The LNG industry

GIIGNL Annual Report

2021

Profile

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

The Group constitutes a forum for exchange of information and experience among its 86 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 2020

Jean Abiteboul
President

Dear Colleagues,

2020 can be characterized as a year of market volatility. In the face of such volatility, driven by the influence of the pandemic on energy demand in LNG importing countries, weather events, and logistics bottlenecks, the LNG industry has shown resilience and flexibility. Despite a reduction in global energy consumption due to lockdowns around the world, LNG trade grew by 0.4%, reaching 356.1 MT at the end of the year.

In the first half of 2020, natural gas demand began to be impacted in many countries as Covid-19 spread and control measures were enacted. The slowdown of global LNG demand coupled with new supply coming onstream resulted in plummeting spot LNG prices and in convergence of the main regional price indices. In this context of reduced demand elasticity and of limited arbitrage opportunities, US liquefaction plants provided further flexibility to the LNG market and enabled a physical rebalancing thanks to the ability for off-takers to cancel LNG cargoes, a first in the industry's history and a sign that regional markets are becoming increasingly interdependent. On the importing side, Europe was able to absorb uncommitted volumes during the first half of the year, but reduced its imports during the second half of the year while LNG cargoes were increasingly directed to Asia to take advantage of rapidly escalating JKM prices. LNG demand in China and India recovered relatively quickly from the Covid impact. Increased competitiveness of LNG versus other fuels and compared to pipeline gas boosted spot LNG procurement in multiple regions.

Towards the end of the year, the market recorded price spikes and record high spot shipping charter rates due to infrastructure bottlenecks and colder than usual weather. The market tightness and high spot LNG prices were a stark reminder that the industry should continue to invest in new capacity.

Despite some challenges, the LNG industry witnessed growth in many new areas. Myanmar, which relied on LNG to fuel its growing need for power, joined the ranks of LNG importing countries last year. New regasification capacity continued to come online, with 8 new terminals commissioned in 2020 in Bahrain, Brazil (2), Croatia, India, Indonesia, Myanmar and Puerto Rico. New uses such as LNG-to-power and LNG as a marine fuel are gaining further traction driven by LNG's advantages: it is a proven technology, readily available, which offers better environmental performance than other fossil fuels and is cost competitive. 2020 was a year of milestones for the diversification of LNG uses with the start-up of the first LNG powership, the delivery and order of several bunkering vessels, the launch of the first LNG-fueled mega containerships and the largest LNG bunkering operation ever conducted.

China, South Asia and South East Asia, where the majority of new receiving terminals under development are located, offer significant potential for LNG to help reduce emissions and improve air quality by displacing coal and other polluting fuels in a variety of sectors. Thanks to its flexibility, imported LNG can complement domestic gas production, replace depleting local supply sources and facilitate the introduction of intermittent renewable energies. Substantial investment in infrastructure and access to low-cost supply will be vital in order for new demand to materialize. It will drive the need for producers and sellers to minimize their capital and operating costs while developing innovative ways of financing in order to deliver competitively-priced LNG.

Our industry's optimism also comes with great responsibilities. Net zero targets have been announced by several countries including Japan, South Korea and China, the three largest LNG importers. Methane emissions could increasingly influence future international trade discussions, in particular with the European Union. Fortunately, greenhouse gas emissions associated with the LNG supply chain can be closely monitored and mitigated thanks to the natural gas industry's experience combined with the development of new technologies. As is the case in other sectors, the LNG industry is actively deploying solutions to minimize its carbon footprint, including efforts to avoid, reduce and offset greenhouse gas emissions. Alternative technologies such as electric motors driving the liquefaction process, carbon capture and sequestration, bio-LNG and production of hydrogen from natural gas are allowing to enhance the sustainability of the LNG supply chain.

In this context, LNG is poised to provide a growing share of the world's energy supplies, and contribute to an affordable and cleaner economic recovery as well as to a responsible energy transition.

