membrane	GasLog	SHI	GasLog LNG Services
2010	**GasLog Singapore**	**155,000**	Membrane	GasLog	SHI	GasLog LNG Services
2010	**Gigira Laitebo**	**155,000**	Membrane	MOL	HHI	MOL LNG Transport (E)
2010	**Methane Becki Anne**	**170,678**	Membrane	GasLog Partners	SHI	GasLog LNG Services
2010	**Methane Julia Louise**	**170,000**	Membrane	Lepta Shipping	SHI	GasLog LNG Services
2010	**Methane Mickie Harper**	**170,000**	Membrane	Meiji Shipping	SHI	MMS Co Ltd
2010	**Methane Patricia Camila**	**170,000**	Membrane	Meiji Shipping	SHI	MMS Co Ltd
2010	**Point Fortin**	**154,914**	Membrane	Trinity LNG Carrier	Koyo Dock	MOL LNG Transport (E)
2010	**Rasheeda**	**267,335**	Membrane	Qatar Gas (Nakilat)	SHI	STASCO (Shell)
2010	**Ribera Del Duero Knutsen**	**173,400**	Membrane	Knutsen OAS Shipping	DSME	Knutsen OAS Shipping
2010	**Seapeak Meridian** (ex Meridian Spirit)	**165,772**	Membrane	Seapeak	SHI	Teekay Shpg. (Gla)
2010	**Sevilla Knutsen**	**173,400**	Membrane	Knutsen OAS Shipping	DSME	Knutsen OAS Shipping
2010	**Taitar No. 3**	**147,366**	Moss	Nimic Ship Mgmt	MHI	Nimic Ship Mgmt
2010	**Taitar No. 4**	**147,546**	Moss	Nimic Ship Mgmt	KHI	Nimic Ship Mgmt
2010	**Valencia Knutsen**	**173,400**	Membrane	Knutsen OAS Shipping	DSME	Knutsen OAS Shipping
2010	**Zarga**	**267,335**	Membrane	Qatar Gas (Nakilat)	SHI	STASCO (Shell)
2011	**Amali**	**148,000**	Membrane	Brunei Shell Tankers	DSME	Brunei Gas Carriers
2011	**Arkat**	**147,228**	Membrane	Brunei Gas Carriers	DSME	Brunei Gas Carriers
2011	**Energy Horizon**	**177,441**	Moss	Tokyo LNG Tanker Co.	KHI	NYK LNG Shipmngt.
2011	**Lobito**	**160,276**	Membrane	MiNT LNG	SHI	Teekay Shipping Ltd.
2011	**Malanje**	**160,276**	Membrane	MiNT LNG	SHI	NYK LNG Shipmngt.
2011	**Sonangol Benguela**	**160,500**	Membrane	Sonangol	DSME	Chevron Shpg Co
2011	**Sonangol Etosha**	**160,786**	Membrane	Sonangol	DSME	Chevron Shpg Co
2011	**Sonangol Sambizanga**	**160,785**	Membrane	Sonangol	DSME	Chevron Shpg Co
2011	**Soyo**	**160,276**	Membrane	MiNT LNG	SHI	Teekay Shipping
2011	**Stena Clear Sky**	**173,593**	Membrane	Stena Bulk	DSME	Northern Marine Mngt
2011	**Stena Crystal Sky**	**173,611**	Membrane	Stena Bulk	DSME	Northern Marine Mngt
2012	**Cubal**	**160,276**	Membrane	MiNT LNG	SHI	NYK LNG Shipmngt.
2012	**Shen Hai**	**147,210**	Membrane	CLNG	HZ	CLNG
2013	**Arctic Aurora**	**154,899**	Membrane	Dynagas LNG Partners	HHI	Dynagas
2013	**Cool Voyager**	**160,372**	Membrane	Thenamaris	SHI	Thenamaris LNG
2013	**Energos Celsius** (ex Golar Celsius)	**160,000**	Membrane	Energos Infrastructure	SHI	New Fortress
2013	**GasLog Santiago**	**155,000**	Membrane	GasLog Partners	SHI	GasLog LNG Services
2013	**GasLog Seattle**	**155,000**	Membrane	GasLog Partners	SHI	GasLog LNG Services
2013	**GasLog Shanghai**	**155,000**	Membrane	GasLog Partners	SHI	GasLog LNG Services
2013	**GasLog Skagen**	**155,000**	Membrane	GasLog	SHI	GasLog LNG Services
2013	**GasLog Sydney**	**155,000**	Membrane	GasLog Partners	SHI	GasLog LNG Services
2013	**Grace Dahlia**	**177,630**	Moss	NYK	KHI	NYK LNG Shipmngt.
2013	**Hoegh Gandria** (ex Golar Seal)	**160,000**	Membrane	CoolCo	SHI	CoolCo
2013	**Lena River**	**155,165**	Membrane	Dynagas LNG Partners	HHI	Dynagas
2013	**Wilforce**	**156,007**	Membrane	Awilco LNG	DSME	Awilco LNG Technical
2013	**Wilpride**	**156,007**	Membrane	Awilco LNG	DSME	Awilco LNG Technical
2013	**Woodside Goode**	**159,662**	Membrane	Maran Gas Maritime	DSME	Maran Gas Maritime
2013	**Woodside Rogers**	**160,668**	Membrane	Maran Gas Maritime	DSME	Maran Gas Maritime
2013	**Yenisei River**	**155,000**	Membrane	Dynagas LNG Partners	HHI	Dynagas
2014	**Adam LNG**	**161,870**	Membrane	Oman Shipping Co	HHI	Oman Ship Mngt

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* Cargo Containment System

LNG carrier fleet

Built	Vessel Name	Capacity (m^3)	CCS*	Owner	Builder	Manager
2014	**Amani**	**154,800**	Membrane	Brunei Gas Carriers	HHI	Brunei Gas Carriers
2014	**Asia Energy**	**160,000**	Membrane	Chevron Transport	SHI	Chevron Transport
2014	**Asia Vision**	**160,000**	Membrane	Chevron Transport	SHI	Chevron Transport
2014	**Clean Ocean**	**161,881**	Membrane	Dynagas	HHI	Dynagas
2014	**Clean Planet**	**161,814**	Membrane	Dynagas	HHI	Dynagas
2014	**Cool Runner**	**160,000**	Membrane	Thenamaris	SHI	Thenamaris LNG
2014	**Corcovado LNG**	**160,106**	Membrane	TMS Cardiff Gas	DSME	TMS Cardiff Gas
2014	**Energos Penguin** (ex Golar Penguin)	**160,000**	Membrane	Energos Infrastructure	SHI	CoolCo
2014	**Esshu Maru**	**155,300**	Moss	Trans Pacific Shipping 2 Ltd.	MHI	MOL LNG Transport
2014	**GasLog Saratoga**	**155,000**	Membrane	GasLog	SHI	GasLog LNG Services
2014	**Golar Bear**	**160,000**	Membrane	CoolCo	SHI	Golar Management
2014	**Golar Crystal**	**160,000**	Membrane	CoolCo	SHI	Golar Management
2014	**Golar Glacier**	**162,000**	Membrane	CoolCo	HSHI	Golar Management
2014	**Kita LNG**	**160,118**	Membrane	TMS Cardiff Gas	DSME	TMS Cardiff Gas
2014	**Kool Frost** (ex Golar Frost)	**160,000**	Membrane	CoolCo	SHI	Golar Management
2014	**LNG Venus**	**155,873**	Moss	Osaka Gas International Transport Inc	MHI	MOL LNG Transport
2014	**Maran Gas Apollonia**	**161,870**	Membrane	Maran Nakilat	HSHI	Maran Gas Maritime
2014	**Maran Gas Delphi**	**159,800**	Membrane	Maran Nakilat	DSME	Maran Gas Maritime
2014	**Maran Gas Efessos**	**159,800**	Membrane	Maran Nakilat	DSME	Maran Gas Maritime
2014	**Maran Gas Posidonia**	**161,870**	Membrane	Maran Nakilat	HSHI	Maran Gas Maritime
2014	**Pacific Arcadia**	**147,200**	Moss	NYK	MHI	NYK LNG Shipmngt.
2014	**Palu LNG**	**160,000**	Membrane	TMS Cardiff Gas	DSME	TMS Cardiff Gas
2014	**Pskov**	**170,200**	Membrane	Sovcomflot	STX SB (Jinhae)	Sun Ship Management
2014	**Seishu Maru**	**155,300**	Moss	Trans Pacific Shipping 1 Ltd.	MHI	NYK LNG Shipmngt.
2014	**Solaris**	**155,000**	Membrane	GasLog Partners	SHI	GasLog LNG Services
2014	**Velikiy Novgorod**	**170,567**	Membrane	Sovcomflot	STX SB (Jinhae)	Sun Ship Management
2014	**Yari LNG**	**160,000**	Membrane	TMS Cardiff Gas	DSME	TMS Cardiff Gas
2015	**Amadi**	**154,800**	Membrane	Brunei Gas Carriers	HHI	Brunei Gas Carriers
2015	**Asia Endeavour**	**160,000**	Membrane	Chevron Transport	SHI	Chevron Transport
2015	**Asia Excellence**	**160,000**	Membrane	Chevron Transport	SHI	Chevron Transport
2015	**Beidou Star**	**172,000**	Membrane	MOL	HZ	MOL LNG Transport (E)
2015	**BW Pavilion Leeara**	**161,870**	Membrane	BW LNG	HHI	BW Fleet Mngt
2015	**BW Pavilion Vanda**	**161,870**	Membrane	BW LNG	HHI	BW Fleet Mngt
2015	**Clean Horizon**	**161,870**	Membrane	Dynagas	HHI	Dynagas
2015	**Cool Explorer**	**161,352**	Membrane	Thenamaris	SHI	Thenamaris LNG
2015	**Energy Atlantic**	**159,924**	Membrane	Alpha Gas	STX SB (Jinhae)	Alpha Gas
2015	**GasLog Salem**	**155,000**	Membrane	GasLog	SHI	GasLog LNG Services
2015	**Golar Kelvin**	**162,000**	Membrane	CoolCo	HSHI	CoolCo
2015	**Kool Baltic** (ex SCF Melampus)	**170,200**	Membrane	Eastern Pacific Shpg	STX SB (Jinhae)	CoolCo
2015	**Kool Blizzard** (ex Golar Snow)	**160,000**	Membrane	CoolCo	SHI	CoolCo

Built	Vessel Name	Capacity (m^3)	CCS*	Owner	Builder	Manager
2015	**Kool Boreas** (ex SCF Mitre)	**170,200**	Membrane	Eastern Pacific Shpg	STX SB (Jinhae)	CoolCo
2015	**Kool Ice** (ex Golar Ice)	**160,000**	Membrane	CoolCo	SHI	CoolCo
2015	**LNG Bonny II**	**176,809**	Membrane	Bonny Gas Transport	HHI	Nigeria LNG Ltd.
2015	**LNG Finima II**	**174,900**	Membrane	Bonny Gas Transport	SHI	NLNG Ship Mngt
2015	**LNG Jurojin**	**155,300**	Moss	KEPCO	MHI	MOL LNG Transport
2015	**LNG Port Harcourt II**	**174,900**	Membrane	Bonny Gas Transport	SHI	NLNG Ship Mngt
2015	**Maran Gas Alexandria**	**161,870**	Membrane	Maran Gas Maritime	HSHI	Maran Gas Maritime
2015	**Maran Gas Lindos**	**159,800**	Membrane	Maran Gas Maritime	DSME	Maran Gas Maritime
2015	**Maran Gas Mystras**	**159,800**	Membrane	Maran Gas Maritime	DSME	Maran Gas Maritime
2015	**Maran Gas Sparta**	**161,870**	Membrane	Maran Gas Maritime	HSHI	Maran Gas Maritime
2015	**Maran Gas Troy**	**159,800**	Membrane	Maran Gas Maritime	DSME	Maran Gas Maritime
2015	**Papua**	**172,000**	Membrane	MOL	HZ	MOL LNG Transport (E)
2015	**Southern Cross**	**172,000**	Membrane	MOL	HZ	MOL LNG Transport (E)
2016	**CESI Gladstone**	**174,323**	Membrane	China Energy Shpg	HZ	China Energy Mngt
2016	**Christophe de Margerie**	**172,845**	Membrane	Sovcomflot	DSME	Sunship Mgmt
2016	**Clean Vision**	**162,000**	Membrane	Dynagas	HHI	Dynagas
2016	**GasLog Geneva**	**174,000**	Membrane	GasLog Partners	SHI	GasLog LNG Services
2016	**GasLog Gibraltar**	**174,000**	Membrane	GasLog Partners	SHI	GasLog LNG Services
2016	**GasLog Glasgow**	**174,000**	Membrane	GasLog Partners	SHI	GasLog LNG Services
2016	**GasLog Greece**	**174,000**	Membrane	GasLog Partners	SHI	GasLog LNG Services
2016	**Kumul**	**172,000**	Membrane	MOL	HZ	MOL LNG Transport (E)
2016	**La Mancha Knutsen**	**176,300**	Membrane	Knutsen OAS Shipping	HHI	Knutsen OAS Shipping
2016	**LNG Abalamabie**	**174,900**	Membrane	Bonny Gas Transport	SHI	Northern Marine Mngt
2016	**LNG Abuja II**	**174,900**	Membrane	Bonny Gas Transport	SHI	Northern Marine Mngt
2016	**LNG Fukurokuju**	**165,134**	Moss	KEPCO	KHI	MOL LNG Transport
2016	**LNG Lagos II**	**176,809**	Membrane	Bonny Gas Transport	HHI	Nigeria LNG Ltd.
2016	**LNG Mars**	**155,693**	Moss	Osaka Gas International Transport Inc	MHI	MOL LNG Transport
2016	**LNG Saturn**	**155,300**	Moss	MOL	MHI	MOL LNG Transport
2016	**Maran Gas Achilles**	**174,000**	Membrane	Maran Gas Maritime	HSHI	Maran Gas Maritime
2016	**Maran Gas Agamemnon**	**174,000**	Membrane	Maran Gas Maritime	HSHI	Maran Gas Maritime
2016	**Maran Gas Amphipolis**	**173,479**	Membrane	Maran Gas Maritime	DSME	Maran Gas Maritime
2016	**Maran Gas Hector**	**174,000**	Membrane	Maran Gas Maritime	HSHI	Maran Gas Maritime
2016	**Maran Gas Leto**	**174,000**	Membrane	Maran Gas Maritime	HSHI	Maran Gas Maritime
2016	**Maran Gas Pericles**	**175,069**	Membrane	Maran Gas Maritime	HSHI	Maran Gas Maritime
2016	**Maran Gas Vergina**	**174,364**	Membrane	Maran Gas Maritime	DSME	Maran Gas Maritime

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* Cargo Containment System

Built	Vessel Name	Capacity (m³)	CCS*	Owner	Builder	Manager
2016	**Maria Energy**	**174,000**	Membrane	Tsakos Energy Nav	HHI	Tsakos Hyundai Mgmt
2016	**Prachi**	**173,323**	Membrane	India LNG Transport	HHI	Shpg Corp of India
2016	**Rioja Knutsen**	**176,300**	Membrane	Knutsen OAS Shipping	HHI	Knutsen OAS Shipping
2016	**Seapeak Creole** (ex-Creole Spirit)	**173,545**	Membrane	Seapeak	DSME	Seapeak
2016	**Seapeak Oak** (ex-Oak Spirit)	**173,545**	Membrane	Seapeak	DSME	Seapeak
2016	**Seri Camellia**	**150,200**	Moss	MISC	HHI	EagleStar Shipmgmt
2016	**Tessala**	**171,800**	Membrane	ITOCHU Corp	HHI	Hyproc Shipping Co.
2017	**Asia Integrity**	**160,000**	Membrane	Chevron Transport	SHI	Chevron Transport
2017	**Asia Venture**	**160,000**	Membrane	Chevron Transport	SHI	Chevron Transport
2017	**Bishu Maru**	**165,287**	Moss	K-Line	KHI	K-Line Energ Mgmt
2017	**Boris Vilkitsky**	**172,636**	Membrane	Dynagas	DSME	Dynagas
2017	**CESI Beihai**	**174,323**	Membrane	China Energy Shpg	HZ	China Energy Mngt
2017	**CESI Qingdao**	**174,323**	Membrane	China Energy Shpg	HZ	China Energy Mngt
2017	**CESI Tianjin**	**174,323**	Membrane	China Energy Shpg	HZ	China Energy Mngt
2017	**Eduard Toll**	**172,652**	Membrane	Seapeak CLSICO JV	DSME	Teekay Shpg. (Gla)
2017	**Fedor Litke**	**172,636**	Membrane	Dynagas	DSME	Dynagas
2017	**Hyundai Peacepia**	**174,000**	Membrane	Hyundai LNG Shipping	DSME	Hyundai LNG Shipping
2017	**Hyundai Princepia**	**174,000**	Membrane	Hyundai LNG Shipping	DSME	Hyundai LNG Shipping
2017	**Macoma**	**173,545**	Membrane	Seapeak	DSME	STASCO (Shell)
2017	**Maran Gas Olympias**	**173,638**	Membrane	Maran Gas Maritime	DSME	Maran Gas Maritime
2017	**Maran Gas Roxana**	**173,615**	Membrane	Maran Gas Maritime	DSME	Maran Gas Maritime
2017	**Maran Gas Ulysses**	**175,069**	Membrane	Maran Gas Maritime	HSHI	Maran Gas Maritime
2017	**Murex**	**173,545**	Membrane	Seapeak	DSME	STASCO (Shell)
2017	**Ougarta**	**171,800**	Membrane	ITOCHU Corp	HHI	Hyproc Shipping Co.
2017	**Pan Asia**	**174,000**	Membrane	Seapeak	HZ	Seapeak Maritime
2017	**Seapeak Vancouver** (ex Torben Spirit)	**173,545**	Membrane	Seapeak	DSME	Seapeak
2017	**Seri Cempaka**	**150,200**	Moss	MISC	HHI	EagleStar Shipmgmt
2017	**Seri Cenderawasih**	**150,200**	Moss	MISC	HHI	EagleStar Shipmgmt
2017	**SK Audace**	**180,000**	Membrane	SK & Marubeni JV	SHI	SK Shipping
2017	**SM Eagle**	**174,263**	Membrane	Korea Line LNG	DSME	KLC SM
2017	**SM Seahawk**	**174,263**	Membrane	Korea Line LNG	DSME	KLC SM
2018	**Boris Davydov**	**172,636**	Membrane	Dynagas	DSME	Dynagas
2018	**British Achiever**	**173,644**	Membrane	BP Shipping	DSME	BP Shipping
2018	**British Contributor**	**173,644**	Membrane	BP Shipping	DSME	BP Shipping
2018	**British Partner**	**173,644**	Membrane	BP Shipping	DSME	BP Shipping
2018	**BW Lilac**	**174,284**	Membrane	BW LNG	DSME	BW Fleet Mngt
2018	**BW Tulip**	**174,284**	Membrane	BW LNG	DSME	BW Fleet Mngt
2018	**Castillo de Caldelas**	**178,817**	Membrane	Elcano	Imabari SB Saijo	Elcano
2018	**Castillo de Merida**	**178,817**	Membrane	Elcano	Imabari SB Saijo	Elcano
2018	**CESI Lianyungang**	**174,323**	Membrane	China Energy Shpg	HZ	China Energy Mngt
2018	**CESI Wenzhou**	**174,323**	Membrane	China Energy Shpg	HZ	China Energy Mngt
2018	**Diamond Gas Orchid**	**165,000**	Moss	NYK	MHI	NYK LNG Shipmngt.
2018	**Diamond Gas Rose**	**165,000**	Moss	NYK	MHI	NYK LNG Shipmngt.
2018	**Energy Liberty**	**166,571**	Other	MOL	JMU Tsu Shipyard	MOL LNG Transport
2018	**Enshu Maru**	**165,257**	Moss	K-Line	KHI	K-Line Energ Mgmt
2018	**Flex Endeavour**	**173,400**	Membrane	Hyundai Glovis	DSME	FLEX Fleet Mngt.
2018	**Flex Enterprise**	**173,400**	Membrane	Hyundai Glovis	DSME	FLEX Fleet Mngt.
2018	**Flex Rainbow**	**174,000**	Membrane	FLEX LNG	SHI	FLEX Fleet Mngt.
2018	**Flex Ranger**	**174,101**	Membrane	FLEX LNG	SHI	FLEX Fleet Mngt.
2018	**GasLog Genoa**	**174,000**	Membrane	GasLog	SHI	GasLog LNG Services
2018	**GasLog Hong Kong**	**174,000**	Membrane	GasLog	HHI	GasLog LNG Services
2018	**GasLog Houston**	**174,000**	Membrane	GasLog	HHI	GasLog LNG Services
2018	**Georgiy Brusilov**	**172,636**	Membrane	Dynagas	DSME	Dynagas
2018	**Kinisis**	**174,000**	Membrane	Chandris (Hellas)	DSME	K Line LNG Shpg.
2018	**LNG Juno**	**180,000**	Moss	MOL	MHI	MOL LNG Transport
2018	**LNG Sakura**	**177,582**	Moss	KEPCO	KHI	NYK LNG Shipmngt.
2018	**LNG Schneeweisschen**	**180,125**	Membrane	MOL	DSME	MOL LNG Transport (E)
2018	**Magdala**	**173,545**	Membrane	Seapeak	DSME	STASCO (Shell)
2018	**Maran Gas Spetses**	**173,554**	Membrane	Maran Gas Maritime	DSME	Maran Gas Maritime
2018	**Marvel Eagle**	**156,265**	Moss	MOL	KHI	MOL LNG Transport
2018	**Marvel Falcon**	**174,000**	Membrane	NYK	SHI	NYK Shipmngt. Pte.
2018	**Marvel Hawk**	**174,000**	Membrane	Schulte Group	SHI	B. Schulte (UK)
2018	**Megara**	**173,545**	Membrane	Seapeak	DSME	STASCO (Shell)
2018	**Myrina**	**173,545**	Membrane	Seapeak	DSME	STASCO (Shell)
2018	**Oceanic Breeze**	**155,671**	Moss	K-Line	MHI	K-Line Energ Mgmt
2018	**Pacific Breeze**	**183,352**	Moss	K-Line	KHI	K Marine SM
2018	**Pacific Mimosa**	**155,727**	Moss	NYK	MHI	NYK LNG Shipmngt.
2018	**Pan Americas**	**174,000**	Membrane	Seapeak	HZ	Seapeak Maritime
2018	**Pan Europe**	**174,000**	Membrane	Seapeak	HZ	Seapeak Maritime
2018	**Patris**	**174,000**	Membrane	Chandris (Hellas)	DSME	K Line LNG Shpg.
2018	**Rudolf Samoylovich**	**172,567**	Membrane	Seapeak CLSICO JV	DSME	Teekay Shpg. (Gla)
2018	**Seapeak Bahrain** (ex Bahrain Spirit)	**180,000**	Membrane	Seapeak	DSME	Teekay Shpg. (Gla)
2018	**Seapeak Glasgow** (ex Sean Spirit)	**174,162**	Membrane	Seapeak	HSHI	Seapeak
2018	**Seri Camar**	**150,200**	Moss	MISC	HHI	EagleStar Shipmgmt
2018	**Seri Cemara**	**150,200**	Moss	MISC	HHI	EagleStar Shipmgmt
2018	**SK Resolute**	**180,082**	Membrane	SK & Marubeni JV	SHI	SK Shipping
2018	**SK Serenity**	**174,117**	Membrane	SK Shipping	SHI	SK Shipping
2018	**SK Spica**	**174,117**	Membrane	SK Shipping	SHI	SK Shipping
2018	**Vladimir Rusanov**	**172,658**	Membrane	Arctic LNG	DSME	MOL LNG Transport (E)
2018	**Vladimir Vize**	**172,658**	Membrane	Arctic LNG	DSME	MOL LNG Transport (E)
2019	**Adriano Knutsen**	**179,981**	Membrane	Knutsen OAS Shipping	HHI	Knutsen OAS Shipping
2019	**British Listener**	**173,644**	Membrane	BP Shipping	DSME	BP Shipping
2019	**British Mentor**	**173,644**	Membrane	BP Shipping	DSME	BP Shipping