Jean Abiteboul
President

Key figures 2020

Key figures 2020

356.1 MT
imported vs. 354.7 MT in 2019

+0.4%
growth vs. 2019

20
exporting countries

43
importing markets

8
new LNG regasification terminals

71%
of global LNG demand in Asia

947 MTPA
total regasification capacity

41%
of global LNG volumes supplied from the Pacific Basin

454 MTPA
total liquefaction capacity

142.5 MT
imported on a spot or short-term basis or 40% of total trade

40%

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LNG trade in 2020

In 2020, global LNG imports reached **356.1 million tons (MT)**, increasing by 1.4 MT or **0.4%** compared with the previous year. Despite the challenges imposed by the pandemic, LNG trade has proven resilient, increasingly diverse and global. Trade continued to grow strongly in the first quarter of 2020 but as demand weakened in the second and third quarters, supply-side adjustments helped balance the market. In the fourth quarter a strengthening of demand and unplanned liquefaction outages resulted in a tightening of the market.

Myanmar joined the ranks of importing countries. 42* countries imported LNG volumes, from 20 exporting countries.

US LNG underpins supply growth and adds flexibility to the market

In 2020, the United States accounted for most of the new supply volumes (+11 MT) due to the ramp up of projects commissioned in 2019 as well as the commissioning of 5 large-scale liquefaction trains in 2020 (i.e., Cameron LNG trains 2 and 3, Corpus Christi LNG train 3, Freeport LNG trains 2 and 3). New supply was also added by Australia (+2.4 MT) and the Russian Federation (+0.3 MT). Unlike previous years, 2020 was characterized by a deceleration of new LNG supply coming on stream. Almost all exporting countries experienced decreases in their exports, with the greatest declines in Trinidad & Tobago and Malaysia (-2.4 MT each), followed by Egypt (-2.1 MT).

The Atlantic Basin is the only region which experienced growth in 2020 (+3.2 MT), while the Pacific Basin and the Middle East recorded declines of 0.5 MT and 1.3 MT respectively. The Pacific Basin remains the largest source of LNG supplies to the global market with 146.2 MT or 41% of the total global market, followed by the Atlantic Basin with 117.4 MT or a 33% market share and the Middle East with 92.6 MT, a 26% market share.

As production from the US continues to increase, the gap between supply from the Pacific Basin and the Atlantic Basin has narrowed, from 33 MT in 2019 to 28.8 MT in 2020, whereas the gap between the Pacific Basin and the Middle East has slightly widened.

Among LNG supplying countries, Australia and Qatar lead the pack, with 77.8 MT and 77.1 MT respectively. This is the first time that Australia has taken over Qatar as leading exporter on an annual basis. Behind these two, the hierarchy of supplying countries remains unchanged, the United States being third with 44.8 MT, followed by the Russian Federation with 29.6 MT, and Malaysia with 23.9 MT.

Asia drives global demand growth

Asia continues to be the leading importing region with a 71% share of global LNG imports, up from 69% in 2019. Asian LNG imports grew by 3.4% in 2020, reaching 254.4 MT. Imports rose in all Asian countries except Japan, Pakistan, Indonesia, Malaysia and Singapore. Japan experienced the greatest decrease in LNG imports (-2.4 MT) which represented a fall of 3.2%. This happened notably due to lower LNG imports during the second quarter of 2020 following the lockdown measures which were implemented within the country and their downward impact on electricity consumption. However, LNG imports showed a progressive recovery from June onwards with a spike in December 2020 due to the exceptionally cold weather. Despite this, Japan remains the leading LNG importing country in the world with 74.4 MT or a 20.9% market share. South Korea experienced a moderate growth in LNG imports (+0.7 MT), which were up during the first quarter due to temporary closures of coal plants mandated by the government, and during the last quarter due to the economic recovery and below average temperatures at the start of the winter season. During the summer, mild weather and the decrease in demand for manufacturing which followed the pandemic resulted in lower than usual imports.