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* Cargo Containment System

LNG carrier fleet

Built	Vessel Name	Capacity (m³)	CCS*	Owner	Builder	Manager
2019	**British Sponsor**	**173,644**	Membrane	BP Shipping	DSME	BP Shipping
2019	**Bushu Maru**	**180,000**	Moss	NYK	MHI	NYK LNG Shipmngt.
2019	**BW Pavilion Aranda**	**173,400**	Membrane	BW LNG	DSME	BW Fleet Mngt
2019	**Diamond Gas Sakura**	**165,000**	Moss	NYK	MHI	NYK LNG Shipmngt.
2019	**Energy Glory**	**166,686**	Other	NYK	JMU Tsu Shipyard	NYK LNG Shipmngt.
2019	**Energy Innovator**	**166,571**	Other	MOL	JMU Tsu Shipyard	MOL LNG Transport
2019	**Energy Universe**	**166,637**	Other	MOL	JMU Tsu Shipyard	MOL LNG Transport
2019	**Flex Constellation**	**173,400**	Membrane	FLEX LNG	DSME	FLEX Fleet Mngt.
2019	**Flex Courageous**	**173,400**	Membrane	FLEX LNG	DSME	FLEX Fleet Mngt.
2019	**GasLog Gladstone**	**174,000**	Membrane	GasLog	SHI	GasLog LNG Services
2019	**GasLog Warsaw**	**180,000**	Membrane	GasLog	SHI	GasLog LNG Services
2019	**Georgiy Ushakov**	**172,652**	Membrane	Seapeak CLSICO JV	DSME	Teekay Shpg. (Gla)
2019	**LNG Dubhe**	**174,000**	Membrane	MOL	HZ	MOL LNG Transport (E)
2019	**LNG Jia Xing** (ex Saga Dawn)	**45,000**	Membrane	CMC Leasing	CMHI (Jiangsu)	Integrated Mrtm
2019	**Maran Gas Andros**	**173,400**	Membrane	Maran Gas Maritime	DSME	Maran Gas Maritime
2019	**Maran Gas Chios**	**173,548**	Membrane	Maran Gas Maritime	DSME	Maran Gas Maritime
2019	**Maran Gas Hydra**	**173,617**	Membrane	Maran Gas Maritime	DSME	Maran Gas Maritime
2019	**Marvel Crane**	**177,627**	Moss	NYK	MHI	NYK Shipmngt. Pte.
2019	**Marvel Heron**	**177,000**	Moss	MOL	MHI	MOL LNG Transport
2019	**Marvel Kite**	**174,000**	Membrane	Tohmei Shpg	SHI	MMS Co Ltd
2019	**Marvel Pelican**	**156,265**	Moss	MOL	KHI	MOL LNG Transport
2019	**Nikolay Urvantsev**	**172,597**	Membrane	Arctic Purple LNG	DSME	MOL LNG Transport (E)
2019	**Nikolay Yevgenov**	**172,625**	Membrane	Seapeak CLSICO JV	DSME	Teekay Shpg. (Gla)
2019	**Nikolay Zubov**	**172,636**	Membrane	Dynagas	DSME	Dynagas
2019	**Nohshu Maru**	**180,000**	Moss	MOL	MHI	MOL LNG Transport
2019	**Pan Africa**	**174,000**	Membrane	Seapeak	HZ	Seapeak Maritime
2019	**Prism Agility**	**180,024**	Membrane	SK Shipping	HHI	SK Shipping
2019	**Prism Brilliance**	**180,016**	Membrane	SK Shipping	HHI	SK Shipping
2019	**Rias Baixas Knutsen**	**180,041**	Membrane	Knutsen OAS Shipping	HHI	Knutsen OAS Shipping
2019	**Seapeak Yamal** (ex Yamal Spirit)	**174,174**	Membrane	Seapeak	HSHI	Seapeak
2019	**Shinshu Maru**	**177,481**	Moss	NYK	KHI	NYK LNG Shipmngt.
2019	**Sohshu Maru**	**177,474**	Moss	MOL	KHI	MOL LNG Transport
2019	**Vladimir Voronin**	**172,608**	Membrane	Seapeak CLSICO JV	DSME	Teekay Shpg. (Gla)
2019	**Woodside Chaney**	**173,579**	Membrane	Maran Gas Maritime	DSME	Maran Gas Maritime
2019	**Woodside Rees Withers**	**173,400**	Membrane	Maran Gas Maritime	DSME	Maran Gas Maritime
2019	**Yakov Gakkel**	**172,658**	Membrane	Seapeak CLSICO JV	DSME	Teekay Shpg. (Gla)
2020	**Amberjack LNG**	**174,000**	Membrane	TMS Cardiff Gas	HHI	TMS Cardiff Gas
2020	**Aristos I**	**174,000**	Membrane	Capital Product Partners	HHI	B. Schulte (Hellas)
2020	**Bonito LNG**	**174,000**	Membrane	TMS Cardiff Gas	HHI	TMS Cardiff Gas
2020	**BW Magnolia**	**173,400**	Membrane	BW LNG	DSME	BW Fleet Mngt
2020	**BW Pavilion Aranthera**	**173,400**	Membrane	BW LNG	DSME	BW Fleet Mngt
2020	**Celsius Copenhagen**	**180,000**	Membrane	Celsius	SHI	Celsius Tech
2020	**Cool Discoverer**	**174,000**	Membrane	Thenamaris	HHI	Thenamaris LNG
2020	**Diamond Gas Metropolis**	**174,000**	Membrane	NYK Mitsubishi JV	HSHI	NYK LNG Shipmngt.
2020	**Dorado LNG**	**174,000**	Membrane	TMS Cardiff Gas	SHI	TMS Cardiff Gas
2020	**Elisa Larus**	**174,000**	Membrane	NYK	HSHI	Gazocean (NYK)
2020	**Energy Pacific**	**173,400**	Membrane	Alpha Gas	DSME	Alpha Gas
2020	**Flex Amber**	**173,400**	Membrane	FLEX LNG	HSHI	FLEX Fleet Mngt.
2020	**Flex Artemis**	**173,400**	Membrane	FLEX LNG	DSME	FLEX Fleet Mngt.
2020	**Flex Aurora**	**173,400**	Membrane	FLEX LNG	HSHI	FLEX Fleet Mngt.
2020	**Flex Resolute**	**173,400**	Membrane	FLEX LNG	DSME	FLEX Fleet Mngt.
2020	**GasLog Georgetown**	**174,000**	Membrane	GasLog	SHI	GasLog LNG Services
2020	**GasLog Wales**	**180,000**	Membrane	GasLog	SHI	GasLog LNG Services
2020	**GasLog Westminster**	**180,000**	Membrane	GasLog	SHI	GasLog LNG Services
2020	**GasLog Windsor**	**180,000**	Membrane	GasLog	SHI	GasLog LNG Services
2020	**Global Energy**	**173,514**	Membrane	Nakilat Maran JV	DSME	Nakilat Shipping
2020	**Kool Firn** (ex SCF Barents)	**174,000**	Membrane	Eastern Pacific Shpg	HSHI	CoolCo
2020	**La Seine**	**174,000**	Membrane	TMS Cardiff Gas	HHI	TMS Cardiff Gas
2020	**LNG Megrez**	**174,000**	Membrane	MOL China COSCO JV	HZ	MOL LNG Transport (E)
2020	**LNG Merak**	**174,000**	Membrane	MOL China COSCO JV	HZ	MOL LNG Transport (E)
2020	**LNG Phecda**	**174,000**	Membrane	MOL China COSCO JV	HZ	MOL LNG Transport (E)
2020	**Maran Gas Psara**	**173,595**	Membrane	Maran Gas Maritime	DSME	Maran Gas Maritime
2020	**Pearl LNG**	**174,000**	Membrane	TMS Cardiff Gas	SHI	TMS Cardiff Gas
2020	**Qogir**	**174,000**	Membrane	TMS Cardiff Gas	SHI	TMS Cardiff Gas
2020	**SCF La Perouse**	**174,000**	Membrane	Sovcomflot	HSHI	Sun Ship Management
2020	**Traiano Knutsen**	**180,000**	Membrane	Knutsen OAS Shipping	HHI	Knutsen OAS Shipping
2020	**Vivit Americas LNG**	**174,000**	Membrane	TMS Cardiff Gas	HHI	TMS Cardiff Gas
2020	**Woodside Charles Allen**	**173,583**	Membrane	Maran Gas Maritime	DSME	Maran Gas Maritime
2021	**Adamastos**	**174,000**	Membrane	Capital Product Partners	HHI	Capital Ship Management
2021	**Aristarchos**	**174,000**	Membrane	Capital Product Partners	HHI	B. Schulte (UK)
2021	**Aristidis I**	**174,000**	Membrane	Capital Product Partners	HHI	Capital Gas SM
2021	**Asklipios**	**174,000**	Membrane	Capital Product Partners	HHI	Capital Ship Management
2021	**Attalos**	**174,000**	Membrane	Capital Product Partners	HHI	B. Schulte (UK)
2021	**BW Helios**	**174,000**	Membrane	BW LNG	DSME	BW Fleet Mngt
2021	**BW Lesmes**	**174,000**	Membrane	BW LNG	DSME	BW Fleet Mngt
2021	**Celsius Canberra**	**180,000**	Membrane	Celsius	SHI	Celsius Tech
2021	**Celsius Carolina**	**180,000**	Membrane	Celsius	SHI	Celsius Tech
2021	**Celsius Charlotte**	**180,000**	Membrane	Celsius	SHI	Celsius Tech
2021	**Cobia LNG**	**174,000**	Membrane	TMS Cardiff Gas	HHI	TMS Cardiff Gas
2021	**Cool Racer**	**174,000**	Membrane	Thenamaris	HHI	Thenamaris LNG
2021	**Diamond Gas Crystal**	**174,000**	Membrane	MISC NYK Mitsubishi JV	HSHI	NYK LNG Shipmngt.
2021	**Diamond Gas Victoria**	**174,000**	Membrane	MISC NYK Mitsubishi JV	HSHI	NYK LNG Shipmngt.
2021	**Energy Endeavour**	**173,400**	Membrane	Alpha Gas	DSME	Alpha Gas

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* Cargo Containment System

Built	Vessel Name	Capacity (m³)	CCS*	Owner	Builder	Manager
2021	**Energy Integrity**	**173,400**	Membrane	Alpha Gas	DSME	Alpha Gas
2021	**Energy Intelligence**	**173,400**	Membrane	Alpha Gas	DSME	Alpha Gas
2021	**Flex Freedom**	**173,400**	Membrane	FLEX LNG	DSME	FLEX Fleet Mngt.
2021	**Flex Vigilant**	**174,000**	Membrane	FLEX LNG	HSHI	FLEX Fleet Mngt.
2021	**Flex Volunteer**	**174,000**	Membrane	FLEX LNG	HSHI	FLEX Fleet Mngt.
2021	**GAIL Bhuwan**	**180,000**	Membrane	MOL	DSME	MOL LNG Transport (A)
2021	**GasLog Galveston**	**174,000**	Membrane	GasLog	SHI	GasLog LNG Services
2021	**GasLog Wellington**	**180,000**	Membrane	GasLog	SHI	GasLog LNG Services
2021	**GasLog Winchester**	**180,000**	Membrane	GasLog	SHI	GasLog LNG Services
2021	**Global Sea Spirit**	**174,000**	Membrane	Nakilat Maran JV	DSME	Nakilat Shipping
2021	**Global Star**	**173,400**	Membrane	Nakilat Maran JV	DSME	Nakilat Shipping
2021	**Grace Emilia**	**174,000**	Membrane	NYK	HSHI	NYK LNG Shipmngt.
2021	**Gui Ying**	**174,000**	Membrane	CSSC Shpg Leasing	HZ	B. Schulte (Hellas)
2021	**Hellas Athina**	**173,400**	Membrane	Latsco Shipping	HSHI	Latsco Marine Mngt
2021	**Hellas Diana**	**173,400**	Membrane	Latsco Shipping	HSHI	Latsco Marine Mngt
2021	**Isabella**	**174,129**	Membrane	Maran Gas Maritime	DSME	Maran Gas Maritime
2021	**Kool Orca** (ex SCF Timmerman)	**174,095**	Membrane	Eastern Pacific Shpg	HSHI	CoolCo
2021	**LNG Adventure**	**174,000**	Membrane	NYK	SHI	Gazocean (NYK)
2021	**LNG Endeavour**	**174,000**	Membrane	NYK	SHI	Gazocean (NYK)
2021	**LNG Endurance**	**174,000**	Membrane	NYK	SHI	Gazocean (NYK)
2021	**LNG Enterprise**	**174,000**	Membrane	NYK	SHI	Gazocean (NYK)
2021	**LNG Rosenrot**	**180,000**	Membrane	MOL	DSME	MOL LNG Transport (E)
2021	**LNGShips Athena**	**174,000**	Membrane	TMS Cardiff Gas	HHI	TMS Cardiff Gas
2021	**LNGShips Empress**	**174,000**	Membrane	TMS Cardiff Gas	SHI	TMS Cardiff Gas
2021	**LNGShips Manhattan**	**174,000**	Membrane	TMS Cardiff Gas	HHI	TMS Cardiff Gas
2021	**Maran Gas Amorgos**	**174,000**	Membrane	Maran Gas Maritime	DSME	Maran Gas Maritime
2021	**Maran Gas Ithaca**	**174,000**	Membrane	Maran Gas Maritime	DSME	Maran Gas Maritime
2021	**Maran Gas Kalymnos**	**173,400**	Membrane	Maran Gas Maritime	DSME	Maran Gas Maritime
2021	**Marvel Swan**	**174,000**	Membrane	Navigare Capital	SHI	Pronav Ship Mngt
2021	**Minerva Chios**	**174,000**	Membrane	Minerva Gas	SHI	WSM Malaysia
2021	**Minerva Kalymnos**	**174,000**	Membrane	Minerva Gas	SHI	B. Schulte (Hellas)
2021	**Minerva Limnos**	**173,400**	Membrane	Minerva Gas	DSME	B. Schulte (Hellas)
2021	**Minerva Psara**	**173,400**	Membrane	Minerva Gas	DSME	WSM Malaysia
2021	**MOL Hestia**	**180,000**	Membrane	MOL	DSME	Northern Marine Mngt
2021	**Mu Lan**	**174,000**	Membrane	CSSC Shpg Leasing	HZ	B. Schulte (Hellas)
2021	**Prism Courage**	**180,000**	Membrane	SK Shipping	HHI	SK Shipping
2021	**Vivirt City LNG**	**174,000**	Membrane	H-Line Shipping	HSHI	H-Line Shipping
2021	**Yiannis**	**174,000**	Membrane	Maran Gas Maritime	DSME	Maran Gas Maritime
2022	**Alicante Knutsen**	**174,000**	Membrane	Knutsen OAS Shipping	Hyundai Samho HI	Knutsen OAS Shipping
2022	**BW Cassia**	**174,000**	Membrane	BW LNG	Daewoo (DSME)	BW LNG
2022	**BW ENN Snow Lotus**	**174,000**	Membrane	BW LNG	Daewoo (DSME)	BW Fleet Mngt Norway

Built	Vessel Name	Capacity (m³)	CCS*	Owner	Builder	Manager
2022	**Clean Cajun**	**200,000**	Membrane	Dynagas Ltd	Hyundai HI (Ulsan)	Dynagas Ltd
2022	**Clean Copano**	**200,000**	Membrane	Dynagas Ltd	Hyundai HI (Ulsan)	Dynagas Ltd
2022	**Elisa Aquila**	**174,000**	Membrane	Nippon Yusen Kaisha	Hyundai Samho HI	Gazocean S.A.
2022	**Global Sealine**	**174,000**	Membrane	Global Shipping	Daewoo (DSME)	Nakilat Shipping
2022	**Grace Freesia**	**174,000**	Membrane	Nippon Yusen Kaisha	Hyundai Samho HI	NYK LNG Shipmngt.
2022	**Huelva Knutsen**	**174,000**	Membrane	Knutsen OAS Shipping	Hyundai Samho HI	Knutsen OAS Shipping
2022	**John A. Angelicoussis**	**174,000**	Membrane	Maran Gas Maritime	Daewoo (DSME)	Maran Gas Maritime
2022	**Lagenda Serenity**	**79,960**	Membrane	K-Line	Hudong Zhonghua	K Marine SM
2022	**Lagenda Suria**	**79,958**	Membrane	K-Line	Hudong Zhonghua	K Marine SM
2022	**Lech Kaczynski**	**174,000**	Membrane	Knutsen OAS Shipping	Hyundai HI (Ulsan)	Knutsen OAS Shipping
2022	**Malaga Knutsen**	**174,000**	Membrane	Knutsen OAS Shipping	Hyundai Samho HI	Knutsen OAS Shipping
2022	**Minerva Amorgos**	**174,000**	Membrane	Minerva Marine	Samsung HI	Minerva Marine
2022	**Orion Bohemia** (ex Orion Song)	**174,000**	Membrane	Oceonix Services Ltd	Hyundai HI (Ulsan)	B. Schulte (Hellas)
2022	**Orion Monet** (ex Orion Star)	**174,000**	Membrane	Oceonix Services Ltd	Samsung HI	B. Schulte (Hellas)
2022	**Orion Sea**	**174,000**	Membrane	Oceonix Services Ltd	Samsung HI	B. Schulte (Hellas)
2022	**Orion Sun**	**174,000**	Membrane	Oceonix Services Ltd	Samsung HI	Oceonix Services Ltd
2022	**Prism Diversity**	**180,000**	Membrane	SK Shipping	Hyundai Samho HI	
2022	**Santander Knutsen**	**174,000**	Membrane	Knutsen OAS Shipping	Hyundai Samho HI	Knutsen OAS Shipping
2022	**Shaolin**	**174,199**	Membrane	United Liquefied Gas	Hudong Zhonghua	COSCO Shanghai LNG
2022	**SM Albatross**	**174,026**	Membrane	Korea Line LNG	Hyundai HI (Ulsan)	KLC SM
2022	**SM Bluebird**	**174,026**	Membrane	Korea Line LNG	Hyundai HI (Ulsan)	KLC SM
2022	**Tenergy**	**174,000**	Membrane	Tsakos Energy Nav	Hyundai HI (Ulsan)	B. Schulte (Hellas)
2022	**Vivit Arabia LNG**	**174,000**	Membrane	H-Line Shipping	Hyundai Samho HI	H-Line Shipping
2022	**Wu Dang**	**174,199**	Membrane	United Liquefied Gas	Hudong Zhonghua	COSCO Shanghai LNG

DSME: Daewoo Shipbuilding & Marine Engineering
HHI: Hyundai Heavy Industries (Ulsan)
HHIC: Hanjin Heavy Industries & Construction
HSHI: Hyundai Samho Heavy Industries
HZ: Hudong Zhonghua
IHI: Ishikawajima-Harima Heavy Industries
KHI: Kawasaki Heavy Industries
MHI: Mitsubishi Heavy Industries
SHI: Samsung Heavy Industries

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* Cargo Containment System

LNG carrier fleet

less than 30,000 cubic meters

The total LNG carrier fleet (less than 30,000 cubic meters) consisted of **27 vessels** at the end of 2022.

The orderbook comprised 1 vessel scheduled for delivery in 2023.

LNG CARRIER FLEET AT THE END OF 2022

Built	Vessel Name	Storage Capacity (m³)	CCS*	Owner	Builder	Location
2016	JS Ineos Innovation	27,566	Other	Evergas AS	Sinopacific Dayang	Evergas AS
2016	JS Ineos Inspiration	27,566	Other	Evergas AS	Sinopacific Offshore	Thome Ship Mngt
2017	JS Ineos Independence	27,566	Other	Evergas AS	Sinopacific Offshore	Evergas AS
2017	JS Ineos Intuition	27,500	Other	Evergas AS	Jiangsu New YZJ	Evergas AS
2017	JS Ineos Invention	27,500	Other	Evergas AS	Jiangsu New YZJ	Evergas AS
2020	CNTIC VPower Global	28,000	Other	CNTIC Vpower	COSCO HI (Dalian)	Synergy Maritime
2020	Coral Encanto	30,000	Other	Anthony Veder	Ningbo Xinle SB	Anthony Veder
2021	Hong Li	9,500	Other	Tianjin SW Maritime	Huangpu Wenchong	Tianjin SW Maritime
2021	Ravenna Knutsen	30,000	Other	Knutsen OAS Shipping	Hyundai Mipo	Knutsen OAS Shipping

LNG CARRIER ORDERBOOK AT THE END OF 2022

Built	Vessel Name	Storage Capacity (m³)	CCS*	Owner	Builder	Location
2023	TBN	30 000	Other	Anthony Veder	Hyundai Mipo	Anthony Veder

LNG bunkering vessel (LNGBV) fleet

The total LNGBV fleet consisted of **43 vessels** at the end of 2022.

The orderbook comprised 23 LNGBVs, 13 of which were scheduled for delivery in 2023.