China experienced the greatest growth in terms of imported volumes (+7.2 MT or +11.7%), which is below its 2019 growth of 14%. The main surge of LNG imports took place during the second quarter of 2020, when LNG imports were favored over pipeline imports, as a consequence of lower spot LNG prices. China remains the second largest LNG importer globally, with 68.9 MT or a 19.3% market share - up by almost 2% from its 2019 market share (17.4%).

43%
of US volumes delivered to Asia, 41% to Europe, 13% to Americas.

40%
of volumes imported on a spot or short-term basis.

+12%
Increase in Chinese LNG imports, compared with +14% in 2019.

* Egypt and Russia did not import any cargoes. Due to its specific status, Gibraltar is not included in the list of importing countries.

Other Asian countries have also seen important increases in their LNG consumption: in India, imports grew by 11% (+ 2.7 MT) in response to a higher demand driven by lower spot LNG prices. Stronger LNG imports were also underpinned by the start of operations of the Mundra LNG terminal and increased utilization rate of the Kochi LNG terminal. Imports also increased by 1.1 MT in Taiwan (+6.6%), 0.6 MT in Thailand (+12.2%), 0.1 MT in Bangladesh (+2.5%) and 0.2 MT in Myanmar, which joined the rank of LNG importers in May 2020.

2020 was a year of two halves for Europe's LNG imports. During the first half, the region acted as a market of last resort. During the second half, Europe recorded a decrease in LNG imports compared to the previous year due to a decrease in demand for natural gas because of lockdowns, while storages filled up and US cargoes were cancelled. Overall, net LNG imports decreased by -5% compared to 2019, totaling 81.6 MT, a decrease of 4.3 MT. France (-2.5 MT or -16.1%) and Belgium (-1.9 MT or -36.9%) showed the most significant declines, whereas Turkey recorded the most important increase (+1.35 MT or 14.4%). The three leading LNG importers in Europe remain Spain (15.4 MT), followed by the United Kingdom (13.4 MT), which overtook France, now the third largest importing country in the region (13.1 MT).

As the region was severely affected by the Covid pandemic, Europe continued to meet natural gas demand by importing significant LNG volumes thanks to its well connected gas markets and its ability to inject gas in underground gas storage.

Imports into the American region decreased by 16% (-2.6 MT) to 13.2 MT in 2020, down from 15.8 MT in 2019. Mexican imports decreased by 61.5% (-3 MT), as the country is now less reliant on LNG imports following the start of operations of new pipelines that connect the country with US natural gas supply. Chile (2.7 MT or +9.8%) is now the leading importer in South America, followed by Brazil (2.4 MT or +3.2%). Jamaica experienced the greatest increase in the growth of LNG imports (+160%), due to an increased use of natural gas for power generation, followed by Canada (+59.6%).

LNG imports into the Middle East remained stable compared to 2019, showing a decrease of 0.02 MT (0.3%). Jordan recorded the largest decline (-0.6 MT) or -41.2%, whereas Kuwait saw the greatest increase in its LNG imports, 0.5 MT (+14.5%). Egypt did not import any volumes in 2020; the country has experienced a continuous decline in LNG imports since they peaked in 2016.

Low spot LNG prices in 2020 triggered outstanding growth of spot and short-term volumes

2020 was marked by an outstanding growth in spot and short-term transactions. Spot and short-term volumes increased by 23.5 MT, a 19.8% increase, reaching 142.5 MT. This represented 40% of total trade compared with 34% in 2019. The decrease of natural gas and LNG demand, which resulted from lower economic activity on a global scale, led to depressed spot LNG prices during most of 2020, incentivizing spot and short-term purchases in many countries.

The United States remained the leading exporter of spot and short-term LNG, accounting for 21.3% of total spot and short-term volumes, closely followed by the Australia with a 19.9% market share.

"True" spot volumes (i.e., volumes delivered within three months from the transaction date) reached 35% of total imports in 2020 or 125 MT, compared with 27% of total imports in 2019 (95 MT).

In 2020, regional arbitrage opportunities were more frequent than in 2019, in particular towards the end of the year. Re-exports increased to 2.6 MT compared with 1.6 MT in 2019. In 2020, 10 countries re-exported LNG and 22 countries received re-exported volumes. Asia, led by Singapore, which was the country performing most reloading operations (1.1 MT), accounted for 48.5% of the re-exported volumes (1.3 MT), China being the main destination for the reloaded volumes from Singapore. Europe followed with 1.1 MT, France driving the majority of reloads in the region (0.5 MT).

56%
of Russian volumes delivered to Asia, 43% to Europe, 1% to the Middle East.

35%
of volumes imported on a spot basis, compared with 27% in 2019

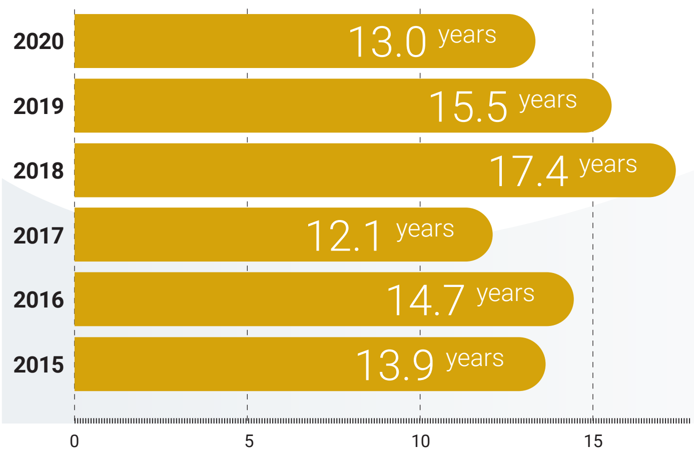
Contracts signed in 2020

Contracts signed in 2020

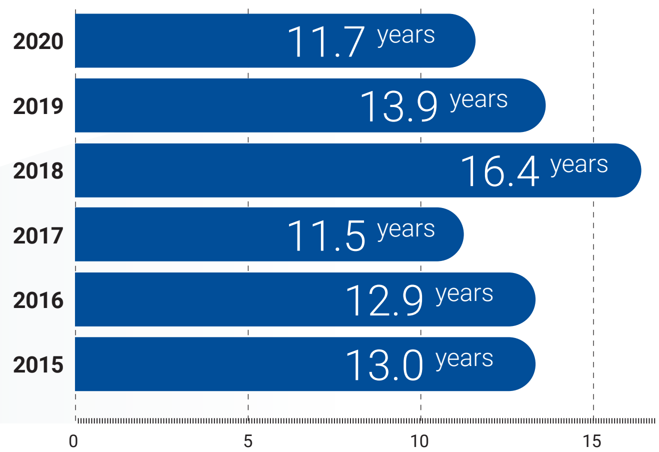
Export Country	Import market	Seller	Buyer	ACQ (MTPA)	Start date	End date	Delivery Format	Comments
LONG & MEDIUM TERM CONTRACTS (> 4 YEARS)								
Australia/Barossa project (Darwin LNG continuation)	Portfolio	Santos	Diamond Gas International	1.5			FOB	From the start date of the Barossa project, a 10-year contract with extension options
Australia Chevron Portfolio	Taiwan	Chevron	CPC		2022		DES	
Centrica Portfolio	China	Centrica	Shenergy	0.5	2024	2039	DES	
ENGIE Portfolio	United States	ENGIE	European utility	0.35	2023	2032	DES	From Sep 2023 to Sep 2032
JERA Portfolio	Japan	JERA	Shizuoka Gas	0.07	2022	2027	DES	From April 2022 to March 2027
Naturgy Portfolio	Puerto Rico	Naturgy Energy Group	Puerto Rico Electric Power Authority (PREPA)	1.47	2020	2032	DES	2-3 Bcma from Oct 2020 to Sep 2032
Nigeria/Bonny Island	Portfolio	Nigeria LNG T1-3	ENI	1.5	2021	2031		From Oct 2021 to Sep 2031
Nigeria/Bonny Island	Portugal	Nigeria LNG T1-3	Galp Trading SA	1	2021	2031	DES	
Nigeria/Bonny Island	Portfolio	Nigeria LNG T1-3	Total	1.5	2021	2031	DES	From Oct 2021 to Sep 2031