LNGBV FLEET AT THE END OF 2022

Built	Vessel Name	Storage Capacity (m³)	CCS*	Type	Owner	Builder	Manager	Location
1974	Seagas	167	Other	LNGBV	Linde Europe North	Fiskerstrand Verft	Sirius Shipping	Stockholm, Sweden
2004	Pioneer Knutsen	1,100	Other	LNGBV/LNGC	Knutsen OAS Shipping	Veka SY Lemmer	Knutsen OAS Shipping	Norway
2009	Coral Methane	7,500	Other	LNGBV/LNGC	Anthony Veder	Remontowa Repair	Anthony Veder	Northwest Europe
2009	Oizmendi	600	Other	LNGBV	ITSAS Gas Bunker	Astilleros Murueta	Naviera Ulises ltd	Huelva, Spain
2010	Bergen LNG	850	Other	LNGBV	Bergen Tankers	Westcon Shipyards	Bergen Tankers	Bergen, Norway
2010	Coral Favia	10,030	Other	LNGBV/LNGC	Anthony Veder	Taizhou Skaugen	Anthony Veder	LNGC
2010	Coral Fraseri	10,030	Other	LNGBV/LNGC	Anthony Veder	Taizhou Skaugen	Anthony Veder	LNGC
2011	Coral Fungia	10,030	Other	LNGBV/LNGC	Anthony Veder	Taizhou Skaugen	Anthony Veder	LNGC
2011	Coral Furcata	10,030	Other	LNGBV/LNGC	Anthony Veder	Taizhou Skaugen	Anthony Veder	LNGC
2013	Coral Anthelia	6,500	Other	LNGBV/LNGC	Anthony Veder	AVIC Dingheng SB	Anthony Veder	LNGC
2013	Coral Energy	15,600	Other	LNGBV/LNGC	Anthony Veder	Neptun Werft	Anthony Veder	Northwest Europe
2015	Hai Yang Shi You 301	30,000	Other	LNGBV/LNGC	CenerTech	Jiangnan SY Group	CenerTech	LNGC
2017	Coralius	5,800	Other	LNGBV	Anthony Veder	Royal Bodewes SY	Sirius Shipping	Northwest Europe
2017	Green Zeebrugge	5,100	Other	LNGBV	NYK	HHIC	NYK LNG Ship Mgt	Zeebrugge, Belgium
2017	New Frontier 1 (ex Cardissa)	6,469	Other	LNGBV	Pan Ocean	STX SB (Jinhae)	WSM Malaysia	Northwest Europe
2018	Bunker Breeze	1,200	Other	LNGBV	Grupo Suardiaz	Ast. Zamakona	Flota Suardiaz SL	Algeciras, Spain
2018	Clean Jacksonville	2,200	Membrane	Bunker barge (pushed by tug)	Seaside LNG	Conrad Shipyard	Harvey Gulf	New York, USA
2018	Coral Energice	18,000	Other	LNGBV/LNGC	Anthony Veder	Neptun Werft	Anthony Veder	Northwest Europe
2018	Kairos	7,500	Other	LNGBV	Schulte Group	Hyundai Mipo	B. Schulte (Deutsch)	Northwest Europe
2019	FlexFueler 001	1,480	Other	Bunker barge (pushed by tug)	Titan LNG	Kooiman Marine Group	Titan LNG	ARA region

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Built	Vessel Name	Storage Capacity (m³)	CCS*	Type	Owner	Builder	Manager	Location
2019	LNG London	3,000	Other	LNGBV	LNG Shipping		LNG Shipping	ARA region
2019	SM Jeju LNG1	7,654	Membrane	LNGBV/LNGC	Korea Line LNG	SHI	KLC SM	LNGC
2020	Avenir Advantage	7,500	Other	LNGBV/LNGC	Future Horizon	Keppel Nantong	EagleStar Shipmanagement	Malaysia
2020	FlexFueler 002	1,480	Other	Bunker barge (pushed by tug)	Titan LNG	Kooiman Marine Group	Titan LNG	ARA region
2020	FueLNG Bellina	7,500	Other	LNGBV	FueLNG	Keppel Nantong	K Marine SM	Singapore
2020	Gas Agility	18,600	Membrane	LNGBV	MOL	HZ	MOL LNG Transport (E)	Rotterdam, Netherlands
2020	Kaguya	3,500	Other	LNGBV	Central LNG Shipping	KHI	Central LNG Shipping	Chubu region, Japan
2020	Q Ocean Service	4,000	Other	LNGBV	Q-LNG	VT Halter Marine	Harvey Gulf	Florida, USA
2020	SM Jeju LNG2	7,500	Membrane	LNGBV/LNGC	Korea Line LNG	SHI	KLC SM	LNGC
2021	Avenir Accolade	7,500	Other	LNGBV/LNGC	Avenir LNG	Keppel Nantong	Avenir LNG	LNGC
2021	Avenir Aspiration	7,500	Other	LNGBV/LNGC	Avenir LNG	CIMC SOE	Hoegh LNG Fleet M.	LNGC
2021	Clean Canaveral (Polaris)	5,500	Other	Bunker barge (pushed by tug)	Polaris New Energy	Fincantieri Bay	Polaris New Energy	Florida, USA
2021	Dmitry Mendeleev	5 800	Other	LNGBV	Gazpromneft Shipping	Keppel Nantong	Gazpromneft Shipping	Gulf of Finland
2021	Gas Vitality	18 600	Membrane	LNGBV	MOL	HZ	MOL LNG Transport (E)	Marseille, France
2021	Hai Gang Wei Lai (ex Avenir Allegiance)	20 000	Other	LNGBV/LNGC	SIPG Energy SSES	CIMC SOE	Wah Kwong Shipmgt	Shanghai, China
2021	Optimus	6 000	Other	LNGBV	Infortar	Damen Yichang	LNG Shipmngt OU	Northwest Europe
2022	Avenir Achievement	20 000	Other	LNGBV/LNGC	Avenir LNG	CIMC SOE	Hoegh LNG Fleet M.	Florida, USA
2022	Avenir Ascension	7 500	Other	LNGBV/LNGC	Avenir LNG	CIMC SOE	Hoegh LNG Fleet M.	Baltic Sea
2022	Coral Nordic	30 000	Other	LNGBV/LNGC	Anthony Veder	Jiangnan SY Group	Anthony Veder	LNGC
2022	Haugesund Knutsen	5 000	Other	LNGBV	Knutsen OAS Shipping	Armon (Gijon)	Knutsen OAS Shipping	Barcelona, Spain
2022	K LNG Dream	500	Other	LNGBV	S Korea Fisheries	EK Heavy Industries	S Korea Fisheries	
2022	K. Lotus	18 000	Other	LNGBV	Korea Line LNG	Hyundai Mipo	KLC SM	ARA region
2022	Xin Ao Pu Tuo Hao	8 500	Other	LNGBV	Shenzhen Xin Ao Maritime	Dalian Shipbuilding	Shenzhen Xin Ao Maritime	Yantian, China

LNGBV ORDERBOOK AT THE END OF 2022

Built	Vessel Name	Storage Capacity (m³)	CCS*	Type	Owner	Builder	Manager	Location
2023	Ecobunker Tokyo Bay	2,500	Other	LNGBV	Ecobunker Shipping	Fukuoka shipbuilding/JMU Isogo	Ueno Transtech	Tokyo Bay, Japan
2023	Hong Peng	9,500		LNGBV	Tianjin SW Maritime	Huangpu Wenchong	Tianjin SW Maritime	Nansha, China
2023	TBN	4,000	Other	Bunker barge (pulled by tug)	Rimorchiatori Riuniti Panfido	Rosetti Marino shipyard	Rimorchiatori Riuniti Panfido	North Adriatic Sea
2023	Titan Krios	4,500	Other	LNGBV	Titan LNG		Titan LNG	Mediterranean basin
2023	Titan Hyperion	8,000	Other	LNGBV	Titan LNG		Titan LNG	ARA region
2023	Brassavola	12,000	Membrane	LNGBV	MOL	Sembcorp	V-Bunkers	Singapore
2023	TBN (Kanfer 1)	6,000	Other	LNGBV	Kanfer Shipping	Taizhou	Kanfer Shipping	Mediterranean basin
2023	TBN (Kanfer 2)	6,000	Other	LNGBV	Kanfer Shipping	Taizhou	Kanfer Shipping	Mediterranean basin
2023	TBN	7,500	Other	LNGBV	KOGAS	HHI	Korea LNG Bunkering	Korea
2023	TBN (Fratelli Cosulich)	8,200	Other	LNGBV	Fratelli Cosulich	CIMC SOE	Fratelli Cosulich	Mediterranean basin
2023	Levante LNG	12,500	Other	LNGBV	Peninsula/Scale Gas	Hyundai Mipo	Peninsula/Scale Gas	Algeciras, Spain
2023	TBN	18,000	Other	LNGBV	Pan Ocean	Hyundai Mipo	Pan Ocean	Gulf of Mexico
2023	TBN	18,000	Other	LNGBV	Korea Line LNG	Hyundai Mipo	Korea Line LNG	Singapore
2024	TBN	14,000	Other	LNGBV	Wuhu LNG	Hudong Zhonghua	Wuhu LNG	China
2024	TBN	5,500	Other	Bunker barge (pushed by tug)	Polaris New Energy	Fincantieri Bay	Polaris New Energy	Florida, USA
2024	TBN (Fratelli Cosulich)	8,200	Other	LNGBV	Fratelli Cosulich	CIMC SOE	Fratelli Cosulich	Mediterranean basin
2024	TBN	12,000	Other	Bunker barge (pushed by tug)	Crowley Maritime	Fincantieri Bay	Crowley Maritime	US East Coast, USA
2024	Hai Yang Shi You 302	12,000	Other	LNGBV	CenerTech	CIMC SOE	CenerTech	Anhui, China
2024	TBN	3,500	Other	LNGBV	KEYS Bunkering Japan	MHI Shimonoseki	KEYS Bunkering Japan	Kyushu & Setouchi, Japan
2024	TBN	7,600	Other	LNGBV	Seaspan Marine	CIMC SOE	Seaspan Marine	
2024	TBN	7,600	Other	LNGBV	Seaspan Marine	CIMC SOE	Seaspan Marine	
2025	TBN	7,600	Other	LNGBV	Seaspan Marine	CIMC SOE	Seaspan Marine	
2025	Net Zero hive Canarias	12,500	Other	LNGBV	Scale Gas		Scale Gas	Canary Islands

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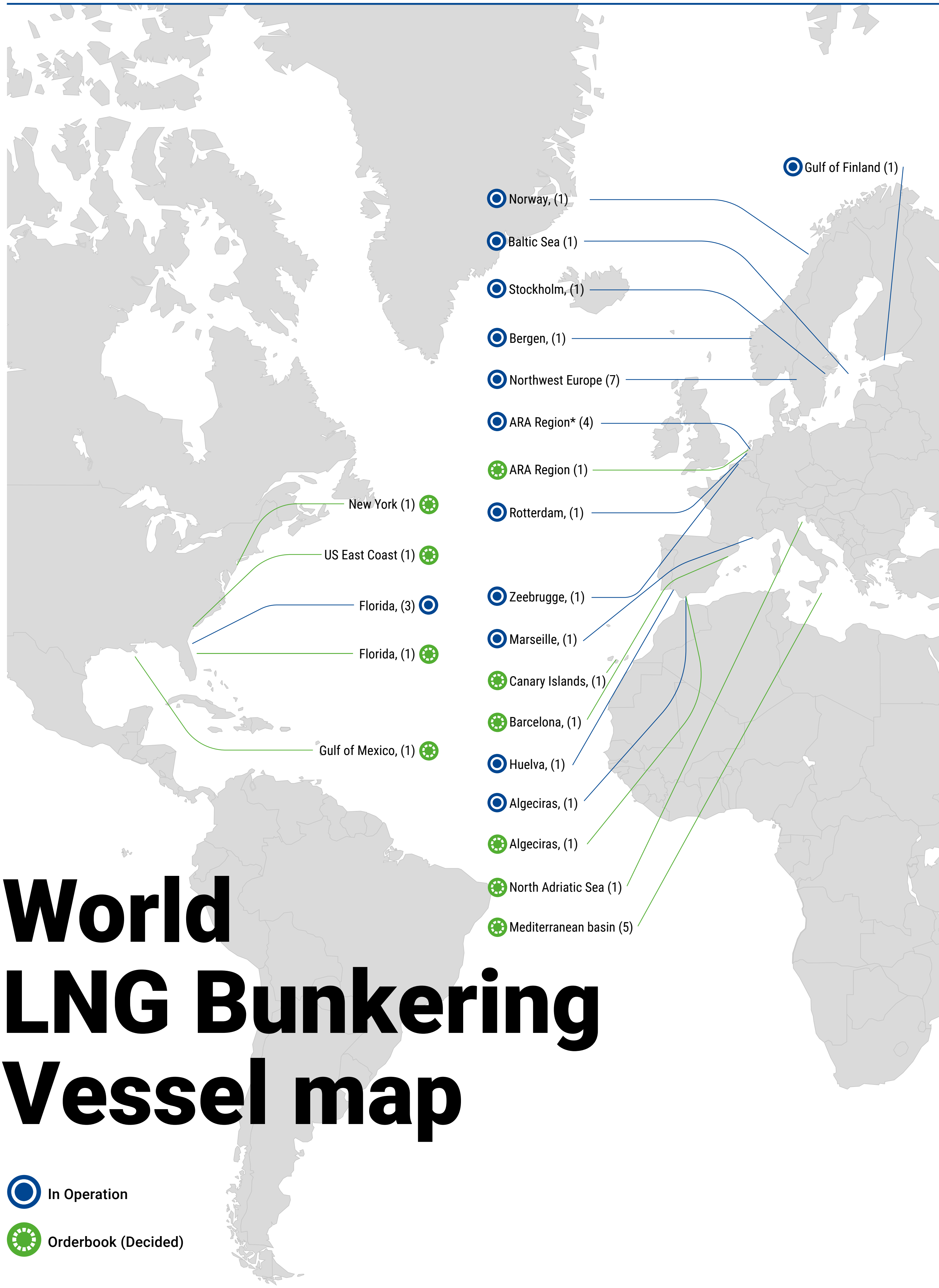
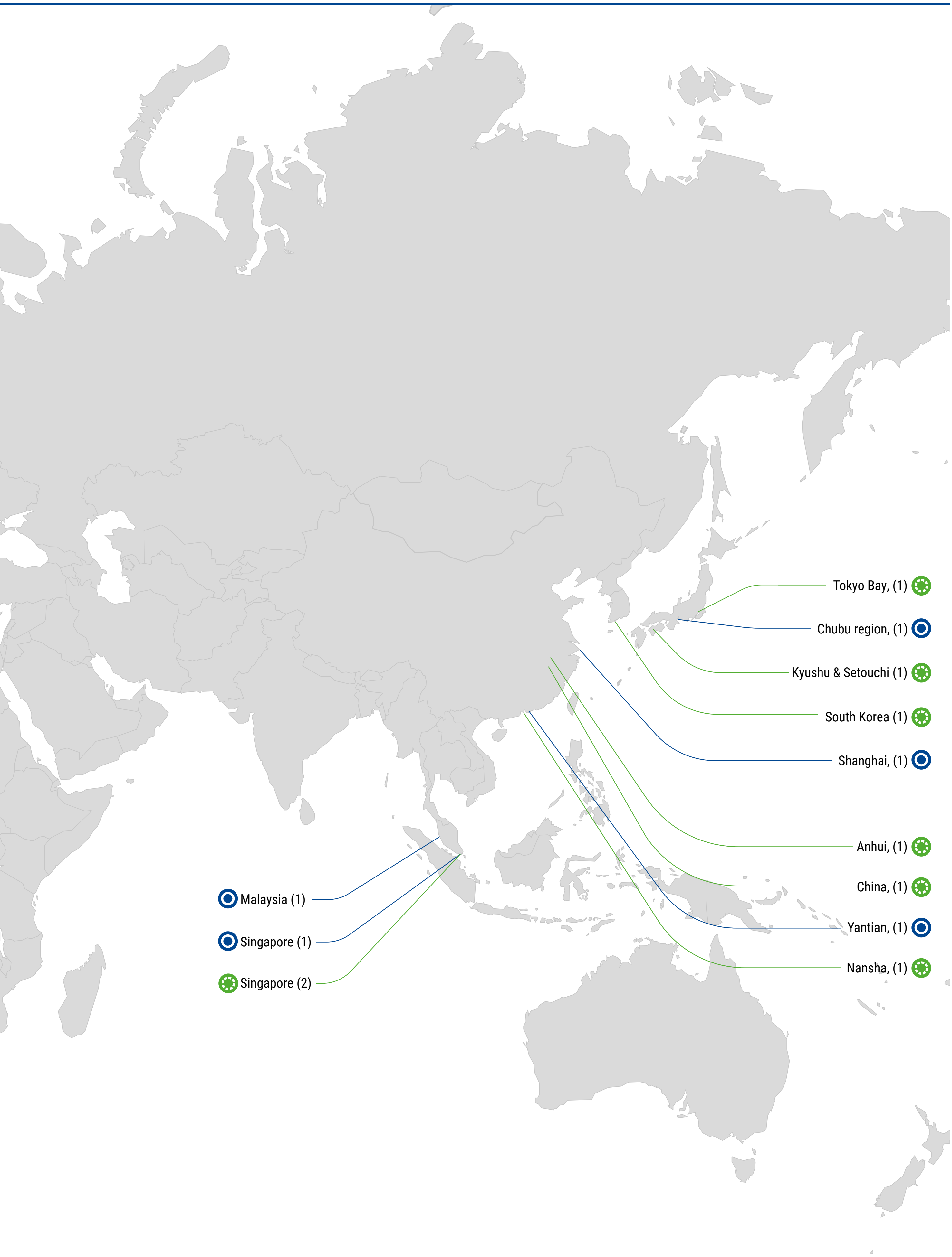


World LNG Bunkering Vessel map

In Operation

Orderbook (Decided)



*ARA: Amsterdam, Rotterdam and Antwerp
The figures in parentheses refer to the number of LNGBV(s)

Liquefaction plants

In 2022 global liquefaction capacity reached **476.5 MTPA** at year-end. New capacity amounted to **14.9 MTPA.**

10 MTPA Calcasieu Pass LNG export project started commissioning in the United States. The 1.5 MTPA Portovaya LNG plant started operations in Russia. The 3.4 MTPA Coral South FLNG produced it's first LNG shipment offshore Mozambique. In addition, the 4.2 MTPA Snøhvit LNG resumed operations in Norway.

Three FIDs were taken in 2022, for a total capacity of around 26 MTPA: 10.4 MTPA Corpus Christi Stage 3 liquefaction project and 13.3 MTPA first phase of the Plaquemines LNG in the United States and a 2 MTPA FLNG facility in Malaysia.

Algeria

Two projects are ongoing related to LNG export capacities: the construction of a storage tank and a new loading jetty at the port of Skikda to accommodate large vessels. As of August 2022, the expansion of Skikda's loading capacity was reported to be about 80% complete. In March 2023 Sonatrach announced that around $1Bn will be invested to its energy transition projects including flare gas recovery projects at its LNG plants at **Skikda** and **Arzew.**

Angola

In July 2022, Angola's first non-associated gas project, New Gas Consortium (NGC), reached FID for the development of the Quiluma and Maboqueiro (Q&M) fields. The project will provide new supply of gas to the **Angola LNG** plant. The project includes two offshore wellhead platforms, an onshore gas processing plant and a connection to Angola LNG facility. Gas and LNG production is scheduled to start in 2026. The project is expected produce around 4 BCMA at plateau.

Australia

In April 2022, **Prelude FLNG** resumed operations after a four-month shutdown due to a fire incident and a power outage. The FLNG facility was shut down again in July because of strikes by the workforce following a salary dispute but resumed operations in September 2022 after reaching an in-principle enterprise agreement. In May 2022, Shell Australia and SGH Energy took FID for the development of the Crux natural gas field in Western Australia. The project is expected to supply up to 550 mmscfd of natural gas to Prelude FLNG. First gas is expected to be produced in 2027.

In August 2022, construction of the 5 MTPA second train started at the **Pluto LNG** export facility. Bechtel is the EPC contractor and Woodside will be the operator of the project. The facility will process gas from the Scarborough field. The Pluto Train 2 joint venture is held by Woodside (51%) and Global Infrastructure Partners (49%).

The same month, the Bonaparte CCS (carbon capture and storage) Assessment joint venture (between TotalEnergies, INPEX and Woodside), aimed at avoiding and reducing GHG emissions from **Ichthys LNG** facility, was awarded a GHG Storage Assessment Permit, to carry out evaluation and appraisal work on block G-7-AP off the Northwest coast of Australia, with start of work scheduled for 2023.

Canada

In March 2023, a vessel carrying the final two modules for the **LNG Canada** export project was on its way from Qingdao port in Shandong province to the project site at Kitimat in British Columbia.

The same month, the 3 MTPA planned **Cedar LNG** project on the Douglas Channel, under development by Pembina Pipeline Corporation and Haisla Nation, received environmental approval and signed an MoU with ARC Resources for a 20-year 1.5 MTPA liquefaction services agreement. FID is expected in Q3 2023.

In April 2022, **Woodfibre LNG** issued a notice to proceed to McDermott International for pre-construction works at the 2.1 MTPA Woodfibre LNG project. Major works are expected to start in 2023. In July 2022, Pacific Energy and Enbridge agreed to invest jointly in the construction and operation of the project, with Enbridge acquiring a 30% ownership stake and Pacific Energy retaining the remaining 70%. The project is expected to start operations in 2027.

Congo

In August 2022, Eni acquired Export LNG Ltd, which owns the *Tango FLNG* barge from Exmar. The facility, with 0.6 MTPA LNG production capacity, will be used for a fast-track project in the offshore Marine XII block, where Eni is a 65% operator. Start-up is scheduled for December 2023.

In December 2022, Eni signed a contract with Wison Heavy Industry for the construction and installation of a 2.4 MTPA **FLNG,** to be deployed also at the Marine XII block. The construction started the same month with long lead items ordered and steel cut for cryogenic tanks of the FLNG. The vessel will be anchored at a water-depth of around 40 meters and will be able to store over 180,000 m³ of LNG and 45,000 m³ of LPGs. With these two FLNG plants, the total LNG production capacity from the Marine XII block will reach 3 MTPA in 2025.

Indonesia

As of March 2023, the 3.8 MTPA third train at **Tangguh LNG** project was in the commissioning process. Commercial operations are expected to start in Q4 2023. In December 2022, the Government of Indonesia granted a 20-year extension of the Tangguh production sharing contract until 2055 to BP, operator of the PSC, and its Tangguh PSC partners (MI Berau, CNOOC Muturi, Nippon Oil Exploration (Berau), KG Berau Petroleum, KG Wiriagar Petroleum and Indonesia Natural Gas Resources Muturi).

Malaysia

In December 2022, Petronas took FID for a nearshore 2 MTPA FLNG facility in **Sabah,** Bernama.

In October 2022, Petronas declared force majeure on gas supply to **MLNG Dua**, located in Bintulu, Sarawak, due to a pipeline leak caused by soil movement close to Sabah-Sarawak Gas Pipeline (SSGP) that occurred in September 2022. The other LNG production facilities at Petronas LNG Complex were not impacted. The investigation is expected to be completed by mid-2023.

Mauritania/Senegal

In January 2023, the FPSO vessel for the 2.3 MTPA **Greater Tortue Ahmeyim** (GTA) LNG project, operated by BP, departed from Qidong shipyard in China towards the project site off the coasts of Mauritania and Senegal. Before departure, the vessel completed a series of sea trials. The vessel was completed by Cosco Shipping Heavy Industry in September 2022, after 3.5 years of construction. With 8 processing and production modules, the FPSO will process around 500 mscf of gas per day. In addition to the FPSO, the *Gimi* FLNG vessel is being completed at Singapore's Keppel Shipyard. The project is expected to start production in 2024.

The development concept for the second phase of the GTA project was confirmed in February 2023. The partners (BP, Kosmos Energy, PETROSEN and SMH) will evaluate a gravity-based structure (GBS) as the basis for the **GTA Phase 2** expansion project (GTA2) with total capacity of between 2.5-3.0 MTPA and they will consider powering LNG liquefication using electricity.

Mexico

Energía Costa Azul (ECA) LNG Phase 1 is currently under construction with commercial operations expected to start in 2025. The proposed **ECA LNG Phase 2** is expected to comprise two trains and one additional LNG storage tank and to produce approximately 12 MTPA. The US DOE has authorized the re-export of up to to 636 Bcf/y of US-sourced LNG from ECA LNG Phase 2 to non-FTA countries. Re-export permits are applicable for the period beginning on the date of first commercial re-export through to December 2050.

As of March 2023, Mexico Pacific signed SPAs with Shell, ExxonMobil and Guangzhou Development Group for the supply of 7.7 MTPA in total from its 14.1 MTPA planned LNG export facility, **Saguaro Energia,** located at Puerto Libertad in Sonora State. The first phase of the project will have three trains, two storage tanks, and one berth. The project targets the start of commercial operations in 2026.

In December 2022, Sempra Infrastructure received authorization from the US DOE to re-export to non-FTA countries 200 Bcf/y of US-sourced LNG from its 3.5 MTPA **Vista Pacifico** LNG project, under development in collaboration with Mexico's Federal Electricity Commission (CFE) in Topolobampo, Sinaloa State.

In November 2022, New Fortress Energy (NFE) and Petróleos Mexicanos (Pemex) agreed to develop and operate an integrated upstream and natural gas liquefaction project off the coast of Veracruz in Eastern Mexico. NFE will deploy to the Lakach deepwater natural gas field its two Sevan cylindrical drill ships, which are under conversion in Sembcorp Marine yard in Singapore, to 1.4 MTPA FLNG units. The project is expected to come online in 2023-2024.

Mozambique

In November 2022, the first shipment of LNG produced from the Coral gas field departed from the 3.4 MTPA **Coral Sul FLNG** facility located in the ultra-deep waters of the Rovuma Basin in Mozambique. The project, operated by Eni, and developed with partners (ExxonMobil, CNPC, GALP, KOGAS and ENH) came online after 5 years of construction and in line with the initial budget and schedule. BP has a 20-year agreement to purchase 100% of LNG output from the facility.

In February 2023, **Mozambique LNG** was assessing whether the conditions are met for resuming project activities after the withdrawal of all project personnel from the Afungi site and the declaration of force majeure in 2021.

Norway

In January 2022, PX Group, headquartered in the UK, was appointed by North Sea Midstream Partners (NSMP) to operate its 0.33 MTPA Risavika LNG liquefaction plant, located south-west of **Stavanger,** which it acquired last year.

In June 2022, 4.2 MTPA **Hammerfest LNG** resumed operations after a fire in September 2020, following extensive repairs and improvement work.

Oman

As of March 2023, **Oman LNG** signed 8 LNG agreements in the context of the company's plans to extend the operation of the liquefaction complex at Qalhat for another 10 years from 2024. The counterparties are Itochu, JERA, Mitsui, Shell, BOTAŞ, TotalEnergies, PTT, Unipec. The work on the Power and Debottlenecking project at the Qalhat LNG plant, which will increase its production capacity to 11.6 MTPA, is in progress.