Nigeria/Bonny Island	Multiple	Nigeria LNG T7	ENI	1.1				
Mauritania & Senegal Greater Tortue Ahmeyim Phase 1	Portfolio	Kosmos Energy and partners (SMHPM, Petrosen, BP)	BP Gas Marketing	2.45	2023	2043	FOB	
Mexico/ECA LNG (Costa Azul)	Portfolio	Sempra Energy	Mitsui	0.8	2025	2045	FOB	From Jan 2025 to Jan 2045
Mexico/ECA LNG (Costa Azul)	Portfolio	Sempra Energy	Total	1.7	2025	2045	FOB	From Jan 2025 to Jan 2045
Qatar/Ras Laffan	Kuwait	Qatargas IV	Shell	1	2020		DES	
Qatar	China	Qatargas	Sinopec	2	2022	2032	DES	Preliminary agreement, SPA confirmed in 2021
Qatar	Kuwait	Qatar Petroleum	Kuwait Petroleum Corporation	3	2022	2037	DES	Delivered to Al-Zour terminal
Qatar/QP Portfolio	Singapore	QP Trading	Pavilion Energy	1.8	2023	2032	DES	Each LNG cargo accompanied by a statement of its GHG emissions
Shell Portfolio	Croatia/ Hungary	Shell	MFGK Croatia	0.2	2021	2027	DES	0.25 Bcma delivered to Krk terminal for export to Hungary
UAE Das Island/ ADNOC LNG Portfolio	South and Southeast Asia	ADNOC LNG	Vitol	1.8	2022	2028		Up to 6 years
United States Plaquemines LNG	Portfolio	Venture Global Plaquemines LNG, LLC	EDF	1	2024	2044	FOB	From the start date of the project
	Multiple	Pertamina	Petronas		2020	2025	DES/FOB	MSPA; From Jan 2020 to Jan 2025
	Multiple		New Fortress Energy	0.54	2022	2030	FOB	27.5 million MMBtu per year = 8 cargoes per year
SHORT TERM CONTRACTS (≤ 4 YEARS)								
BP Portfolio	China	BP	ENN	0.3	2021	2023		To supply regasified LNG through Guangdong Dapeng LNG terminal
BP Portfolio	China	BP	Foran Energy	0.3	2021	2023		To supply regasified LNG through Guangdong Dapeng LNG terminal
ENGIE Portfolio	United States	ENGIE	US utility	0.75	2023	2025	DES	From Jul 2023 to Mars 2025
Mitsubishi Portfolio	China	Mitsubishi Portfolio	Guangdong Energy Group	0.28	2020		DES	
UAE Das Island/ ADNOC LNG Portfolio	South and Southeast Asia	ADNOC LNG	Total	0.75	2021	2022		From Jan 2021 to Dec 2022