PNG

In August 2022, TotalEnergies, operator of the **Papua LNG,** launched the first phase of FEED studies with Technip Energies and Clough for the project's upstream production facilities. In March 2023, TotalEnergies launched the fully integrated FEED for the project. The project will include four electrical LNG trains with a total capacity of 4 MTPA, which will be built within the existing liquefaction plant of **PNG LNG.** Papua LNG will also benefit from 2 MTPA of additional liquefaction capacity in the existing trains of PNG LNG. The construction and operation of the electrical liquefaction trains is being delegated to ExxonMobil. Papua LNG joint venture partners are TotalEnergies (40.1%), ExxonMobil (37.1%) and Santos (22.8%). The project is targeting FID by end 2023-early 2024 and start-up four years later.

In the context of integration between Papua LNG and PNG LNG, TotalEnergies and JX Nippon, an affiliate of ENEOS, signed an HoA with the view to sell a 2% interest in Papua LNG to JX Nippon, which currently holds a 4.7% interest in PNG LNG.

Qatar

Since June 2022, TotalEnergies, ENI, ConocoPhillips, ExxonMobil and Shell joined QatarEnergy as partners in the **North Field East (NFE)** expansion project. The project will include 4 mega liquefaction trains with a combined nameplate capacity of 33 MTPA and will consist of 5 respective joint ventures. QatarEnergy will hold a 75% interest in each JV. TotalEnergies, ExxonMobil and Shell will each have a 25% share of one train while ENI and ConocoPhillips will each have 12.5% of the fourth train.

Since September 2022, TotalEnergies, Shell and ConocoPhillips joined QatarEnergy as partners in the two-train 16 MTPA **North Field South (NFS)** expansion project. In the project effective net participating interests are distributed as follows: TotalEnergies and Shell will have 9.375% each, ConocoPhillips will have 6.25%, QatarEnergy will hold the remaining 75%.

Together, NFE and NFS form the wider North Field Expansion project to increase LNG production from the North Field, bringing Qatar's export capacity to 126 MTPA by 2028. In January 2022, QatarEnergy awarded a major engineering, procurement, construction, and installation (EPCI) contract for the offshore part of its North Field Expansion project to McDermott. In March 2022, two ultra-heavy acid gas removal absorbers, manufactured by Hitachi Zosen in Japan, were delivered at the North Field site.

Russia

In September 2022, Gazprom started LNG production at its 1.5 MTPA **Portovaya LNG** plant. The plant comprises two liquefaction trains, a loading bay for LNG carriers, including small scale vessels, bunkering and truck loading facilities, as well as a 42,000 m³ onshore storage tank and 138,000 m³ FSU Portovyy (formerly the LNG carrier, Excel).

In August 2022, a new operator Sakhalin Energy LLC, based in Yuzhno-Sakhalinsk, was assigned to the **Sakhalin 2 LNG** project. Following the transfer of operatorship, the shareholding structure of the project will be changed, as Shell exited the project and sold its 27.5% stake to Novatek. The other foreign shareholders (Mitsui 12.5% and Mitsubishi 10%) confirmed their participation in the new entity. All rights and obligations held by Sakhalin Energy have been transferred to the new company including the LNG SPAs.

In January 2022, Novatek signed a power purchase agreement (PPA) for renewable electricity produced by Fortum's wind farms in Russia for use at its **Vysotsk** LNG plant.

In March 2022, TotalEnergies decided no longer to book proved reserves for the **Arctic LNG 2** project and will not provide any more capital for the project. In October 2022, a service provider Technip Energies decided to exit the project.

In June 2022, Linde, one of the suppliers of the LNG and gas-processing technology and services to the **Ust-Luga** Gas Condensate Fractionation and Transshipment Complex, suspended operations in Russia causing delays in the project development. In October 2022, Novatek and Rosatom signed an MoU according to which the Ust-Luga Complex will purchase electricity generated at Rosatom's wind farms.

Tanzania

In Mai 2023, Equinor, Shell and ExxonMobil agreed on the framework of the Host Government Agreement with the government of Tanzania for the development of the 10 MTPA **Tanzania LNG** project in Lindi region. The agreement includes a regulatory framework, a production sharing agreement, and elements regarding land use and security. The agreement is subject to legal reviews and quality assurance. Equinor and Shell are joint operators and ExxonMobil, Medco Energi, Pavilion Energy and the state-run Tanzania Petroleum Development Corporation are partners of the project. FID is expected in 2025 and start-up in 2031.

USA

In June 2022, an incident occurred at the **Freeport LNG** liquefaction plant, due to the overpressure and rupture of a segment of an LNG transfer line connecting the facility's LNG storage tanks to its dock facilities. None of the liquefaction trains, LNG storage tanks, dock facilities, or LNG process areas were impacted.

In January 2023, Freeport LNG received regulatory approval to commence the initial cool down of its LNG facilities, followed in February 2023 by the approval to start commercial operations of one liquefaction train and fully return to service its second train. Finally, in March 2023, the approval to restart the third train was received. Operations are initially utilizing two of Freeport LNG's three LNG storage tanks and one of its two LNG berths. The second LNG berth and third LNG storage tank returned to service in May 2023.

In July 2022, Freeport LNG received authorization from the US DOE to increase export volumes to 1,022.0 Bcf/y to FTA countries and 1,044.8 Bcf/y of natural gas to non-FTA countries.

Calcasieu Pass LNG export project started commissioning in March 2022. As of April 2023, Venture Global was still working to launch commercial operations at the facility. The start-up of commercial operations is delayed due to the time needed to finish repairs at a power generation unit at the facility.

In February 2022, Train 6 at the **Sabine Pass** liquefaction project achieved substantial completion, ahead of its guaranteed completion date and within the project budget. In October 2022, substantial completion was achieved for the project's third berth, which can accommodate vessels with a capacity of up to 200,000 m³.

In June 2022, Cheniere took FID on the 10+ MTPA **Corpus Christi Stage 3** liquefaction project and issued full notice to proceed to Bechtel to continue construction, which began earlier in 2022 under limited notice to proceed. The start-up of the project is expected by the end of 2025. As part of the Stage 3 project, Cheniere purchased a 30% equity interest in a JV with Whitewater Midstream to construct the Agua Dulce Corpus Christi Pipeline (ADCC Pipeline), connecting the Whistler Pipeline from the Permian Basin to the LNG plant. In August 2022, Cheniere initiated the pre-filing review process with the US FERC for an expansion adjacent to the Corpus Christi liquefaction project consisting of two additional midscale trains (Trains 8 & 9), which would increase production capacity by ~3 MTPA of LNG.

In March 2022, the DOE authorized the export of an additional 152.64 Bcf/y and 108.16 Bcf/y of LNG from the Sabine Pass LNG Terminal and the Corpus Christi LNG Terminal, respectively, through December 31, 2050 to non-FTA countries.

In April 2022, **Golden Pass LNG** received authorization from the US DOE to export up to 18.1 MTPA of LNG to non-FTA countries. In October 2022, QatarEnergy and ExxonMobil agreed independently to offtake and market their respective equity shares of LNG produced by the Golden Pass LNG export project. QatarEnergy Trading will offtake, transport, and trade 70% of the volumes produced by Golden Pass LNG. Ocean LNG Limited, a QatarEnergy/ExxonMobil JV established in 2016 for the purpose of offtaking and marketing the entire production of Golden Pass LNG, has ceased operations.

In May 2022, Venture Global LNG took FID on the initial phase of the 20 MTPA **Plaquemines LNG** facility and the associated Gator Express pipeline. In February 2023, Venture Global LNG announced the successful air raising of the roof of the first of four 200 000m3 LNG storage tanks which are being built at the plant. In March 2023, Venture Global LNG took FID on the second phase of the Plaquemines LNG project and issued a full notice to proceed to KZJV to continue construction on phase two of the project. Plaquemines LNG has received all necessary permits, including the US FERC authorization and non-FTA export authorization from the US DOE. Customers of the Plaquemines LNG project are CNOOC, Chevron, China Gas, EDF, EnBW, Excelerate Energy, ExxonMobil, New Fortress Energy, Orlen, Petronas, Shell and Sinopec.

In March 2023, Sempra Infrastructure took FID on the development, construction, and operation of the 13 MTPA **Port Arthur LNG Phase 1** project, located in Jefferson County, Texas, USA. The project is fully permitted and will include two liquefaction trains, two LNG storage tanks, and a single berth. The company issued a final notice to proceed under the project's EPC agreement with Bechtel Energy. The commercial start-up is expected in 2027 for Train 1 and in 2028 for Train 2. 10.5 MTPA of the Phase 1 output is contracted on a long-term basis with ConocoPhillips, RWE Supply and Trading, PKN ORLEN, INEOS and ENGIE.

The proposed **Cameron LNG Phase 2 (T4)** project will include a single LNG train with a production capacity of 6.75 MTPA of LNG, as well as a 5% debottlenecking of the existing three LNG trains. Cameron LNG started a competitive FEED process with Bechtel Energy and a joint venture between JGC America and Zachry Industrial. At the conclusion of this process, one EPC contractor will be selected for the project. FID is expected in 2023.

In December 2022, the FERC published an environmental assessment for the amended expansion project, including several design modifications and enhancements to Train 4 to increase production capacity and convert T4 refrigerant compressors from gas turbine drives to electric drives.

In April 2022, Cameron LNG partners (Sempra, TotalEnergies, Mitsui, and Japan LNG Investment) agreed to allocate the projected T4 production capacity in their respective equity proportions together with 25% of projected debottlenecking capacity for each company.

In May 2022, Sempra, TotalEnergies, Mitsui & Co and Mitsubishi agreed to develop the proposed Hackberry Carbon Sequestration (HCS) project in Southwest Louisiana, which is designed for the capture, transportation, and storage of CO_2 from Cameron LNG. The CO_2 will be permanently stored in a saline aquifer using an injection well with a capacity of up to 2 MT of CO_2 per year.

In March 2023, the EPC contract with Bechtel for the first 3 liquefaction trains at Next Decade's **Rio Grande** LNG project was extended. FID on the project is expected by the end of Q2 2023. Next Decade has plans and permits to produce up to 27 MTPA of LNG from five liquefaction trains at the Rio Grande facility. The first train is expected to start commercial operations in 2026, the second train – in 2027.

Delfin LNG, a 13.5 MTPA modular offshore project developed by Delfin Midstream, which requires up to four FLNG vessels, is fully approved and is expected to take FID on the first FLNG vessel by the end of 2023. The project is expected to start operations in 2026.

Liquefaction plants

Country	Name	Liquefaction		Storage		Owner(s)	Operator	MT - LT Buyer(s)	Start-up date
		Number of trains	Nominal capacity (MTPA)	Number of tanks	Total capacity (liq m^3)				
ATLANTIC BASIN									
Algeria	**Arzew GL1Z T1 - T6**	6	**7.9**	3	**300,000**	Sonatrach	**Sonatrach**	Botaş, Cepsa Gas, DEPA, TotalEnergies	**1978**
	Arzew GL2Z T1 - T6	6	**8.2**	3	**300,000**				**1981**
	Arzew GL3Z	1	**4.7**	2	**320,000**				**2014**
	Skikda GL1K	1	**4.5**	1	**150,000**				**2013**
Angola	**Angola LNG**	1	**5.2**	1	**360,000**	Angola LNG (Chevron 36.4%, Sonangol 22.8%, BP 13.6%, ENI 13.6%, TotalEnergies 13.6%)	**Angola LNG**		**2013**
Argentina	**Tango (stopped; no vessel chartered) *(FLNG)***								**2019, Stopped in 2020**
Cameroon	**Kribi *(FLNG)***	4	**2.4**	1	**125,000**	Golar LNG 89%, Keppel Corporation Ltd 10%, Black & Veatch 1%	**Golar LNG**	Gazprom	**2018**
Egypt	**Damietta**	1	**5**	2	**300,000**	SEGAS (ENI 50%, EGAS 40%, EGPC 10%)	**Damietta LNG**	EGAS, ENI	**2005**
	Idku T1	1	**3.6**	2	**280,000**	Egyptian LNG (Shell 35.5%, Petronas 35.5%, EGPC 12%, EGAS 12%, TotalEnergies 5%)	**Egyptian LNG**	TotalEnergies	**2005**
	Idku T2	1	**3.6**			Egyptian LNG (Shell 38%, Petronas 38%, EGAS 12%, EGPC 12%)		Shell	
Equatorial Guinea	**EG LNG**	1	**3.7**	2	**272,000**	EG LNG (Marathon 60%, Sonagas 25%, Mitsui 8.5%, Marubeni 6.5%)	**EG LNG**	Shell	**2007**
Nigeria	**NLNG T1 - T2**	2	**6.6**	4	**336,800**	Nigeria LNG (NNPC 49%, Shell 25.6%, TotalEnergies 15%, ENI 10.4%)	**NLNG**	ENI, Galp Energía, Naturgy, TotalEnergies, Vitol	**T1: 1999 T2: 2000**
	NLNG T3	1	**3.3**					Galp Energía, Naturgy	**2002**
	NLNG T4 - T5	2	**8.2**					Endesa, ENI, Galp Energía, Pavilion Energy, Shell, TotalEnergies	**2006**
	NLNG T6	1	**4.1**					Shell, TotalEnergies	**2008**
Norway	**Snøhvit**	1	**4.2**	2	**250,000**	Equinor 36.8%, Petoro 30%, TotalEnergies 18.4%, Neptune Energy 12%, DEA 2.8%	**Equinor**	Equinor, Pavilion Energy, RWE Supply & Trading, TotalEnergies	**2007**
	Stavanger	1	**0.33**	1	**30,000**	North Sea Midstream Partners	**PX Group**	Gasum	**2010**
Russia	**Vysotsk LNG**	1	**0.66**	1	**42,000**	Novatek 51%, Gazprombank 49%	**CryoGAS Vysotsk**		**2019**
	Portovaya LNG *(+ Portovyy FSU)*	2	**1.5**	2	**180,000**	Gazprom	**Gazprom**		**2022**
	Yamal T1 - T4	4	**17.4**	4	**640,000**	Yamal LNG (Novatek 50.1%, CNPC 20%, TotalEnergies 20%, Silk Road Fund 9.9%)	**Yamal LNG**	CNPC, Gazprom Marketing & Trading, Naturgy, Novatek, TotalEnergies	**T1: 2017 T2: 2018 T3: 2018 T4: 2021**
Trinidad & Tobago	**Atlantic LNG T1 (Mothballed)**	1	**3.3**	1	**102,000**	Shell 46%, BP 34%, CIC 10%, NGC Trinidad 10%	**Atlantic LNG**		**1999**
	Atlantic LNG T2 - T3	2	**6.8**	2	**262,000**	Shell 57.5%, BP 42.5%		BP, ENGIE, Naturgas Energia, Naturgy, Shell	**T2: 2002 T3: 2003**
	Atlantic LNG T4	1	**5.2**	1	**160,000**	Shell 51.1%, BP 37.8%, NGC Trinidad 11.1%		BP, Shell	**2006**
USA	**Calcasieu Pass**	18	**10**	2	**400,000**	Venture Global Calcasieu Pass	**Venture Global Calcasieu Pass**	BP, Edison, Galp, Orlen, Repsol, Shell	**2022**
	Cameron LNG T1	1	**4.5**	3	**480,000**	Sempra 50.2%, TotalEnergies 16.6%, Mitsui 16.6%, Japan LNG Investment (a joint venture between Mitsubishi and NYK) 16.6%	**Cameron LNG**	Mitsubishi, Mitsui & Co, TotalEnergies	**2019**
	Cameron LNG T2	1	**4.5**						**2020**
	Cameron LNG T3	1	**4.5**						**2020**
	Corpus Christi T1	1	**5.0**	3	**480,000**	Corpus Christi Liquefaction (Cheniere 100%)	**Cheniere**	Cheniere Marketing, CNPC, EDF, EDP, Endesa, ENGIE, Iberdrola, Naturgy, Pertamina, Woodside	**2018**
	Corpus Christi T2	1	**5.0**						**2019**
	Corpus Christi T3	1	**5.0**						**2020**

Country	Name	Liquefaction: Number of trains	Liquefaction: Nominal capacity (MTPA)	Storage: Number of tanks	Storage: Total capacity (liq m^3)	Owner(s)	Operator	MT - LT Buyer(s)	Start-up date
USA	Cove Point	1	**5.25**	7	**700,000**	Cove Point LNG, LP (Dominion Energy 75%, Berkshire 25%)	**Cove Point LNG, LP**	Gail, Kansai Electric, Sumitomo Corp., Tokyo Gas	**2018**
	Elba Island	10	**2.5**	5	**550,000**	Kinder Morgan	**Southern LNG**	Shell	**2019**
	Freeport LNG T1	1	**5.0**	3	**480,000**	Freeport LNG Liquefaction, LLC	**Freeport LNG**	JERA, Osaka Gas	**2019**
	Freeport LNG T2	1	**5.0**			Freeport LNG Liquefaction 2, LLC		BP	**2020**
	Freeport LNG T3	1	**5.0**			Freeport LNG Liquefaction 3, LLC		SK E&S, TotalEnergies	**2020**
	Sabine Pass T1	1	**5.0**	5	**800,000**	Sabine Pass Liquefaction (Cheniere 100%)	**Cheniere**	Centrica, Cheniere Marketing, GAIL, KOGAS, Naturgy, Shell, TotalEnergies	**2016**
	Sabine Pass T2	1	**5.0**						**2016**
	Sabine Pass T3	1	**5.0**						**2017**
	Sabine Pass T4	1	**5.0**						**2017**
	Sabine Pass T5	1	**5.0**						**2018**
	Sabine Pass T6	1	**5.0**						**2021**
ATLANTIC BASIN TOTAL			**201.64**		**8 299 800**				
MIDDLE EAST									
Oman	Oman T1 - T2	2	**7.1**	2	**240,000**	Government of Oman 51%, Shell 30%, TotalEnergies 5.5%, Korea LNG 5%, Mitsubishi 2.8%, Mitsui 2.8%, PTTEP 2%, Itochu 0.9%	**Oman LNG**	BP, Itochu, KOGAS, Osaka Gas	**2000**
	Qalhat	1	**3.3**			Government of Oman 65.6%, Shell 11%, Mitsubishi 4%, ENI 3.7%, Naturgy 3.7%, Itochu 3.3%, Osaka Gas 3%, TotalEnergies 2.1%, Korea LNG 1.9%, Mitsui 1%, PTTEP 0.7%		Osaka Gas, Naturgy	**2005**
Qatar	Qatargas I T1 - T3	3	**9.5**	4	**340,000**	Qatar Energy (100%)	**Qatargas Operating Company**	Naturgy	**T1:1996 T2: 1997 T3: 1998**
	Qatargas II T1	1	**7.8**	8	**1,160,000**	Qatar Energy 70%, ExxonMobil 30%	**Qatargas Operating Company**	ExxonMobil, Pakistan State Oil, Petrochina	**2009**
	Qatargas II T2	1	**7.8**			Qatar Energy 65%,ExxonMobil 18.3%, TotalEnergies 16.7%		ExxonMobil, Petrochina, TotalEnergies	**2009**
	Qatargas III	1	**7.8**			Qatar Energy 68.5%, ConocoPhillips 30%, Mitsui 1.5%	**Qatargas Operating Company**	CNOOC, JERA, Kansai Electric, Orlen, PTT, RWE Supply & Trading, Tohoku Electric	**2010**
	Qatargas IV	1	**7.8**			Qatar Energy 70%, Shell 30%	**Qatargas Operating Company**	Centrica, CNPC, KPC, OMV, Petronas, Shell	**2011**
	Rasgas I T1 - T2	2	**6.6**	6	**840,000**	Qatar Energy 63%, ExxonMobil 25%, KOGAS 5%, Itochu 4%, LNG Japan 3%	**Qatargas Operating Company**	KOGAS	**T1: 1999 T2: 2000**
	Rasgas II T1	1	**4.7**			Qatar Energy 70%, ExxonMobil 30%	**Qatargas Operating Company**	Petronet	**2004**
	Rasgas II T2	1	**4.7**					Edison	**2005**
	Rasgas II T3	1	**4.7**					CPC, EDF Trading, ENI	**2007**
	Rasgas III T1	1	**7.8**				**Qatargas Operating Company**	EDF Trading, ExxonMobil, KOGAS, Petronet	**2009**
	Rasgas III T2	1	**7.8**					CPC, KOGAS, Petrobangla, Petronet	**2010**
UAE	Das Island T1 - T3	3	**5.8**	3	**240,000**	ADNOC LNG (ADNOC 70%, Mitsui 15%, BP 10%, TotalEnergies 5%)	**ADNOC LNG**	BP, Vitol, TotalEnergies	**T1: 1977 T2: 1977 T3: 1994**
Yemen	Balhaf T1 - T2 (stopped)	2	**7.2**	2	**280,000**	Yemen LNG (TotalEnergies 39.6%, Hunt Oil Co. 17.2%, SK Innovation 9.6%, KOGAS 6%, Yemen Gas 16.7%, Hyundai 5.9%, GASSP 5%)	**Yemen LNG**	TotalEnergies	**T1: 2009 T2: 2010**
MIDDLE EAST TOTAL			**100.4**		**3,100,000**				

Liquefaction plants

Country	Name	Liquefaction: Number of trains	Liquefaction: Nominal capacity (MTPA)	Storage: Number of tanks	Storage: Total capacity (liq m³)	Owner(s)	Operator	MT - LT Buyer(s)	Start-up date
PACIFIC BASIN									
Australia	**NWS T1 - T5**	5	**16.3**	4	**260,000**	BHP, BP, Chevron, Woodside (16.7% each), Shell 16.7%, Mitsubishi, Mitsui (8.3% each)	**Woodside**	GDLNG, JERA, Kansai Electric, Kyushu Electric, Osaka Gas, Shizuoka Gas,Toho Gas, Tokyo Gas	**T1: 1989 T2: 1989 T3: 1992 T4: 2004 T5: 2008**
	Darwin	1	**3.7**	1	**188,000**	Santos 43.4%, SK E&S 25%, INPEX 11.4%, Eni 11%, JERA 6.1%, Tokyo Gas 3.1%	**Santos**	JERA, Tokyo Gas	**2006**
	Pluto T1	1	**4.9**	2	**240,000**	Woodside 90%, Kansai Electric 5%, Tokyo Gas 5%	**Woodside**	Kansai Electric, Tokyo Gas	**2012**
	QCLNG T1	1	**4.25**	2	**280,000**	Shell 50%, CNOOC 50%	**Shell**	CNOOC, Shell	**2015**
	QCLNG T2	1	**4.25**			Shell 97.5%, Tokyo Gas 2.5%		Shell, Tokyo Gas	**2015**
	GLNG T1 - T2	2	**7.8**	2	**280,000**	Santos 30%, Petronas 27.5%, TotalEnergies 27.5%, KOGAS 15%	**Santos**	KOGAS, Petronas	**T1: 2015 T2: 2016**
	APLNG T1	1	**4.5**	2	**320,000**	ConocoPhillips 47.5%, Origin Energy 27.5%, Sinopec Group 25%	**Australia Pacific LNG**	Sinopec	**2016**
	APLNG T2	1	**4.5**	1				Kansai Electric, Sinopec	**2016**
	Gorgon T1 - T3	3	**15.6**	2	**360,000**	Chevron 47.3%, ExxonMobil 25%, Shell 25%, Osaka Gas 1.3%, Tokyo Gas 1%, JERA 0.4%	**Chevron**	BP, Chevron, ENEOS Corp., ExxonMobil, GS Caltex, JERA, Kyushu Electric, Osaka Gas, PetroChina, Petronet, Shell, SK E&S, Tokyo Gas	**T1: 2016 T2: 2016 T3: 2017**
	Wheatstone T1 - T2	2	**8.9**	2	**300,000**	Chevron 64.1%, KUFPEC 13.4%, Woodside 13%, JOGMEC 3.4%, Mitsubishi 3.2%, Kyushu Electric 1.5%, NYK 0.8%, JERA 0.6%	**Chevron**	Chevron, JERA, KUFPEC, Kyushu Electric, Tohoku Electric, Woodside	**T1: 2017 T2: 2018**
	Ichthys T1 - T2	2	**8.9**	2	**330,000**	INPEX 66.3%, TotalEnergies 26%, CPC 2.6%, Tokyo Gas 1.6%, Kansai Electric 1.2%, Osaka Gas 1.2%, JERA 0.7%, Toho Gas 0.4%	**INPEX**	CPC, INPEX, JERA, Kansai Electric, Kyushu Electric, Osaka Gas, Toho Gas, Tokyo Gas, TotalEnergies	**2018**
	Prelude *(FLNG)*	1	**3.6**	1	**220,000**	Shell 67.5%, INPEX Corporation 17.5%, KOGAS 10%, CPC 5%	**Shell**	CPC, INPEX, KOGAS, Shell	**2019**
Brunei	**Brunei T1 - T5**	5	**7.2**	3	**195,000**	Brunei Government 50%, Shell 25%, Mitsubishi 25%	**Brunei LNG**	JERA, Osaka Gas, Petronas, Shell, Tokyo Gas	**1973**
Indonesia	**Bontang**	4	**11.5**	6	**630,000**	Government of Indonesia	**PT Badak NGL (Pertamina 55%, PHSS 20%, PNA 15%, TotalEnergies 10%)**	ENI, Nusantara Regas, PPT ETS, Pertamina	**Train E: 1990 Train F: 1994 Train G: 1998 Train H: 1998**
	Tangguh T1 - T2	2	**7.6**	2	**340,000**	Tangguh LNG (BP 40.2%; CNOOC 13.9%; JX Nippon Oil & Gas Exploration 7.5%; Mitsubishi 9.9%; INPEX 7.8%; LNG Japan 7.4%; Mitsui 3.2%, Others 10.2%)	**Tangguh LNG**	CNOOC, Kansai Electric, PLN, Posco, Sempra LNG, SK E&S, Tohoku Electric	**2009**
	Donggi-Senoro	1	**2.0**	1	**170,000**	PT Donggi-Senoro LNG (Mitsubishi 45%, Pertamina 29%, KOGAS 15%, Medco 11%)	**PT Donggi-Senoro LNG**	JERA, KOGAS, Kyushu Electric	**2015**
Malaysia	**MLNG 1 Satu**	3	**8.4**	6	**390,000**	Petronas 90%, Mitsubishi 5% Sarawak state government 5%	**Petronas**	JOVO, Hiroshima Gas, PTT, Saibu Gas, Shikoku Electric, S-Oil, Tokyo Gas	**1983**
	MLNG 2 Dua	3	**9.6**			Petronas 80%, Mitsubishi 10% Sarawak state government 10%		ENEOS Corp., JERA, Osaka Gas, Sendai City Gas, Shizuoka Gas, Tohoku Electric, Tokyo Gas	**1995**
	MLNG 3 Tiga	2	**7.7**			Petronas 60%, Sarawak state government 25%, ENEOS Corporation 10%, Diamond Gas 5%		CNOOC, JAPEX, KOGAS, Osaka Gas, Toho Gas, Tohoku Electric, Tokyo Gas	**2003**
	MLNG T9	1	**3.6**			Petronas 70%, ENEOS Corporation 10%, PTT 10%, Sarawak state government 10%		Hokkaido Electric, Hokuriku Electric	**2016**
	PFLNG Dua *(FLNG)*	1	**1.5**		**177,000**	Petronas	**Petronas**	KEPCO, Petronas, PTT	**2021**
	PFLNG Satu *(FLNG)*	1	**1.2**	1	**180,000**	Petronas	**Petronas**	KEPCO, PTT	**2017**

Country	Name	Liquefaction: Number of trains	Liquefaction: Nominal capacity (MTPA)	Storage: Number of tanks	Storage: Total capacity (liq m³)	Owner(s)	Operator	MT - LT Buyer(s)	Start-up date
Mozambique	**Coral South *(FLNG)***	1	**3.4**		**230,000**	Coral South LNG (CNPC 20%, Eni 25%, ExxonMobil 25%, ENH 10%, Galp 10%, KOGAS 10%)	**Eni**	BP	**2022**
Papua New Guinea	**PNG LNG T1 - T2**	2	**8.3**	2	**320,000**	PNG LNG (Santos 42.5%, Exxon Mobil 33.2%, Kumul Petroleum 16.8%, Nippon Papua New Guinea LNG LLC 4.7%, MRDC 2.8%)	**PNG LNG**	BP, CPC, JERA, Osaka Gas, Sinopec	**2014**
Peru	**Peru**	1	**4.45**	2	**260,000**	Hunt Oil 50%, Shell 20%, SK Innovation 20%, Marubeni 10%	**Hunt Oil**	Shell	**2010**
Russia	**Sakhalin-2 T1 - T2**	2	**10.8**	2	**200,000**	Sakhalin Energy LLC (Gazprom 50%, Novatek 27.5%, Mitsui 12.5%, Mitsubishi 10%)	**Sakhalin Energy LLC**	Gazprom, Hiroshima Gas, JERA, KOGAS, Kyushu Electric, Osaka Gas, Saibu Gas, Toho Gas, Tohoku Electric, Tokyo Gas	**2009**
PACIFIC BASIN TOTAL			**174.43**		**5,870,000**				
TOTAL			**476.47**		**17,269,800**				

Regasification terminals

At the end of 2022, global regasification capacity reached **1,068 MTPA.**

9 new regasification terminals started commercial operations in 2022 totaling 23.4 MTPA of capacity. El Salvador joined the ranks of LNG importing countries in 2022 with the start-up of the 2 MTPA FSRU-based Acajutla LNG terminal. One FSRU project started operations in Brazil. Two projects were commissioned in Europe, one floating-based in Netherlands and a small-scale onshore terminal in Finland. 5 new terminals started operations in Asia: two land-based terminals in China, one in Thailand, one in Japan and a small-scale offshore project in Indonesia.

Other regasification capacity additions included the second phase at the Al-Zour terminal in Kuwait, capacity additions in Europe (in France, Poland, Italy and Croatia), and one expansion program completed in China.

Argentina

Between May and August 2022, the 150,900 m³ *Exemplar* FSRU, owned and operated by Excelerate Energy, provided regasification services in **Bahia Blanca** under a short-term seasonal contract.

Belgium

In 2022, Fluxys LNG, owner and operator of the **Zeebrugge** import terminal continued the construction of the three additional open rack vaporizers which will increase the send-out capacity at the terminal. The additional regasification capacity is envisaged in two steps: it is expected to reach a total of 4.7 MTPA from early 2024 and a total of 6 MTPA from early 2026. Four new truck loading bays are under construction to support the freight transport sector in its switch to LNG and BioLNG, scheduled to become available in early 2024. In summer 2022, Fluxys LNG held a call for market interest in truck loading slots which showed strong interest. In December 2022, Fluxys LNG organized a subscription window for booking long-term BioLNG liquefaction services to allow terminal users to convert biomethane into BioLNG and to load trucks and bunker ships.

Brazil

In October 2022, the FSRU LNGT Powership Asia deployed in **Sepetiba Bay** received a partial LNG cargo and started testing operations. The FSRU is controlled by KARMOL, a joint venture between Karpowership and Mitsui O.S.K. Lines. The temporary deployment of the FSRU and a floating thermoelectric plant will supply power to the state of Rio de Janeiro through December 2025.

In August 2022, an FSRU-based LNG import terminal in **Barcarena,** developed by New Fortress Energy (NFE), was reported to be almost complete with the start-up expected in 2023. In Q2 2022, NFE started construction of the 605 MW Barcarena power plant, which is planned to be supplied from the terminal under a 25-year PPA.

The same month, a 3.8 MTPA FSRU-based LNG receiving terminal in **Santa Catarina,** also developed by NFE, was reported to be 90% complete. Start-up is expected in 2023.

An FSRU-based import terminal in the Port of **Santos**, Sao Paulo state, is expected to start operations in the second quarter of 2023. Höegh LNG has 10-year charter contract with Terminal de Regaseificação de São Paulo (TRSP), a unit of Compass Gas & Energia, which is part of the Cosan group, for the 3.7 MTPA capacity *Höegh Giant* FSRU.

In October 2022 OnCorp was selected to build an LNG regasification terminal in the port of **Suape** in Pernambuco, subject to the authorization from Antaq, National Waterway Transportation Agency. OnCorp has a 48-month leasing contract for an FSRU to be located at an existing mixed-use pier. It is also planned to connect the terminal to the gas distribution network of Copergas. Start-up of the terminal has been delayed and is now scheduled for 2024. The terminal also has the potential to be connected to the Transportadora Associada de Gas' (TAG) gas transport grid.

Chile

A fifth truck loading bay has been built at **GNL Quintero** terminal and started operations in February 2023. Two LNG truck fueling service stations started operations at the terminal in 2022. The first LNG ship reloading operation was performed at GNL Quintero terminal in Q3 2022. In the first quarter of 2022 the Government of Chile awarded GNL Quintero US$5.7 MM to support the development of a 10 MW green hydrogen plant to be built at the regasification terminal.

In July 2022, the transaction for the purchase of a 80% stake in GNL Quintero by a consortium of EIG Partners and Fluxys from Enagas and Omers was completed. The Chilean national oil company, ENAP, holds the remaining 20%.

China

In January 2023, China Huanqiu Contracting & Engineering Co. Ltd completed the construction of two LNG onshore storage tanks at **Tianjin Nangang LNG** terminal, which is under development by Beijing Gas Group. Each tank has a capacity of 220,000 m³. The two onshore tanks, the first of an eventual 10, have entered the commissioning phase.

In July 2022, the new 1 MTPA **Jiaxing LNG** terminal, located in Zhejiang province in China, received its first LNG cargo. The terminal is jointly owned by Jiaxing Gas and Hangzhou Gas. The facility started construction in 2018 and is equipped with small-scale loading/unloading berths.

In October 2022, the 3 MTPA **Jiangsu-Binhai LNG** terminal, located on the east coast of China and owned and operated by CNOOC, started operations. The terminal has four storage tanks with an overall capacity of 880,000 m³ with further expansions planned, and can receive vessels with a capacity between 80,000 m³ and 266,000 m³.

In March 2022, the Zhejiang Provincial Development and Reform Commission approved the Phase III Expansion Project at ENN's **Zhoushan LNG** terminal, which will include the addition of four storage tanks, each with a capacity of 220,000 m³. Commercial operations are expected to start by the end of 2025. A third berth, to be built as part of the Phase III expansion, will accommodate LNG ships between 40,000 m³ and 180,000 m³ and will be capable of both loading and unloading operations. Ancillary processing equipment will also be added including 1 BOG compressor, 3 high-pressure pumps, 2 vaporizers, and 2 seawater pumps. Once the Phase III Project is put into operation, the processing capacity of the terminal is expected to reach 8.5 MTPA.

Croatia

In April 2022, **LNG Croatia** increased the initial annual capacity of the FSRU, located on the island of Krk, to 2.9 BCMA. In August 2022 it announced plans to increase the capacity to 6.1 BCMA to serve other countries in the region.

Cyprus

As of March 2023, the conversion of the LNG carrier *Galea* to an FSRU at Cosco Shipping Heavy Industry in Shanghai was reported to be 90% completed. Renamed the *Etyfa Prometheas* FSRU, it will serve Cyprus's first LNG import terminal in **Vasilikos** port. The project is owned by Natural Gas Infrastructure Company of Cyprus (ETYFA), a subsidiary of the Public Natural Gas Company (DEFA). Start-up is expected in October 2023.

Dominican Republic

In April 2022, two new truck loading bays, that were built as part of the expansion project of the AES **Andrés** LNG facility, started commercial operations. The construction of the second 120,000 m³ storage tank is expected to be completed in 2023.

El Salvador

In October 2022, Invenergy started commercial operations at the Energía del Pacífico (EDP) LNG-to-power project, located at the Port of **Acajutla** in El Salvador. In April 2022, the 137,000 m³ FSRU *BW Tatiana* completed its first ship-to-ship LNG operation receiving its first LNG cargo. The 2 MTPA FSRU is owned and operated jointly by BW LNG and Invenergy Investment.

Estonia

In June 2022, Estonia's TSO, Elering started construction work on the 1.2 km pipeline connecting a planned FSRU-based LNG import terminal in **Paldiski** to the grid. In September 2022, the first phase of the construction of the terminal, developed by Alexela and Infortar, which included the construction of the connection with Balticconnector pipeline, which connects the Finnish and Estonian pipeline grids, and the rental of an FSRU, was reported to be completed. The work on the mooring point was completed in October 2022. Estonia and Finland agreed to jointly charter an FSRU to import LNG and moor it in the Finnish port of **Inkoo.**

In March 2023, state-owned Estonian Stockpiling Agency (ESPA) purchased the LNG quay, port infrastructure and property at Paldiski from Alexela and Infortar.

Finland

In January 2023, Excelerate Energy's FSRU *Exemplar* located in **Inkoo** received its first LNG cargo and started operations. The FSRU arrived on site in December 2022. The construction works on the LNG terminal started in August 2022 and included the pier and mooring structures and systems for the FSRU as well as the construction of a 2.2-kilometre gas pipeline. The FSRU *Exemplar* will serve Finland, Estonia and the Baltic Sea region under the 10-year charter agreement signed by Excelerate Energy and Gasgrid Finland in May 2022.

France

In May 2022, a technical debottlenecking increased the long-term capacity at the **Fos Cavaou** LNG terminal from 6.8 MTPA to 8 MTPA. In addition, commercial optimization of the facilities enabled Elengy to market some additional capacity for 2022-2024. In June 2022, French Energy Regulation Commission (CRE) modified allocation rules for additional short-term capacities, which allowed Elengy to organize an experimental auction process. Following an open season in June-November 2022, all 2.5 MTPA of the capacity offered have been sold from 2025 until 2040.

In 2022, Elengy undertook technical and scheduling optimization in its three terminals (Montoir-de-Bretagne, Fos Cavaou, and Fos Tonkin). Work on possible capacity increases at Montoir and Fos Cavaou LNG terminals is ongoing.

The construction of an additional truck loading bay in **Montoir** is ongoing with the commissioning expected in summer 2023. Two additional truck loading bays will be commissioned in Fos Cavaou in the fourth quarter of 2023.

In January 2022, Elengy signed commercial agreements for the satellite storage of LNG at Reichstett in Bas-Rhin, in the Alsace region of France, developed in partnership with Rubis Terminal. The facility will be supplied with LNG by rail from Fos-sur-Mer LNG terminals, with a transfer capacity of 0.13 MTPA. The project is expected to be commissioned in 2023.

A new offshore LNG receiving terminal in **Le Havre** with a 5 BCMA regasification capacity, developed by TotalEnergies with the support of the French Minister of Ecological Transition, will enter service by mid-September 2023. The terminal is expected to operate for 5 years. TotalEnergies has run a non-binding call of interest for LNG import and regasification capacity. The test resulted in a significant excess of demand (12 BCMA) over the offered capacity (2.5 BCMA). A binding open season is expected to be launched in March 2023.

Germany

In January 2023, Germany joined the ranks of LNG importing countries. The new FSRU-based LNG receiving terminal in **Wilhelmshaven,** operated by Uniper, received its first LNG cargo and started commercial operations. The terminal uses the FSRU *Höegh Esperanza,* chartered from Höegh LNG by Uniper on behalf of the German Federal Government. The FSRU arrived on site in December 2022. The FSRU *Höegh Esperanza* has a 3.8 MTPA nominal regasification capacity and a 5.7 MTPA peak regasification capacity.

Another floating-based import project is being developed at the port of Wilhelmshaven, the **German North Sea LNG.** The project is led by Tree Energy Solutions. In April 2022 Tree Energy Solutions announced an open season inviting parties to submit expression of interest to reserve capacity and services for the import of LNG volumes at the terminal. The initial capacity of the terminal will be of 16-20 BCMA from 2025 onwards. In October 2022, Excelerate Energy signed a 5-year charter agreement with the German Government for the FSRU *Excelsior*. The project is expected to start up in the third or fourth quarter of 2023.

In February 2023, FSRU-based LNG import terminal **Elbehafen LNG,** located in Brunsbüttel Elbehafen port and operated by RWE, received its first LNG cargo and started commissioning. In January 2023, Höegh LNG signed a binding 10-year time charter contract with RWE on behalf of the German Federal Ministry for Economic Affairs and Climate Action for the deployment of the FSRU *Höegh Gannet* for the Brunsbüttel LNG project. Commercial operations started in May 2023.

The FSRU based Elbehafen terminal is providing a source of early LNG supply in advance of the construction of the onshore terminal in **Brunsbüttel,** which is under development by German LNG Terminal (KfW 50%, Gasunie 40%, RWE 10%). In March 2022, Kreditanstalt für Wiederaufbau (KfW) on behalf of the German government, Gasunie and RWE signed a MoU to construct and operate an onshore multifunctional LNG import and distribution terminal. The terminal will have two LNG storge tanks of 165,000 m³ each, a jetty with two berths for LNG carriers up to QMax size, as well as truck loading and bunkering facilities. It will have an annual throughput capacity of 8 BCMA which can be expanded to at least 10 BCMA. In October 2022, German LNG Terminal executed the EPC contract with CS Gas North, a subsidiary of VINCI group in a consortium with Sener, for the construction of the terminal. The facility is expected to be operational in 2026. The onshore terminal will be operated by Gasunie. ConocoPhillips, INEOS and RWE have booked long-term regasification capacity at the terminal.

Deutsche Ostsee LNG import terminal, located in Lubmin and operated by Deutsche ReGas, was inaugurated in January 2023. The terminal uses the *Neptune FSRU* on a long-term charter with TotalEnergies, which is subchartering the unit to Deutsche Regas. *Neptune* has a 3.8 MTPA nominal regasification capacity and a 5.7 MTPA peak regasification capacity. TotalEnergies holds 2 MTPA of regasification capacity at the terminal. The FSRU arrived on site at Mukran Port, in December 2022, and started operations in January. LNG carriers bringing in the LNG moor offshore Lubmin and the LNG is transshipped to the FSRU using two small LNG carriers, *Coral Furcata* and *Coral Favia.* In October 2022, Deutsche ReGas started a binding open season for Phase I of the Deutsche Ostsee offshore LNG terminal, and a non-binding open season for Phase II of the project. For phase I, the *Neptune FSRU* is moored in the port of Lubmin. In Phase II it will be relocated to a location offshore Lubmin. The start-up of the second phase is planned in December 2023. The terminal is the first and, so far, the only privately financed LNG terminal in Germany. It is exempted from tariff and network access regulation for 20 years.

Another LNG project is under development offshore the port of **Lubmin** by RWE. A charter agreement for an FSRU was signed in May 2022 between Dynagas and RWE on behalf of the German Government.

In **Stade,** the shareholders of Hanseatic Energy Hub (Fluxys, Buss Group, Partners Group and Dow) have started preparatory works for the construction of a 13.3 BCMA onshore regasification terminal with two storage tanks of 240,000 m³ each. The onshore terminal is scheduled to be operational by 2027. In January 2023, the Stade LNG terminal started construction of the new jetty. By the end of 2023, the jetty will allow a Dynagas FSRU chartered by the German government to start importing LNG. The terminal will use residual heat from an adjacent Dow plant to regasify the LNG, which is expected to reduce the CO_2 footprint of the operations. EnBW and SEFE have contracted long-term capacity at the terminal, for respectively 3 BCMA over 25 years and 4 BCMA over 20 years. The contracts include an option to move to ammonia as a hydrogen-based energy source at a later date.

The European Commission has confirmed that the terminal will benefit from a regulatory exemption.

Ghana

In October 2022, the Ghana National Petroleum Corp (GNPC) said that the **Tema LNG** Terminal is likely to be completed in 2023.

Greece

In November 2022, the 145,000 m³ FSU Gaslog Athens, leased from Gaslog and moored by DESFA offshore the **Revithoussa** LNG terminal, started operations. The addition of the FSU has increased the storage capacity of the LNG Terminal of Revithoussa to approximately 370,000 m³ LNG. The volume stored in the FSU is intended to cover part of the strategic reserve that must be kept by power generation units that are not able to operate with an alternative fuel. This obligation was for the period from 1 November 2022 to 31 March 2023, according to the provisions of the Preventive Action Plan approved by the Greek Regulatory Authority for Energy (RAE). According to DESFA's National Development Plan, small-scale LNG truck loading infrastructure is expected to be ready in Revithoussa in 2023 and a small-scale LNG bunkering facility is expected in 2024.

In May 2022, Gastrade started work at the 5.5 BCMA **Alexandroupolis FSRU** project. The FSRU, will have four LNG storage tanks with a total capacity of 153,500 m³ of LNG, three regasification units, with a capacity of 315,000 m³/h (267 mmscfd) each and systems for side to side (STS) mooring for LNG offloading. The terminal will be linked to the Greece-Bulgaria gas interconnector, commissioned in October 2022. In March 2023, Keppel Shipyard (Singapore) started work on the DNV classed LNG carrier *GasLog Chelsea* to convert the vessel to be renamed FSRU *Alexandroupoli.* It is expected to start operations by the end of 2023, with 60% of its technical regasification capacity, already booked.

In February 2023, Dioriga Gas completed the second phase of the market test for the reservation of capacity at its proposed FSRU-based LNG terminal, located in the regional district of Corinth. The 2 MTPA offered has been subscribed for a period of up to 25 years. The first phase of the market test was carried out between January and October 2022. The **Dioriga Gas FSRU** project is being developed by Dioriga Gas, a 100% subsidiary of Motor Oil Group. It consists of an FSRU to be connected to the National Natural Gas Transmission System (NNGTS). In addition to storage and regasification services, LNG truck loading and bulk breaking services will be available at the terminal. According to Dioriga Gas, the FSRU is designed to be H2 ready.

In December 2022, Mediterranean Gas completed the first phase of the market test for the expression of interest and capacity allocation for a period of up to 25 years for the 5.2 BCMA Argo FSRU terminal proposed in **Volos** with demand exceeding the total capacity of the terminal. Mediterranean Gas reported a high demand for additional storage space in the terminal. The FSRU will have a 170,000 m3 storage capacity and 3 regasifiers, with a maximum capacity of 250 mmscfd each. The average and maximum regasification capacity of the terminal will be 3.7 MTPA and 5.6 MTPA respectively.

Hong Kong

In March 2023, **Hong Kong LNG** Terminal joint venture issued a tender to purchase an LNG cargo for the commissioning of the terminal. The terminal includes the 263,000 m³ *Bauhinia Spirit FSRU* (ex. Challenger), a double berth jetty and subsea pipelines. In April 2023, the FSRU arrived in Hong Kong. The terminal received its first LNG cargo in May 2023.

Israel

The contract between Excelerate Energy and Israel Electric Corporation (IEC) for the provision of an FSRU ended in December 2022. Israel is not expected to import any LNG in the foreseeable future.

India

The regasification capacity of **Dahej** LNG Terminal is being expanded from 17.5 MTPA to 22.5 MTPA. Two additional LNG storage tanks and a 3rd jetty are under construction at the terminal. The terminal is also being adapted to handle ethane and propane in addition to LNG.

In April 2023, the 5 MTPA **Dhamra** LNG terminal, developed by Adani Total Private Limited (ATPL), a 50/50 joint venture between Adani and TotalEnergies, received its first LNG cargo from Qatar and started commissioning. The facility is the country's 7th LNG import. It can accommodate LNG vessels of a 40,000 - 265,000 m³ capacity. It has reloading and truck loading facilities and benefits from a natural breakwater in Dhamra Port, which assures year-round operations. The terminal will deliver regasied LNG to refineries, fertilizer plants, industries, and city gas distribution. Indian Oil Corp has booked 3 MTPA of regasification capacity at the terminal for 20 years.