Export Country	Import market	Seller	Buyer	ACQ (MTPA)	Start date	End date	Delivery Format	Comments
CONTRACT MODIFICATION								
Algeria/Arzew-Skikda	Portfolio	Sonatrach	TOTAL	2	2021	2023	DES	Extension of existing contract from Jan 2021 to Dec 2023
HEADS OF AGREEMENT								
Petronas Portfolio	China	Petronas LNG	Shenergy Group Company	1.5	2022	2034		
United States Cheniere Portfolio	China	Cheniere	Foran Energy	0.34	2021	2026	DES	26 cargoes between 2021 and 2025
MEMORANDUMS OF UNDERSTANDING								
Indonesia/Abadi LNG		INPEX	PGN					
Indonesia/Abadi LNG		INPEX	PLN					
TERMINAL CAPACITY								
	Brazil	Hygo Energy Transition	Companhia de Gas do Para	1.8	2022			For Barcarena terminal. + 0.6 MTPA from 2025
	China	GDLNG	BP	0.6	2021	2023		Tolling regasification capacity at Guangdong Dapeng LNG
	Croatia	LNG Croatia (Krk terminal)	MET Croatia Energy Trade	0.32	2020	2023		
	Croatia	LNG Croatia (Krk terminal)	MFGK Croatia	0.49	2021	2027		6.8 Bcm over 7 years: 2020/2021 0.666 Bcm, 2023/2024 1.016 Bcm and 1.014 Bcma the remaining years
	France	Elengy	Qatar Petroleum	3		2035		At the Montoir-de-Bretagne terminal
	Poland	Polskie LNG S.A.	PGNiG S.A.	0.88	2022	2023		Agreement on available capacities after the expansion of the terminal in Poland
	Poland	Polskie LNG S.A.	PGNiG S.A.	2.43	2024	2038		Agreement on available capacities after the expansion of the terminal in Poland
	UK	National Grid Grain LNG	Qatar Terminal Limited	7.2	2025	2050		From Jul 2025 to Jul 2050

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 2020*

Export Country	Loading Point	Seller	Buyer	ACQ (MTPA)	Start date	End date	Delivery Format	Comments
ATLANTIC BASIN								
Algeria	Skikda-Bethioua	Sonatrach	Botaşş	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	0.72	2000	2021	CIF	0.34 MTPA in 2021
	Skikda-Bethioua	Sonatrach	Enel	1.13	2001	2021	DES	Delivery under the "GDF SUEZ / Enel" swap agreement
	Skikda-Bethioua	Sonatrach	ENGIE	1.5	1972	2020	DES	Contract extended, duration not disclosed
	Skikda-Bethioua	Sonatrach	Total	2.5	1972	2020	DES	
Cameroon	Kribi FLNG	SNH	Gazprom	1.2	2018	2026	FOB	
Egypt	Damietta	SEGAS	BP	1	2005	2025	FOB	No deliveries in 2020
	Damietta	SEGAS	Naturgy Energy Group	3	2005	2030	FOB	Former Union Fenosa Gas contract; No deliveries in 2020
	Idku	ELNG T1	Total	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 & 2	Botaşş	0.91	1999	2021	DES	
	Bonny Island	Nigeria LNG T1 & 2	Enel	2.75	2001	2021	DES	
	Bonny Island	Nigeria LNG T1 & 2	Galp Energia	0.26	2000	2020	DES	
	Bonny Island	Nigeria LNG T1 & 2	Naturgy Energy Group	1.17	1999	2021	DES	
	Bonny Island	Nigeria LNG T1 & 2	Total	0.33	1999	2021	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	2006	2026	DES	
	Bonny Island	Nigeria LNG T4 & 5	Galp Energia	1.42	2006	2026	DES	
	Bonny Island	Nigeria LNG T4 & 5	Pavilion Energy	0.38	2006	2026	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	Total	0.23	2006	2029	DES	
	Bonny Island	Nigeria LNG T6	Shell	3.1	2008	2027	DES	
	Bonny Island	Nigeria LNG T6	Total	0.9	2008	2029	DES	
Norway	Hammerfest	-	RWE Supply & Trading	0.12	2010	-	FOB	0.06-0.12 MTPA; until depletion
	Hammerfest	Equinor	Equinor	1.75	2007	2021	DES	
	Hammerfest	Equinor	Pavilion Energy	1.13	2006	2025	DES	Pavilion Energy novation of Iberdrola contract
	Hammerfest	Neptune Energy	Total	0.5	2007	-	FOB	Until depletion
	Hammerfest	Total	Total	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	Total	4	2018	2032	FOB	