In 2022, H-Energy completed the construction of a jetty at **Jaigarh** port along with other buildings including control room, jetty monitoring room, administration building and associated facilities. The installation and testing of all equipment, including topside piping, metering skid and fire water system, has also been completed. Construction and testing of the Jaigarh-Dabhol pipeline has been completed including its connection to GAIL's DUPL pipeline linking the terminal with Western, Northern and Southern parts of India. The 10-year charter agreement between H-Energy and Hoëgh LNG for the 170,000 m³ *Hoëgh Giant* FSRU has been terminated.

The first phase of the India's first newbuild FSRU project in Jafrabad, developed by Swan Energy, which includes the 5 MTPA *FSRU Vasant 1* and an FSU, was supposed to be commissioned in 2022. The FSRU was completed by Hyundai Heavy Industries in South Korea at the end of 2020. However, due to delays in the start-up of the project, the FSRU has been chartered for one year by Botas to provide regasification services at Saros in Türkiye.

As of December 2022, the 5 MTPA **Chhara** LNG project, which is under development by Hindustan Petroleum Corp Ltd (HPCL) in Gujarat state, was reported to be expected to start-up by the end of 2023.

The **Karaikal** LNG import terminal, which is being built by Atlantic, Gulf and Pacific (AG&P) in the Karaikal Port in Southeast India, is expected to start operations by the end of 2024. The terminal will include an FSU, leased through a long-term charter agreement with ADNOC L&S. The facility will provide natural gas to power plants, industrial and commercial customers and city gas networks of AG&P.

An FSU based LNG regasification project in **Kakinada,** under development by H-Energy, is expected to be commissioned by mid-2024.

Petronet is working to develop an LNG Terminal at **Gopalpur,** Odisha, which will initially use an FSRU with a capacity of 4 MTPA, with a future provision to convert it into a land-based LNG terminal of 5 MTPA capacity.

Bengal Concessions Private Limited (BCPL), a subsidiary of HE Terminals Private Limited (HETPL) is planning to construct an onshore 3 MTPA LNG terminal at **Kukrahati,** East Medinipur District, West Bengal. The terminal will have storage tanks with a total capacity of 180,000 m³, two jetties and truck loading facilities. The project has received EC Approval, as well as approvals from National Waterways and Kolkata Port Trust.

Italy

In March 2022, the offshore **Rovigo LNG** terminal increased its regasification capacity from 8 to 9 BCMA thanks to the optimization of its operating regime, without undertaking any structural changes or systems with respect to the current configuration.

In March 2023, the 170,000 m³ FSRU *Golar Tundra,* purchased by Snam, arrived in **Piombino** for a new 5 BCMA LNG offshore regasification project. The terminal's regasification capacity is booked at 86% for a 20-year period up to 2044. Snam recently selected Klaipedos Nafta (KN) to collaborate in the installation, commissioning and testing of the terminal and launched a tender for a commissioning cargo. The project received state approval in October 2022. The FSRU received its first LNG cargo in May 2023.

In July 2022, Snam purchased the 170,000 m³ FSRU *BW Singapore* from BW LNG. The 5 BCMA FSRU, currently located in Egypt and bound by a charter agreement with EGAS until November 2023, is expected to be installed in the upper Adriatic Sea, close to the coast of **Ravenna.** Operations are scheduled to start in the third quarter of 2024, following the completion of the authorization and regulatory process as well as finalizing the works required for mooring the FSRU and connecting it to the gas transport network.

Jamaica

In March 2022, the 170,000 m³ *Höegh Gallant* FSRU replaced *Golar Freeze* at the New Fortress Energy's **Old Harbor** LNG terminal following the 10-year charter contract signed between Höegh LNG and a subsidiary of New Fortress Energy in 2021.

Japan

The 1 MTPA **Niihama** LNG terminal started operations in January 2022.

In 2022, Eneos announced plans to add LNG ship-to-ship transfer (STS) services and break-bulking cargoes into smaller vessels at the **Hachinohe** terminal jetty. Five truck loading lanes were added at the **Ishikari** LNG terminal, operated by Hokkaido Gas.

In December 2022, the Sunflower Kurenai, Japan's first LNG-fueled ferry ordered by MOL and operated by Ferry Sunflower Limited, received its first LNG fuel supply at the Port of Beppu in Oita Prefecture from Oita LNG Company, Inc., a subsidiary of Kyushu Electric Power. For the first time in Japan, LNG was supplied via truck to the ferry with a skid that connected simultaneously four tank trucks to the ferry, speeding up the process.

Latvia

In April 2023, the Latvian government abandoned plans for the **Skulte LNG** terminal after receiving unfavorable reports on its commercial viability. Latvia's Ministry of Climate and Energy (KEM) is working on arranging access for the joint use of the **Paldinski LNG** terminal in Estonia.

Lithuania

In October 2022, AB Klaipėdos Nafta exercised its option to acquire the FSRU *Independence* from Höegh LNG. The ownership transfer will take place in December 2024. The operation of the terminal is guaranteed until 2044.

AB Klaipėdos Nafta, operator of **Klaipeda** LNG terminal, is exploring the possibility to expand the regasification capacity of the terminal to 2.5 BCMA starting from 2nd half of 2026. The gas transmission capacity at relevant entry and exit points would also be increased accordingly. A joint open season procedure is proposed by Klaipeda LNG Terminal and Lithuanian gas transmission system.

Netherlands

Gate Terminal increased the send-out during the summer 2022 to 16 BCMA by means of some small investments and changes. The operator launched an open season in September 2022 for an additional 4 BCMA of send-out capacity, including a 4th tank. The terminal has decided to expand the truck loading facilities by two more bays to a total of 5.

In September 2022, a new offshore 8 BCMA LNG terminal EemsEnergyTerminal started operations in **Eemshaven.** The project is a 100% subsidiary of NV Nederlandse Gasunie. The terminal includes two FSRUs, the *Eemshaven LNG* barge from Exmar and the *Golar Igloo* from Energos Infrastructure, which have been leased for a period of 5 years. The terminal is connected to the Dutch high-pressure gas grid by a 4-kilometer connection pipeline. The annual capacity is fully booked by ČEZ (Czech Republic), Shell Western LNG B.V. and ENGIE SA.

Poland

GAZ-SYSTEM completed Stage 1 of the expansion project at the **Świnoujście** LNG Terminal. Installation of two additional Submerged Combustion Vaporisers (SCV) allowed an increase in regasification capacity to 6.2 BCMA. Stage 2 of the expansion project is ongoing. It includes a third LNG storage tank, auxiliary installations and equipment and connection to the existing infrastructure. A new jetty for LNG unloading, loading and bunkering along with a dedicated transmission pipe rack will also be constructed. Stage 2 is expected to be completed in December 2023. As of July 2022, the annual truck loading capacity was increased to 185,000 tons of LNG.

In 2022 GAZ-SYSTEM completed the first phase of the binding open season for its new FSRU-based LNG terminal in the Gulf of **Gdańsk** area. The open season has confirmed the interest of market participants. In November 2022 GAZ-SYSTEM signed an agreement with Rambøll Danmark A/S for the preparation of the Construction Permit Design for the offshore infrastructure for the FSRU Terminal. In December 2022 the European Commission, under the Connecting Europe Facility (CEF), granted funding to the LNG Gdańsk Project for the development of technical specifications and performance of engineering works. In March 2023, GAZ-SYSTEM launched a non-binding open season for regasification capacity, which will deliver approximately 4.5 BCMA of natural gas. The decision on the final regasification capacity of the new terminal will depend on the results of the market screening.

Senegal

In January 2023, KARMOL, a joint venture between Turkish Karpowership and Japanese MOL, signed a loan agreement with Japan Bank for International Cooperation (JBIC) and MUFG Bank for US$71M to finance its first FSRU in Senegal located offshore **Dakar**. The terminal will use FSRU *Karmol LNGt Powership Africa,* which will supply regasified LNG to a Karpowership floating power plant, which was already in operation burning fuel oil. In May 2022, Gas Entec, a subsidiary of AG&P, completed the conversion of the LNG carrier *Dwiputra* to the FSRU while the vessel was already onsite since June 2021. The facility has the capacity to be scaled from 15 MMcfd to 300 MMcfd of gas.

Singapore

Studies related to additional storage and jetty capacity, which will be used for storage, reloading, small-scale LNG and LNG bunkering activities are being carried out at the **SLNG terminal.**

The Energy Markets Authority has put in place a set of temporary measures to secure Singapore's energy supply and ensure the functioning of the energy sector, including the establishment of a Standby LNG facility (SLF). Power generation companies can draw from SLF to generate electricity when their natural gas supplies are disrupted. These measures were first extended until 31 March 2023, and the SLF will be maintained beyond that date to address risks of gas supply disruptions. Singapore has chartered vessels, including *Gaslog Singapore* and *Bauhinia Spirit,* as a temporary measure to be used as LNG floating storage in response to the risk of a shortage of LNG supply.

Spain

In 2023 **El Musel** (Gijón) LNG receiving terminal is scheduled to start operating as a logistics terminal and will be able to supply up to 8 bcma of LNG to Europe. The terminal has received ministerial authorization and approval from the National Markets and Competition Commission (CNMC) for its special economic regime as a logistics facility in February 2023. El Musel LNG terminal has two tanks of a 150,000 m³ LNG storage capacity each, two loading bays which will allow the berthing of vessels of between 50,000 and 266,000 m³. The terminal had been idled since its construction was completed in 2013. In March 2023, Enagás launched an open season for logistic services which will include a first non-binding phase expression for interest for LNG unloading, storage and loading operations, on an unregulated access basis. Under the regulated access regime, El Musel terminal will only offer the essential regasification service for the proper management of the terminal, as well as the tank loading service. After the first phase, a binding phase will take place in which marketers bid for the capacity. The process will end with the allocation of long-term logistics services.

In February 2023, Enagás and Reganosa signed an agreement under which Reganosa purchased a 25% stake in the 8 BCMA El Musel LNG receiving terminal for €95M and Enagás acquired the entire transmission network of 130 km of 80-bar natural gas pipelines, previously owned by Reganosa, for €54M.

The jetty of the LNG terminal in **Mugardos** has been extended and a small-scale transfer facility is now available, allowing gassing up, cooling down, loading and unloading operations for all capacities of LNG vessels and barges up to 266,000 m³ (QMAX).

South Korea

NH Company, a joint venture between Korean steelmaking company Posco and subsidiary Posco Energy, is building two more LNG storage tanks at the **Gwangyang LNG** terminal in South Korea. Construction is expected to be completed by 2025, taking the number of tanks at the terminal to eight.

Development of **Ulsan LNG** terminal, jointly owned by Korea National Oil Company, SK Gas and MOL Chemical Tankers, is underway. The terminal will have six 215,000 m³ storage tanks. As of November 2022, tanks one and two had been completed. The terminal is expected to be fully completed by the third quarter of 2024 and commissioned in the fourth quarter of 2024. The terminal will be operated by KET (Korea Energy Terminal). KET holds a 4.8 MTPA and Clean Energy Complex (CEC) a 2.4 MTPA of regasification capacity at the terminal. LNG imports are expected to start in 2024 and 2026 respectively. The terminal will supply two power plants (Ulsan Gas & Power Solution and SK Multi Utility).

Philippines

In April 2023, Philippines joined the ranks of LNG importers, as AG&P's **Philippines LNG** terminal, located in Batangas Bay near Manila, received its commissioning LNG cargo. The FSU *Ish*, used at the project, is part of the combined offshore/onshore terminal that will have an initial capacity of 5 MTPA.

162,400 m³ FSRU *BW Batangas* (ex. BW Paris), owned by BW LNG, is undergoing modifications at MMHE Shipyard in Johor (Malaysia) to be ready to serve First Gen's **Batangas** LNG terminal under a 10-year charter. BW Batangas arrived in the Philippines in June 2023. The 3.9 MTPA FSRU will provide LNG storage and regasification services to First Gen's existing and planned gas-fired power plants and to other third-party terminal users. First Gen, through its subsidiary FGEN LNG, in partnership with Tokyo Gas, is developing the **Interim Offshore LNG Terminal** as the first phase of the Batangas LNG terminal at the First Gen Clean Energy Complex in Batangas City.

Puerto Rico

In May 2022, Crowley inaugurated a small-scale LNG loading terminal in the southern town of Peñuelas. The facility will deliver more than 94 million gallons (356,000 m³) of LNG annually from the Eco Electrica LNG terminal. The LNG facility will support industrial and commercial operators in Puerto Rico, Central America and the Caribbean.

Taiwan

In 2022, CPC started construction of phase III expansion project in CPC **Taichung LNG** receiving terminal. The project includes two additional LNG storage tanks of a capacity 180,000 m³ each and extra regasification facilities. Completion is targeted for the end of 2026.

Thailand

In June 2022, the second LNG receiving terminal in Thailand, LNG **Map Ta Phut Terminal 2,** also known as Nong Fab LNG, owned and operated by PTT LNG and located adjacent to the existing Map Ta Phut Terminal 1, received its commissioning LNG cargo. The construction of the 7.5 MTPA terminal was carried out by a joint venture between Saipem and CTCI Corporation and took 4 years.

Turkey

The upgrade of the LNG terminal jetty to receive Q-max size and small-scale vessels in EgeGaz's **Aliağa** LNG facility was completed in 2022.

Botas has completed construction of a new jetty in Saros Bay for the **Saros FSRU** project. In February 2023, the 180,000 m³ FSRU *Vasant 1* arrived at **Saros LNG** terminal with a commissioning cargo onboard. The FSRU is chartered by Botas from Swan Energy and is set to operate at the terminal for 12 months.

UAE

In March 2023, Excelerate Energy extended the time charter agreement with Dubai Supply Authority (DUSUP) for the *FSRU Explorer,* employed at **Jebel Ali** LNG import terminal in Dubai, by an additional 5-years from the end of the existing contract in the fourth quarter of 2025.

UK

The expansion of **Grain LNG** terminal is underway. From mid-July 2025, its storage capacity is expected to increase to 1.2 million m³, and the regasification capacity to 800 GWh/d (23 MTPA). In addition, a second cryogenic unloading line will be commissioned. In July 2022, Grain LNG issued a statement inviting market participants to express an interest in low-cost capacity at the facility as of 2029. Grain LNG has a series of existing capacity contracts ending by 2029. Grain LNG expects to be able to offer at least 360,000 m³ of storage and 300 GWh/d of regasification capacity for 2029.

Regasification terminals

		Storage		Send-out						
Market	Site	Number of tanks	Total capacity (liq m³)	Number of vaporizers	Nominal capacity (MTPA)	Owner	Operator	Third Party Access	Additional Services offered	Start-up date
AMERICAS										
Argentina	**Bahia Blanca** **No vessel chartered**	4	**151,000**	6	**3,7**	Owner: Excelerate Energy Charterer: YPF	**FSRU: Excelerate Energy** **Terminal: YPF**	No		**2008**
	Escobar ***Excelerate Expedient (FSRU)***	4	**151,000**	6	**6,1**	Owner: Excelerate Energy Charterer: UTE Escobar (50% Enarsa, 50% YPF)	**FSRU: Excelerate Energy** **Terminal: YPF**	No		**2011**
Brazil	**Bahia** ***Excelerate Sequoia (FSRU)***	4	**173,400**		**5,6**	Owner: Maran Gas Maritime Charterer: Excelerate Energy	**FSRU: Excelerate Energy** **Terminal: Excelerate Energy**	Yes		**2013**
	Guanabara Bay ***Excelerate Experience (FSRU)***	4	**173,400**	6	**6,0**	Owner: Excelerate Energy Charterer: Petrobras	**FSRU: Excelerate Energy** **Terminal: Petrobras**	No	Reloading	**2009**
	Pecem ***Energos Winter (FSRU)***	4	**138,000**		**3,8**	Owner: Energos Infrastructure Charterer: Petrobras	**FSRU: Energos Infrastructure** **Terminal: Petrobras**	No		**2009**
	Port of Açu ***BW Magna (FSRU)***	4	**173,400**		**5,6**	Owner: BW Charterer: Gas Natural Açu (Prumo Logistica, BP, Siemens)	**FSRU: BW** **Terminal: Klaipedos Nafta**			**2021**
	Sepetiba LNG ***LNGt Powership Asia (FSRU)***	4	**127,500**		**2,7**	KARMOL	**Karpowership**			**2022**
	Sergipe ***Energos Nanook (FSRU)***	4	**170,000**		**5,6**	Owner: Energos Infrastructure Charterer: CELSE	**Energos Infrastructure**		Reloading	**2020**
Canada	**Saint John, New Brunswick**	3	**480,000**	8	**7,4**	Repsol	**Canaport LNG**	Yes		**2009**
Chile	**Mejillones**	1	**187,000**	3	**1,5**	ENGIE (63%), Ameris Capital (37%)	**GNL Mejillones**	Yes	Transshipment, Truck loading	**2010**
	Quintero	3	**334,000**	4	**3,8**	GNLQ: Consortium led by EIG and Fluxys (80%), ENAP (20%)	**GNL Quintero**	Yes	Reloading, Truck loading	**2009**
Colombia	**Cartagena SPEC LNG** ***Höegh Grace (FSRU)***	4	**170,000**	4	**3,7**	Owner: Höegh LNG Charterer: Sociedad Portuaria El Cayao (SPEC LNG)	**FSRU: Höegh LNG** **Terminal: SPEC LNG**	No	Reloading, Transshipment	**2016**
Dominican Republic	**Andrés**	1	**160,000**	3	**1,7**	AES	**AES**	No	Reloading, Truck loading	**2003**
El Salvador	**Acajutla** ***BW Tatiana (FSRU)***	5	**137,000**		**2,0**	Energia del Pacifico (Invenergy, Quantum Energy, Grupo Calleja, VC Energy de Centroamerica)	**Invenergy, BW LNG**			**2022**
Jamaica	***Montego Bay***	7	**7,000**		**0,5**	New Fortress Energy	**New Fortress Energy**		Truck loading	**2016**
	Old Harbour ***Höegh Gallant (FSRU)***	4	**170,000**	4	**1,7**	Owner: Höegh LNG Charterer: New Fortress Energy	**New Fortress Energy**			**2019**
Mexico	**Altamira**	2	**300,000**	5	**5,7**	Terminal de LNG de Altamira (Vopak 60%, Enagas 40%)	**Terminal de LNG de Altamira**	Yes		**2006**
	Energia Costa Azul	2	**320,000**	6	**7,6**	IEnova (Sempra)	**IEnova (Sempra)**	Yes	Reloading	**2008**
	Manzanillo	2	**300,000**		**3,8**	Mitsui (37.5%), Samsung (37.5%), KOGAS (25%)	**Terminal KMS**			**2012**
	Pichilingue, La Paz	3			**0,8**	New Fortress Energy	**New Fortress Energy**		Truck loading	**2021**
Panama	**Costa Norte**	1	**180,000**		**1,5**	AES	**AES**		Bunkering, Truck loading	**2018**
Puerto Rico	**San Juan**				**1,1**	New Fortress Energy	**New Fortress Energy**		Truck loading	**2020**
	Peñuelas	1	**160,000**	4	**2,0**	Naturgy (47.5%), ENGIE (35%), Mitsui (15%), OCO Partners (2.5%)	**Eco Eléctrica**		Truck loading	**2000**
USA	**Cameron**	3	**480,000**	10	**11,4**	Sempra (50.2%), TotalEnergies (16.6%), Mitsubishi (16.6%), Mitsui (16.6%)	**Cameron LNG**	Yes	Reloading	**2009**
	Cove Point	7	**700,000**	25	**13,7**	Cove Point LNG, LP (Dominion Energy 75%, Brookfield 25%)	**Cove Point LNG, LP**			**1978**
	Elba Island	5	**535,000**	11	**12,0**	Kinder Morgan	**Southern LNG**	Yes		**1978**

Regasification terminals

		Storage		Send-out						
Market	Site	Number of tanks	Total capacity (liq m³)	Number of vaporizers	Nominal capacity (MTPA)	Owner	Operator	Third Party Access	Additional Services offered	Start-up date
USA	**Everett**	2	**155,000**	4	**5.1**	Constellation LNG	**Constellation LNG**	Yes	Truck loading	**1971**
USA	**Freeport**	3	**480,000**	7	**13.2**	Freeport LNG Development, L.P.	**Freeport LNG Development**	Yes		**2008**
USA	**Golden Pass**	5	**775,000**	8	**15.7**	QP (70%), ExxonMobil (30%)	**Golden Pass LNG**	No		**2010**
USA	**Gulf LNG**	2	**320,000**		**8.8**	Kinder Morgan (50%), GE (40%), AES (10%)	**Gulf LNG Energy**	No		**2011**
USA	**Lake Charles**	4	**425,000**	14	**17.9**	Lake Charles LNG	**Lake Charles LNG**	Yes		**1982**
USA	**Northeast Gateway No vessel chartered**	4	**151,000**	6	**3.8**	Excelerate Energy	**Excelerate Energy**			**2008**
USA	**Sabine Pass**	5	**800,000**	24	**30.4**	Sabine Pass LNG	**Cheniere**	Yes	Reloading	**2008**
AMERICAS TOTAL			**8,983,700**		**215.99**					
ASIA										
Bangladesh	**Moheshkhali** ***Excelerate Excellence (FSRU)***	4	**138,000**		**3.8**	Owner: Excelerate Energy Charterer: Petrobangla	**Excelerate Energy**			**2018**
Bangladesh	**Summit LNG** ***Summit LNG (FSRU)***	4	**138,000**		**3.8**	Owner: Excelerate Energy Charterer: Summit Power International	**FSRU: Excelerate Energy Terminal: Summit**			**2019**
China	**Beihai, Guangxi**	4	**640,000**		**6.0**	PipeChina (80%), Guangxi Beibu Gulf International (20%)	**PipeChina**	Yes	Truck loading	**2016**
China	**Binhai, Jiangsu**	4	**880,000**	6	**3.0**	CNOOC (76%), Huainan Ming Group (24%)	**CNOOC**			**2022**
China	**Caofeidian (Tangshan), Hebei**	8	**1,280,000**		**10.0**	Petrochina (51%), Beijing Gas Blue Sky Holdings Ltd. (29%), Hebei Natural Gas (20%)	**Petrochina**	Yes	Truck loading	**2013**
China	**Dalian, Liaoning**	3	**480,000**	3	**6.0**	PipeChina (75%), Dalian Port Company Limited (20%), Dalian Construction Investment (5%)	**PipeChina**	Yes	Reloading, Truck loading	**2011**
China	**Dapeng, Shenzhen**	4	**640,000**	7	**6.8**	CNOOC (33%), Guangdong Province Consortium (31%), BP (30%), HK & China Gas (3%), Hong Kong Electric (3%)	**GDLNG**	Limited	Truck loading	**2006**
China	**Dongguan, Guangdong**	2	**160,000**	4	**1.5**	Jovo Group	**Jovo**	No	Truck loading	**2012**
China	**Diefu, Shenzhen**	4	**640,000**		**4.0**	PipeChina (70%), Shenzhen Energy Group (30%)	**PipeChina**	Yes	Truck loading	**2018**
China	**Fangchenggang, Guangxi**	2	**60,000**		**0.6**	PipeChina (51%), Fangchenggang Port Group Co. LTD (49%)	**PipeChina**	Yes	Truck loading	**2019**
China	**Hua'an, Guangdong**	1	**80,000**		**0.8**	Shenzhen Gas	**Shenzhen Gas**		Truck loading	**2019**
China	**Jiaxing, Zhejiang**	2	**200,000**		**1.0**	Hangzhou Gas (49%), Jiaxing Gas (51%)	**GCL**			**2022**
China	**Ningbo, Zhejiang**	6	**960,000**		**6.0**	CNOOC (51%), Zhejiang Energy Group Co Ltd (29%), Ningbo Development & Investment Group (20%)	**CNOOC**	No	Truck loading	**2013**
China	**Putian, Fujian**	6	**960,000**		**6.3**	Fujian LNG (CNOOC 60%, Fujian Inv. & Dev.Co. 40%)	**CNOOC**	No	Truck loading	**2008**
China	**Qidong, Jiangsu**	5	**620,000**		**4.0**	Guanghui Energy	**Guanghui Energy**		Truck loading	**2017**
China	**Qingdao, Shandong**	6	**960,000**		**7.0**	Sinopec (99%), Qingdao Port Group (1%)	**Sinopec**	No	Truck loading	**2014**
China	**Rudong, Jiangsu**	5	**1,080,000**	3	**10.0**	Petrochina (55%), Pacific Oil & Gas (35%), Jiangsu Guoxin Investment Group (10%)	**Petrochina**	Yes	Truck loading	**2011**

		Storage		Send-out						
Market	Site	Number of tanks	Total capacity (liq m^3)	Number of vaporizers	Nominal capacity (MTPA)	Owner	Operator	Third Party Access	Additional Services offered	Start-up date
China	**Tianjin** ***Cape Ann (FSRU)*** **& Onshore facilities**	7	**397,000**	3	**6.0**	FSRU owner: Höegh LNG Charterer: CNOOC Gas & Power Trading and Marketing Onshore facilities owner: PipeChina (46%), Tianjin Govt (40%), Tianjin Gas (9%), Tianjin Hengrongda Investment (5%)	**FSRU: Höegh LNG** **Terminal: PipeChina**	No	Truck loading	**2013**
	Tianjin LNG	4	**640,000**		**6.0**	Sinopec (98%), Tianjin Nangang Industrial Zone Developemnt Co., Ltd. (2%)	**Sinopec**		Truck loading	**2018**
	Shennan, Hainan	2	**40,000**		**0.6**	Petrochina (90%), Beijing Gas Bluesky (10%)	**Petrochina**	No		**2014**
	Wuhaogou, Shanghai	5	**320,000**		**1.5**	Shanghai Gas (Shenergy 100%)	**Shenergy Group**	No		**2008**
	Yangshan, Shanghai	5	**895,000**		**3.0**	Shanghai LNG (CNOOC 45%, Shenergy Group Ltd 55%)	**Shenergy Group**	No	Truck loading	**2009**
	Yangpu, Hainan	2	**320,000**		**3.0**	PipeChina (65%), Guodian Haikong New Energy (35%)	**PipeChina**	Yes	Truck loading	**2014**
	Yuedong, Guangdong	3	**480,000**		**4.2**	PipeChina	**PipeChina**	Yes	Truck loading	**2017**
	Zhoushan, Zhejiang	4	**640,000**	5	**5.0**	ENN Group (90%), SK E&S (10%)	**ENN**	Yes	Truck loading	**2018**
	Zhuhai, Guangdong	3	**480,000**		**3.5**	CNOOC (30%), Guangdong Energy (25%), Guangzhou Gas Group (25%), Guangdong Yuegang (8%), Zhuhai Electric Development (3%), Zhongshan Zhonghui Investment Group (3%), Jiangmen City (3%), Foshan Gas (3%)	**CNOOC**		Reloading, Truck loading	**2013**
India	**Dabhol**	3	**480,000**	6	**5.0**	Konkan LNG Ltd.	**Gail**	Yes		**2013**
	Dahej	6	**932,000**	21	**17.5**	Petronet LNG	**Petronet LNG**	Yes	Truck loading	**2004**
	Dhamra	2	**360,000**		**5.0**	Adani Total Private Limited	**ATPL**			**2023**
	Ennore	2	**360,000**		**5.0**	Indian Oil Corporation (90%), Tamil Nadu Industrial Development Corporation (10%)	**Indian Oil Corporation**			**2019**
	Hazira	2	**320,000**	5	**5.2**	Shell Energy India Private Ltd. (Shell 100%)	**Shell Energy India Private Ltd.**	Negotiated	Truck loading	**2005**
	Kochi	2	**368,000**	5	**5.0**	Petronet LNG	**Petronet LNG**	Yes	Bunkering, Cool-down, Gassing-up, Reloading, Truck loading	**2013**
	Mundra	2	**320,000**	5	**5.0**	GSPC LNG Limited - Goverment of Gujarat and its entities including GSPC holding (95%), Adani Group (5%)	**GSPC LNG Limited**		Truck loading	**2020**
Indonesia	**Amurang** ***No vessel chartered***									**2020**
	Arun Regas	4	**508,000**		**3.0**	PT Perta Arun Gas (Pertamina 70%, Government of Aceh 30%)	**PT Perta Arun Gas**	Yes (2 tanks)	Bunkering, Cool-down, Reloading, Truck loading	**2015**
	Tanjung Benoa, Bali ***FSRU Karunia Dewata***		**26,000**		**0.4**	Owner: JSK Group (50%), PT Pelindo III (50%) Charterer: PLN	**PT Pelindo Energi Logistik (PEL)**			**2016**
	Cilamaya, West Java ***Jawa Satu (FSRU)***	4	**170,000**	4	**2.4**	Jawa Satu Regas (Pertamina, Sojitz, Marubeni)	**Jawa Satu Regas**			**2021**
	Lampung, Sumatra ***PGN FSRU Lampung***	4	**170,000**	3	**2.7**	Owner: Höegh LNG Charterer: PGN (subsidiary of Pertamina)	**FSRU: Höegh LNG** **Terminal: PGN**	No		**2014**
	Nusantara, West Jawa ***Nusantara Regas Satu (FSRU)***	6	**125,000**	6	**3.0**	Owner: New Fortress Energy Charterer: PT Nusantara Regas	**PT Nusantara Regas (Pertamina 60%, PGN 40%)**	No		**2012**
	Maleo, Gorontalo ***Hua Xiang (FSRU)***				**0.2**	Owner: Zhejiang Huaxiang Charterer: PT Sulawesi Satu (PLN GG, Humpuss)	**PT GTS Internasional Tbk**			**2022**

Regasification terminals

Market	Site	Storage: Number of tanks	Storage: Total capacity (liq m³)	Send-out: Number of vaporizers	Send-out: Nominal capacity (MTPA)	Owner	Operator	Third Party Access	Additional Services offered	Start-up date
Japan	**Chita**	7	**640,000**	11	**10.9**	Chita LNG	**Chita LNG**	Yes	Truck loading	**1983**
	Chita Kyodo	4	**300,000**	14	**7.5**	Toho Gas / JERA	**Toho Gas**	Yes		**1978**
	Chita-Midorihama Works	3	**620,000**	8	**7.7**	Toho Gas	**Toho Gas**	Yes	Truck loading	**2001**
	Futtsu	12	**1,360,000**	13	**22.9**	JERA	**JERA**	Yes	Truck loading	**1985**
	Hachinohe	2	**280,000**	5	**1.0**	ENEOS Corporatoin	**ENEOS LNG Service Corporatoin**	Yes	Reloading, Truck loading	**2015**
	Hatsukaichi	2	**170,000**	4	**0.8**	Hiroshima Gas	**Hiroshima Gas**	No	Truck loading	**1996**
	Hibiki	2	**360,000**	5	**2.4**	Hibiki LNG (Saibu Gas 90%, Kyushu Electric 10%)	**Hibiki LNG**	Yes	Cool-down, Gas test services, Truck loading	**2014**
	Higashi-Ohgishima	9	**540,000**	9	**13.2**	JERA	**JERA**	Yes		**1984**
	Himeji	8	**740,000**	5	**5.5**	Osaka Gas	**Osaka Gas**	Yes	Reloading, Truck loading	**1979**
	Himeji LNG	7	**520,000**	7	**8.1**	Kansai Electric	**Kansai Electric**	Yes	Truck loading	**1979**
	Hitachi	2	**460,000**	5	**5.3**	Tokyo Gas	**Tokyo Gas**	Yes	Reloading, Truck loading	**2016**
	Ishikari	4	**840,000**	7	**4.6**	Hokkaido Gas / Hokkaido Electric	**Hokkaido Gas**	Yes (No.1,2 tank) No (No.3,4 tank)	Reloading, Truck loading	**2012**
	Joetsu	3	**540,000**	8	**3.2**	JERA	**JERA**	No	Truck loading	**2011**
	Kagoshima	2	**86,000**	4	**0.2**	Nippon Gas	**Nippon Gas**	No	Truck loading	**1996**
	Kawagoe	6	**840,000**	7	**8.7**	JERA	**JERA**	Yes	Bunkering, Truck loading	**1997**
	Minato	1	**80,000**	3	**0.3**	Gas Bureau, City of Sendai	**Gas Bureau, City of Sendai**	No	Truck loading	**1997**
	Mizushima	2	**320,000**	6	**4.3**	Mizushima LNG	**Mizushima LNG**	Yes	Truck loading	**2006**
	Naoetsu	2	**360,000**	4	**2.1**	INPEX Corporation	**INPEX Corporation**	Yes		**2013**
	Negishi	11	**905,000**	13	**10.8**	Tokyo Gas / JERA	**Tokyo Gas**	Yes	Truck loading	**1969**
	Niigata	8	**720,000**	12	**8.5**	Nihonkai LNG	**Nihonkai LNG**	Yes	Truck loading	**1984**
	Niihama	1	**230,000**	3	**1.0**	Niihama LNG (Tokyo Gas 50.1%, Shikoku Electric 30%, Shikoku Gas 5%, Sumitomo 14.9%)	**Niihama LNG**	No		**2022**
	Ohgishima	4	**850,000**	12	**10.2**	Tokyo Gas	**Tokyo Gas**	Yes		**1998**
	Oita	5	**460,000**	7	**5.4**	Oita LNG	**Oita LNG**	Yes	Truck loading	**1990**
	Sakai	4	**560,000**	6	**6.4**	Kansai Electric	**Kansai Electric**	Yes	Truck loading	**2006**
	Sakaide	1	**180,000**	3	**1.2**	Sakaide LNG	**Sakaide LNG**	No	Truck loading	**2010**
	Senboku I	1	**230,000**	5	**1.9**	Osaka Gas	**Osaka Gas**	Yes	Truck loading	**1972**

Market	Site	Storage: Number of tanks	Storage: Total capacity (liq m^3)	Send-out: Number of vaporizers	Send-out: Nominal capacity (MTPA)	Owner	Operator	Third Party Access	Additional Services offered	Start-up date
Japan	Senboku II	16	1,435,000	12	10.0	Osaka Gas	Osaka Gas	Yes	Truck loading	1977
	Shin-Sendai	2	320,000	3	1.7	Tohoku Electric	Tohoku Electric	No	Truck loading	2015
	Sodegaura	32	2,480,000	36	32.7	Tokyo Gas / JERA	Tokyo Gas	Yes	Reloading, Truck loading	1973
	Sodeshi	3	337,200	8	2.9	Shimizu LNG (Shizuoka Gas 65%, ENEOS Corporation 35%)	Shimizu LNG	Yes	Reloading, Truck loading	1996
	Soma	2	460,000		1.5	Japex/Fukushima Gas Power (JAPEX 33%, Mitsui 29%, Osaka Gas 20%, Mitsubishi Gas Chemical 9%, Hokkaido Electric Power 9%)	Japex		Truck loading	2018
	Tobata	8	480,000	9	7.6	Kita Kyushu LNG	Kita Kyushu LNG	Yes	Reloading, Truck loading	1977
	Toyama Shinko	1	180,000	4	1.8	Hokuriku Electric	Hokuriku Electric	No	Truck loading	2018
	Yanai	6	480,000	5	2.3	Chugoku Electric	Chugoku Electric	No	Truck loading	1990
	Yokkaichi LNG Center	4	320,000	8	6.4	JERA	JERA	Yes		1987
	Yokkaichi Works	2	160,000	6	2.1	Toho Gas	Toho Gas	Yes	Truck loading	1991
	Yoshinoura	2	280,000	3	0.8	Okinawa Electric	Okinawa Electric	Yes	Truck loading	2012
Malaysia	Melaka *Tenaga Empat (FSU)* and *Tenaga Satu (FSU)*	8	260,000	3	3.8	Owner: MISC Charterer: Petronas Gas	Petronas Gas	Yes	Reloading	2013
	Pengerang	2	400,000		3.5	Petronas Gas (65%), Dialog Group (25%) and Johor State (10%)	Petronas Gas		Bunkering, Cool-down, Gassing-up, Reloading, Truck loading	2017
Myanmar	Thanlyin, Yangoon *CNTIC VPower Energy (FSU)*	4	127,500		0.5	CNTIC Vpower (China National Technical Import Corporation, Vpower Global)	CNTIC Vpower			2020
Pakistan	Port Qasim Karachi *Excelerate Exquisite (FSRU)*	4	150,900	6	4.8	Owner: Excelerate Energy Charterer: ETPL (Engro (51%), Vopak (49%)	FSRU: Excelerate Energy Terminal: Engro	No		2015
	Port Qasim GasPort *BW Integrity (FSRU)*	4	170,000		5.0	Owner: BW Charterer: Pakistan GasPort	FSRU: BW Terminal: Pakistan GasPort Consortium			2017
Singapore	Jurong	4	800,000	5	9.0	SLNG	SLNG	Yes	Cool-down, Gassing-up, Reloading, Storage, Transshipment, Truck loading, Wobbe Index Correction	2013
South Korea	Boryeong	6	1,200,000	7	10.8	GS Energy (50%), SK E&S (50%)	Boryeong LNG		Reloading	2016
	Gwangyang	5	730,000	5	7.1	POSCO	POSCO	No	Reloading	2005
	Incheon	23	3,480,000	52	54.4	KOGAS	KOGAS	No		1996
	Jeju	2	90,000	5	1.1	KOGAS	KOGAS	No		2019
	Pyeong-Taek	23	3,360,000	38	41.0	KOGAS	KOGAS	No	Truck loading	1986
	Samcheok	12	2,610,000	8	11.6	KOGAS	KOGAS	No		2014
	Tong-Yeong	17	2,620,000	20	26.5	KOGAS	KOGAS	No	Reloading Truck loading	2002

Regasification terminals

Market	Site	Storage: Number of tanks	Storage: Total capacity (liq m³)	Send-out: Number of vaporizers	Send-out: Nominal capacity (MTPA)	Owner	Operator	Third Party Access	Additional Services offered	Start-up date
Taiwan	**Taichung**	6	**960,000**	10	**6.0**	CPC	**CPC**	No		**2009**
	Yung-An	6	**690,000**	18	**10.5**	CPC	**CPC**	No		**1990**
Thailand	**LNG Map Ta Phut Terminal 1**	4	**640,000**	9	**11.5**	PTT LNG	**PTT LNG**	Yes	Reloading, Truck loading	**2011**
	LNG Map Ta Phut Terminal 2	2	**500,000**	5	**7.5**	PTT LNG	**PTT LNG**	Yes		**2022**
ASIA TOTAL			**57,192,600**		**611.1**					
EUROPE										
Belgium	**Zeebrugge**	5	**566,000**	12	**6.6**	Fluxys LNG	**Fluxys LNG**	Yes	Cool-down, Reloading, Transshipment, Truck loading	**1987**
Croatia	**Krk** ***LNG Croatia (FSRU)***	4	**140,206**		**2.1**	LNG Hrvatska (HEP, Plinacro)	**FSRU: Golar LNG Terminal: LNG Croatia**		Bunkering, Truck loading	**2021**
Finland	**Hamina**		**30,000**		**0.2**	Hamina Energy, Wartsila, Alexela	**Hamina Energy**		Bunkering, Truck loading	**2022**
	Inkoo ***Exemplar (FSRU)***		**150,900**		**4.8**	Gasum Oy (Gasgrid Finland/Elering) FSRU: Excelerate Energy	**Gasgrid Finland/Elering**			**2023**
	Pori	1	**28,500**		**0.1**	Gasum	**Gasum**	Yes	Bunkering, Truck loading	**2016**
	Tornio Manga	1	**50,000**		**0.4**	Manga LNG (Gasum, Outokumpu, SSAB and EPV Energy)	**Manga LNG**		Bunkering, Truck loading	**2018**
France	**Dunkerque LNG**	3	**600,000**	10	**9.6**	Dunkerque LNG - Consortium led by Fluxys with AXA Investment Managers & Crédit Agricole Assurances (60.76%) - Korean investors consortium led by IPM Group in cooperation with Samsung Asset Management (39.24%)	**Gaz-Opale (Dunkerque LNG, Fluxys)**	Yes	Bunkering, Cool-down, Reloading, Truck loading	**2016**
	Fos Cavaou	3	**330,000**	4	**8.0**	Fosmax LNG (Elengy 100%)	**Elengy**	Yes	Bunkering, Cool-down, Reloading, Transshipment, Truck loading	**2009**
	Fos Tonkin	1	**80,000**	6	**1.2**	Elengy	**Elengy**	Yes	Bunkering, Cool-down, Reloading, Truck loading	**1972**
	Montoir-de-Bretagne	3	**360,000**	11	**8.0**	Elengy	**Elengy**	Yes	Bunkering, Cool-down, Reloading, Transshipment, Truck loading	**1980**
Germany	**Brunsbüttel** ***Höegh Gannet (FSRU)***	4	**170,000**	4	**5.7**	Owner: Höegh LNG Charterer: RWE on behalf of German Federal Government	**FSRU: Höegh LNG Terminal: RWE**			**2023**
	Lubmin (Deutsche Ostsee) ***Neptune (FSRU)***	4	**145,000**	3	**3.8**	Owner: Höegh LNG (50%), MOL (48.5%), Tokyo LNG Tanker Co. Ltd (1.5%) Charterer: TotalEnergies Sub-charterer: Deutsche ReGas	**FSRU: Höegh LNG Terminal: Deutsche ReGas**			**2023**
	Wilhelmshaven ***Höegh Esperanza (FSRU)***	4	**170,000**	3	**3.8**	Owner: Höegh LNG Charterer: Uniper on behalf of German Federal Government	**FSRU: Höegh LNG Terminal: Uniper**			**2023**
Gibraltar	**Gibraltar**	5	**5,000**	3	**0.1**	Shell (51%), Government of Gibraltar (49%)	**Gasnor**			**2019**
Greece	**Revithoussa**	3	**225,000**	6	**5.1**	DESFA S.A (Snam, Enagas, Fluxys, Govnt)	**DESFA S.A.**	Yes		**2000**
	Revithoussa ***GasLog Athens (FSU)***	1	**147,800**			Gaslog	**DESFA S.A.**	Yes		**2022**
Italy	**Oristano, Sardinia**	6	**10,800**		**0.2**	HIGAS: Avenir LNG (80%), CPL Concordia (10%), Gas and Heat (10%)	**HIGAS**	Yes	Truck loading	**2021**

		Storage		Send-out						
Market	Site	Number of tanks	Total capacity (liq m³)	Number of vaporizers	Nominal capacity (MTPA)	Owner	Operator	Third Party Access	Additional Services offered	Start-up date
Italy	**Toscana** ***FSRU Toscana***	4	**137,500**	3	**2.8**	OLT (First State Investments 48.24%, SNAM 49.07%, Golar 2.69%)	**OLT Offshore LNG Toscana**	Yes		**2013**
	Panigaglia	2	**100,000**	4	**2.5**	GNL Italia S.p.A.	**GNL Italia S.p.A.**	Yes		**1969**
	Piombino ***Golar Tundra (FSRU)***	4	**170,000**		**3.7**	Snam	**Snam**	Yes		**2023**
	Ravenna	2	**20,000**		**0.7**	Depositi Italiani GNL	**Depositi Italiani GNL**			**2021**
	Rovigo (Gravity-Based Structure)	2	**250,000**	5	**6.6**	Adriatic LNG (ExxonMobil (70.7%), Qatar Petroleum (22%), SNAM (7.3%))	**Adriatic LNG**	Yes		**2009**
Lithuania	**Klaipeda** ***Höegh Independence (FSRU)***	4	**170,000**	4	**2.9**	Owner: Höegh LNG Charterer: Klaipedos Nafta	**Höegh LNG**	Yes	Reloading	**2014**
	KN LNG Reloading Station	5	**5,000**			Klaipedos Nafta	**Klaipedos Nafta**		Bunkering, Reloading, Truck cool-down, Truck loading	**2017**
Malta	**Delimara** ***Armada LNG Mediterrana (FSU)***	4	**125,000**		**0.5**	Owner: BumiArmada Charterer: Electrogas Malta (GEM Holdings Limited (33.34%), Siemens (33.33%), SOCAR (33.33%))	**Reganosa**			**2017**
Netherlands	**Eemshaven** ***Eemshaven LNG (ex. S188) (FSRU)***	2	**25,000**	6	**5.9**	Owner: Exmar Charterer: Gasunie	**EemsEnergyTerminal (100% Gasunie)**	Yes		**2022**
	Energos Igloo (FSRU)	4	**170,000**	8		Owner: Energos Infrastructure Charterer: Gasunie				
	Gate	3	**540,000**	8	**8.8**	Gasunie (50%), Vopak (50%)	**Gate Terminal**	Yes	Bunkering, Cool-down, Reloading, Transshipment, Truck loading	**2011**
Norway	**Fredrikstad**	9	**5,900**		**0.1**	Gasum	**Gasum**	Yes	Bunkering, Truck loading	**2011**
	Mosjøen	8	**6,500**	4	**0.4**	Gasnor	**Gasnor**	Partly	Truck loading	**2007**
Poland	**Świnoujście**	2	**320,000**	7	**4.6**	GAZ-SYSTEM S.A.	**GAZ-SYSTEM S.A.**	Yes	Truck loading	**2016**
Portugal	**Sines**	3	**390,000**	7	**5.6**	Ren Atlântico	**Ren Atlântico**	Yes	Cool-down, Reloading, Truck loading	**2004**
Russia	**Kaliningrad** ***Marshal Vasilevskiy (FSRU)***		**174,100**		**2.0**	Gazprom	**Gazprom**			**2019**
Spain	**Barcelona**	6	**760,000**	13	**12.6**	Enagás	**Enagás**	Yes	Bunkering, Cool-down, Reloading, Transshipment, Truck loading	**1969**
	Bilbao	3	**450,000**	4	**5.1**	Enagás (50%), EVE (50%)	**Bahia de Bizkaia Gas, SL (BBG)**	Yes	Bunkering, Cool-down, Reloading, Truck loading	**2003**
	Cartagena	5	**587,000**	9	**8.7**	Enagás	**Enagás**	Yes	Bunkering, Cool-down, Reloading, Transshipment, Truck loading	**1989**
	El Musel	2	**300,000**	5	**5.1**	Enagás (75%); Reganosa (25%)	**Enagás**	Yes	Reloading, Truck loading, Cool-down	**2023**
	Huelva	5	**619,500**	9	**8.7**	Enagás	**Enagás**	Yes	Bunkering, Cool-down, Reloading, Truck loading	**1988**
	Mugardos	2	**300,000**	3	**2.6**	Tojeiro Group (51%), Xunta Galicia (24%), Sojitz (15%), Sonatrach (10%)	**Reganosa**	Yes	Bunkering, Cool-down, Gassing up, Reloading, Truck loading	**2007**
	Sagunto	4	**600,000**	5	**6.4**	Infraestructuras de Gas [Enagas and Oman Oil Company S.A.O.C.] (50%), Iniciativas de Gas [Enagás and Osaka Gas] (50%)	**Saggas**	Yes	Cool-down, Reloading, Truck loading	**2006**

Regasification terminals

		Storage		Send-out						
Market	Site	Number of tanks	Total capacity (liq m^3)	Number of vaporizers	Nominal capacity (MTPA)	Owner	Operator	Third Party Access	Additional Services offered	Start-up date
Sweden	**Lysekil**	1	**30,000**		**0.2**	Gasum	**Gasum**		Bunkering, Truck loading	**2014**
	Nynashamn	1	**20,000**		**0.4**	AGA Gas	**AGA Gas**		Bunkering, Truck loading	**2011**
Turkey	**Dörtyol** ***FSRU Ertuğrul Gazi***		**170,000**		**4.1**	Owner: Botas Charterer: Botas	**FSRU: Botas Terminal: Botas**			**2018**
	Etki ***FSRU Turquoise***		**170,000**		**5.7**	Owner: Pardus Energy Charterer: Etki Terminal	**Pardus Energy**		Bunkering, Reloading	**2016**
	Izmir Aliaga	2	**280,000**	11	**10.7**	EgeGaz	**EgeGaz**	Yes	Bunkering, Reloading, Truck loading	**2006**
	Marmara Ereglisi	3	**255,000**	7	**4.6**	Botas	**Botas**	No	Truck loading	**1994**
	Saros LNG ***Vasant 1 (FSRU)***		**180,000**		**5.0**	Owner: Swan Energy Charterer: Botas	**Botas**			**2023**
UK	**Dragon**	2	**320,000**	6	**5.6**	Shell (50%), Ancala (50%)	**Dragon LNG**	Yes		**2009**
	Grain	8	**1,000,000**	14	**14.3**	National Grid	**Grain LNG**	Yes	Cool-down, Reloading, Transshipment, Truck loading	**2005**
	South Hook LNG	5	**775,000**	15	**15.4**	QatarEnergy (67.5%), Exxon Mobil (24.15%), TotalEnergies (8.35%)	**South Hook LNG Terminal Company Ltd**	Yes		**2009**
	Teesside GasPort Awaiting recommissioning					Trafigura				**2007**
EUROPE TOTAL			**12,634,706**		**221.9**					
MIDDLE EAST										
Bahrain	**Hidd** ***No vessel chartered***					Bahrain LNG: Nogaholding (30%), Seapeak (30%), Gulf Inv. Corp. (24%), Samsung C&T (16%)	**Bahrain LNG**			**2020**
Egypt	**Sumed BW Singapore**	4	**170,000**	4	**5.7**	Owner: BW Charterer: Egas	**BW**	No		**2015**
Israel	**Hadera** ***Excelerate Excelsior (FSRU)***	4	**138,000**	6	**3.8**	Owner: Excelerate Energy Charterer: INGL	**FSRU: Excelerate Energy Terminal: IEC**	No		**2013**
Jordan	**Aqaba** ***Energos Eskimo (FSRU)***		**160,000**		**3.8**	Owner: New Fortress Energy Charterer: MEMR (Jordan Ministry of Energy and Mineral Resources)	**Golar**	No		**2015**
Kuwait	**Al Zour**	8	**1,800,000**		**22.0**	Kuwait Petroleum	**KIPIC**	No		**2021**
	Mina Al Ahmadi No vessel chartered		**170,000**		**5.8**	Owner: New Fortress Energy Charterer: KPC (Kuwait National Petroleum Company)	**Golar**	No		**2014**
UAE	**Jebel Ali** ***Excelerate Explorer (FSRU)***		**150,900**	6	**6.0**	Owner: Excelerate Energy Charterer: DUSUP (Dubai Supply Authority)	**FSRU: Excelerate Energy Terminal: DUSUP**	No		**2010**
	Ruwais, Abu Dhabi ***Excelerate Express (FSRU)***		**151,000**		**3.8**	Owner: Excelerate Energy Charterer: ADNOC	**Excelerate Energy**	No		**2016**
MIDDLE EAST TOTAL			**2,739,900**		**50.9**					
WORLD TOTAL			**81,550,906**		**1,099.85**					

Retail LNG in 2022

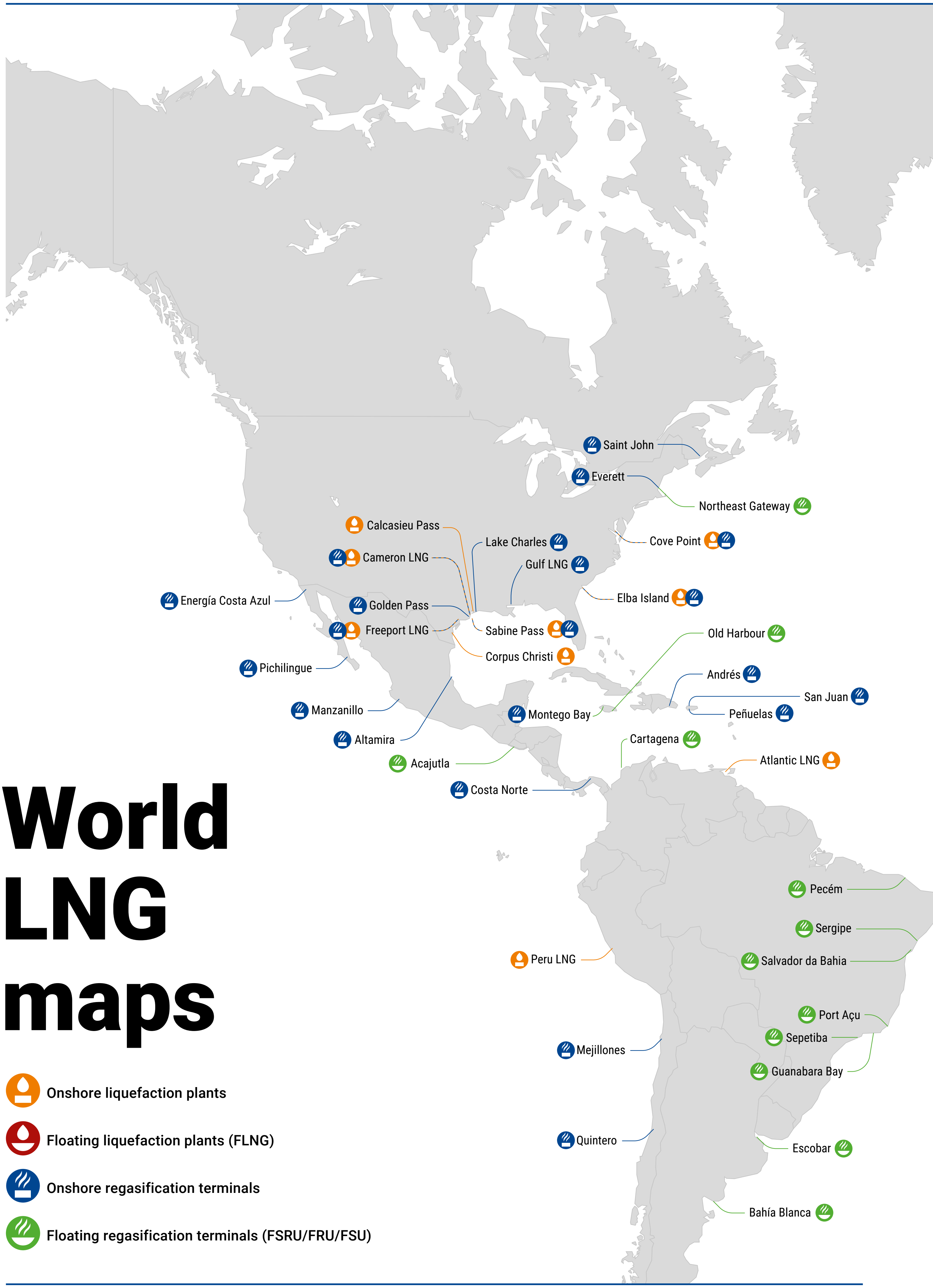
SMALL-SCALE* LNG CARGOES LOADED FROM RECEIVING TERMINALS IN 2022

Country	2022 M³ LNG	2021 M³ LNG	Var. 2022/2021
BELGIUM	355,210	173,842	104%
FRANCE	249,489	66,948	273%
INDONESIA		418,568	-100%
JAPAN	731,505	730,382	0%
THE NETHERLANDS	446,807	632,026	-29%
SINGAPORE	17,943	51,955	-65%
SPAIN	433,281	182,736	137%
UNITED STATES	31		N/A

* Less than 30,000 liq m³

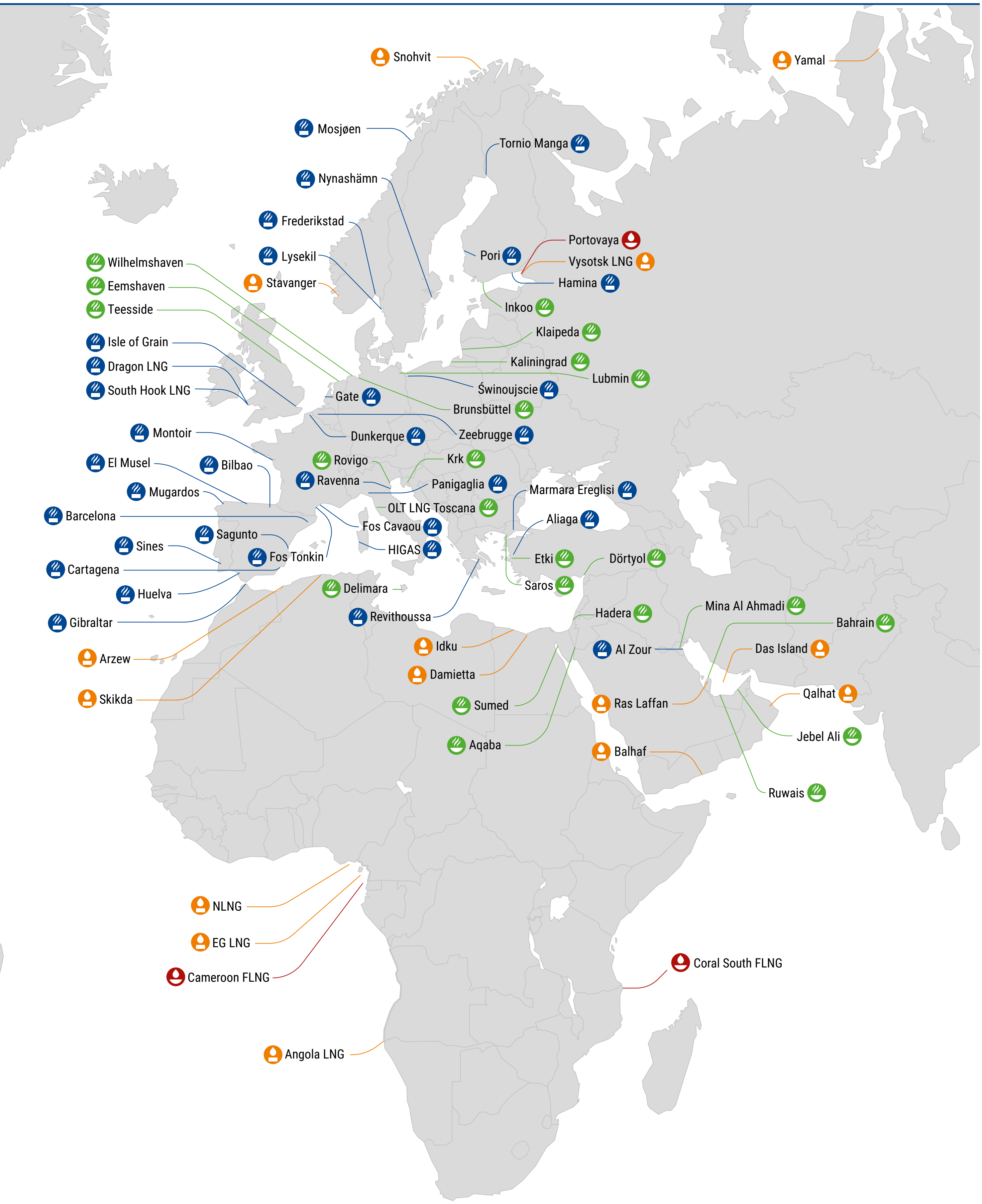
TRUCK-LOADING OF LNG FROM RECEIVING TERMINALS IN 2022

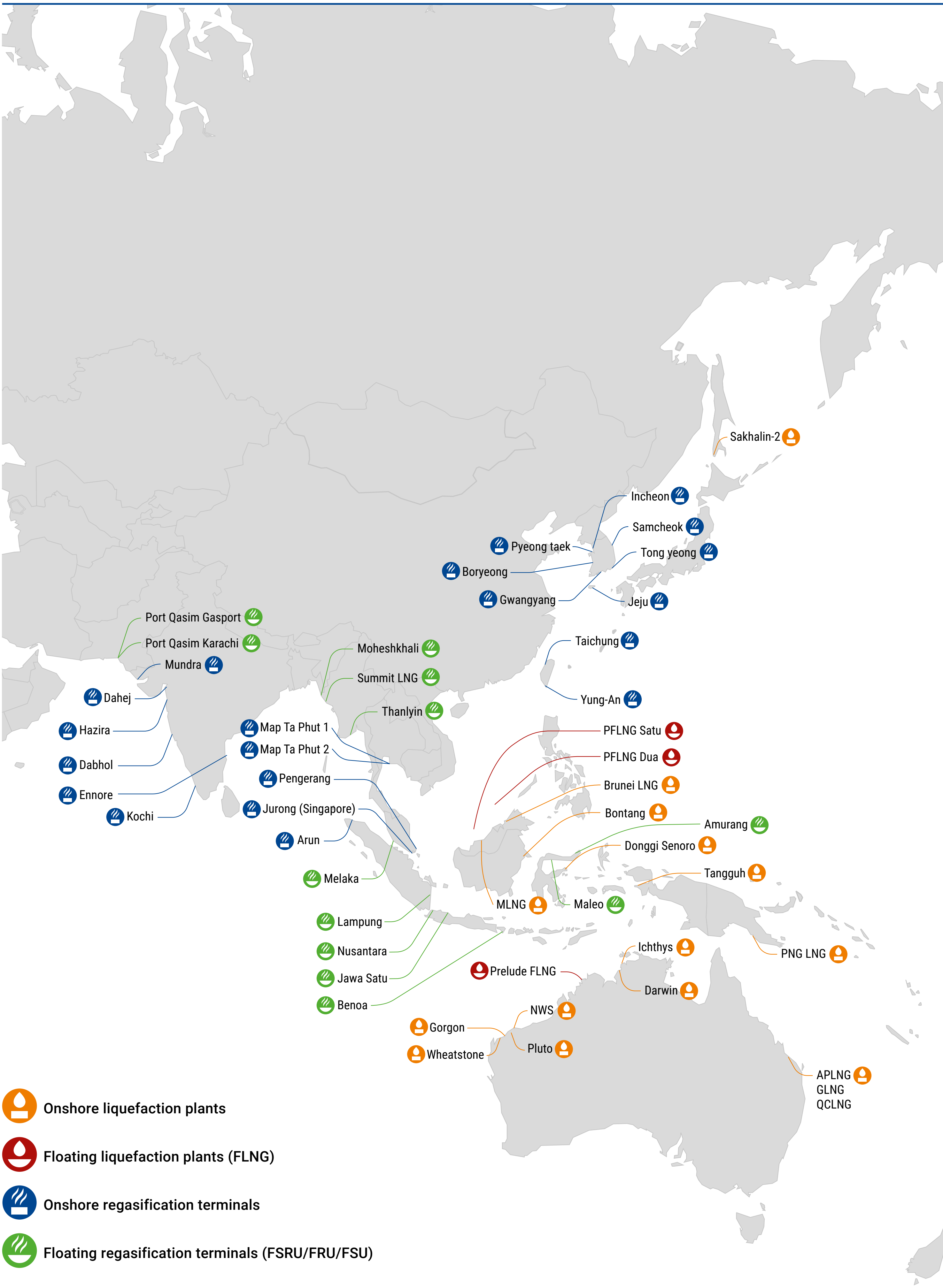
Country	2022 M³ LNG	2022 M³ LNG	Var. 2022/2021
AMERICAS	1,184,512	1,157,865	2%
CHILE	579,767	617,438	-6%
DOMINICAN REPUBLIC	461,546	419,811	10%
PANAMA	22,749	12,820	77%
PUERTO RICO	70,195		
USA	50,255	107,796	-53%
ASIA	24,495,974	52,617,836	-53%
CHINA	19,547,085	48,295,964	-60%
INDIA	487,938	154,903	215%
INDONESIA	73,740	126,481	-42%
JAPAN	3,731,430	3,446,099	8%
SINGAPORE	22,907	14,945	53%
SOUTH KOREA	446,350	434,758	3%
THAILAND	186,523	144,686	29%
EUROPE	4,156,727	5,025,445	-17%
BELGIUM	274,354	272,356	1%
FRANCE	598,377	664,943	-10%
ITALY	11,000		N/A
LITHUANIA	27,780	21,890	27%
NETHERLANDS	366,551	367,019	0%
POLAND	219,949	200,559	10%
PORTUGAL	290,267	323,487	-10%
SPAIN	1,567,558	2,256,886	-31%
TURKEY	655,085	787,701	-17%
UNITED KINGDOM	145,807	130,605	12%



World LNG maps

- Onshore liquefaction plants
- Floating liquefaction plants (FLNG)
- Onshore regasification terminals
- Floating regasification terminals (FSRU/FRU/FSU)


Snohvit
Yamal
Mosjøen
Tornio Manga
Nynashämn
Frederikstad
Portovaya
Wilhelmshaven
Lysekil
Pori
Vysotsk LNG
Stavanger
Hamina
Eemshaven
Teesside
Inkoo
Klaipeda
Isle of Grain
Dragon LNG
Kaliningrad
Lubmin
South Hook LNG
Świnoujście
Gate
Brunsbüttel
Montoir
Dunkerque
Zeebrugge
El Musel
Bilbao
Rovigo
Krk
Ravenna
Panigaglia
Mugardos
Marmara Ereglisi
Barcelona
OLT LNG Toscana
Fos Cavaou
Aliaga
Sagunto
Sines
HIGAS
Fos Tonkin
Etki
Dörtyol
Cartagena
Huelva
Delimara
Saros
Gibraltar
Revithoussa
Hadera
Mina Al Ahmadi
Bahrain
Idku
Al Zour
Das Island
Arzew
Damietta
Qalhat
Skikda
Sumed
Ras Laffan
Jebel Ali
Aqaba
Balhaf
Ruwais
NLNG
EG LNG
Coral South FLNG
Cameroon FLNG
Angola LNG



Onshore liquefaction plants

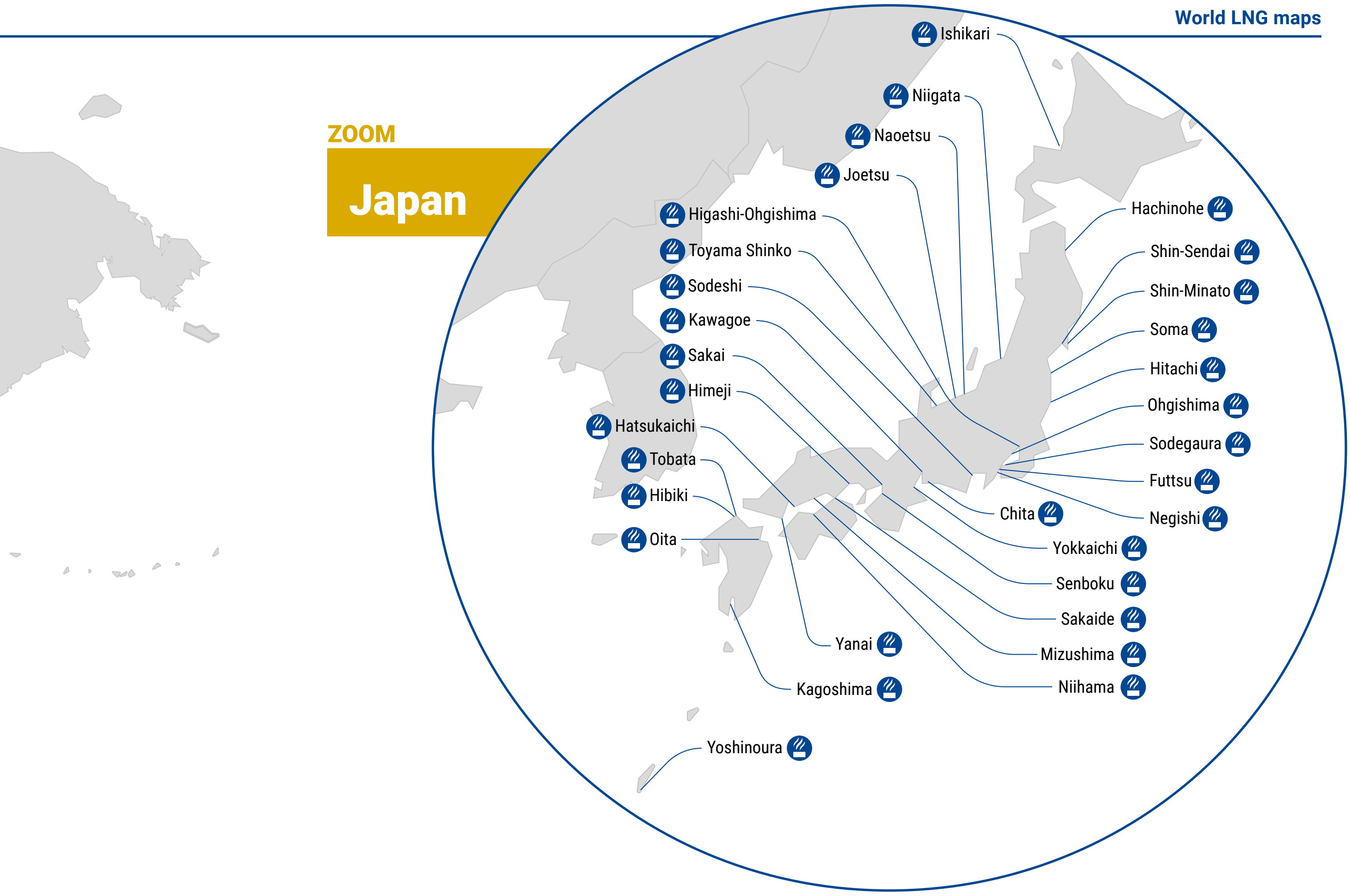
Floating liquefaction plants (FLNG)

Onshore regasification terminals

Floating regasification terminals (FSRU/FRU/FSU)

ZOOM

Japan



ZOOM

China

About GIIGNL

GIIGNL is the international association of LNG importers. It constitutes a forum for exchange of information and experience among its members with a view to enhance safety, reliability, efficiency and sustainability of LNG import activities.

GIIGNL is a non-profit organization registered under the French law of 1901 and its resources only come from the membership fees.

Governance

The Association is composed of two main governing bodies: the General Assembly and the Executive Committee.

The General Assembly is composed of the whole membership and holds its annual meeting in the Fall.

The Executive Committee is composed of **15 member companies,** who are elected by the General Assembly for 2-year terms and meet at least once a year. The Executive Committee elects a Bureau composed of the President and of 3 regional Vice-Presidents to assist him.

The Executive Committee steers two **Standing Study Groups** within which leaders from the LNG industry offer their commercial and technical expertise to improve efficiency and safety across the midstream of the LNG value chain.

GIIGNL's day-to-day activities are coordinated by the **General Delegate,** in charge of the Central Office located in Paris.

GIIGNL Staff

General Delegate
L. David

LNG Analyst
E. Dukhanina

LNG Analyst & Communications Officer
L. Mora

GIIGNL officers

Bureau

President
J. Abiteboul

VP for Americas
A. Feygin
Cheniere

VP for Asia
T. Uchida
Tokyo Gas

VP for Europe
T. Maurisse
TotalEnergies

Executive Committee

AMERICAS

A. Walker
Cheniere

A. Bacigalupo
GNL Quintero

D. Brouillette
Sempra Infrastructure

A. Acuna
Shell

ASIA

Y. Zhu
CNOOC

S.C. Lee
CPC

H. Nishizawa
Jera

C. Lee
Kogas

M. Fujiwara
Osaka Gas

A.K. Singh
Petronet LNG

A. Takeuchi
Tokyo Gas

EUROPE

E. Neviaski
Engie

C. Signoretto
Eni

A. Basolas
Naturgy

J.I. Sanz-Saiz
TotalEnergies

Study Groups

Commercial Study Group Chair

L. Chaveron
TotalEnergies

Technical Study Group Chair

P.E. Decroës
Engie

85 member companies

Founded in 1971, GIIGNL gathers 85 companies from **27 markets** headquartered in three regions: Americas, 11 members, Asia, 42 and Europe, 32.

GIIGNL comprises nearly all companies active in LNG imports or in the operation of LNG terminals.

11 members in Americas

32 members in Europe

42 members in Asia

FULL MEMBERS

BP Global LNG
Centrica LNG Company Ltd.
Cheniere Energy, Inc.
CNOOC Gas & Power Trading & Marketing Ltd.
Constellation LNG
Cove Point LNG, LP
CPC Corporation, Taiwan
Dunkerque LNG SAS
Edison S.p.A.
EDP – Energias de Portugal, S.A.
Elengy S.A.
Enagás S.A.
Enel Trade S.p.A.
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