(*) Duration above 4 years

Medium-term and long-term contracts in force in 2020

Export Country	Loading Point	Seller	Buyer	ACQ (MTPA)	Start date	End date	Delivery Format	Comments
Trinidad & Tobago	Point Fortin	Atlantic LNG T2 & 3	BP	0.85	2002	2021	FOB	
	Point Fortin	Atlantic LNG T2 & 3	EDP	0.74	2003	2023	FOB	Naturgy/EDP swap: Naturgy buys 0.74 MTPA on a FOB basis until 2023
	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	
	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	Total	4	2019	2039	Tolling	
	Cameron	Diamond Gas International	Toho Gas	0.2	2020	2039	DES	3 cargoes per year
	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	2039	DES	8 cargoes per year
	Cameron	Mitsui	Total	0.5	2019	2029	FOB	
	Cameron	Total	CPC	0.8	2019	2038	DES	
	Cameron	Total	Marubeni	0.5	2019	2039	FOB	
	Cameron	Total	Tohoku Electric	0.27	2019	2039	DES	
	Corpus Christi	Cheniere	Cheniere Marketing	*	2019	-	FOB	*Excess from Corpus Christi
	Corpus Christi	Cheniere	EDF	0.77	2020	2040	FOB	Option to extend for 10 years
	Corpus Christi	Cheniere	Endesa	2.25	2019	2039	FOB	
	Corpus Christi	Cheniere	Naturgy Energy Group	1.5	2020	2040	FOB	Option to extend for 10 years
	Corpus Christi	Cheniere	Pavilion Energy	0.8	2019	2040	FOB	Pavilion Energy novation of Iberdrola contract
	Corpus Christi	Cheniere	Pertamina	0.76	2020	2040	FOB	Option to extend for 10 years
	Corpus Christi	Cheniere	Pertamina	0.76	2019	2039	FOB	
	Corpus Christi	Cheniere	Woodside	0.85	2020	2040	FOB	Option to extend for 10 years
	Cove Point	GAIL GLOBAL (USA) LNG	GAIL	2.3	2018	2038	FOB	
	Cove Point	Pacific Summit Energy	Kansai Electric Group	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	
	Freeport	Freeport LNG	Kansai Electric	0.13	2020	2032	FOB	
	Freeport	Freeport LNG	Osaka Gas	2.3	2019	2039	Tolling	
	Freeport	Freeport LNG	SK E&S	2.2	2020	2040	Tolling	
	Freeport	Freeport LNG	Total	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 Total
	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	Total	2	2019	2039	FOB	

(*) Duration above 4 years

Medium-term and long-term contracts in force in 2020*

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	**Mitsubishi**	0.8	**2006**	**2020**	FOB	
	Qalhat	Qalhat LNG	**Osaka Gas**	0.8	**2009**	**2026**	FOB	
	Qalhat	Qalhat LNG	**Union Fenosa Gas**	1.65	**2006**	**2025**	DES	
Qatar	**Ras Laffan**	Qatargas I	**Chugoku Electric, JERA, Kansai Electric, Osaka Gas, Toho Gas, Tohoku Electric, Tokyo Gas**	2	**1998**	**2021**	DES	
	Ras Laffan	Qatargas I	**JERA**	4	**1997**	**2021**	DES	
	Ras Laffan	Qatargas I	**JERA**	1	**2012**	**2021**	DES	Inherited from TEPCO in 2016
	Ras Laffan	Qatargas I	**Naturgy Energy Group**	0.75	**2005**	**2024**	DES	
	Ras Laffan	Qatargas I	**Naturgy Energy Group**	0.75	**2006**	**2025**	FOB	
	Ras Laffan	Qatargas I	**Shizuoka Gas**	0.2	**2016**	**2021**	DES	Tripartite SPA (Qatar Liquefied Gas. JERA and Shizuoka Gas)
	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	**Total**	1.85	**2009**	**2034**	DES	
	Ras Laffan	Qatargas II T2	**Total**	1.5	**2009**	**2034**	DES	
	Ras Laffan	Qatargas II T2	**Total**	1.85	**2009**	**2034**	DES	
	Ras Laffan	Qatargas III	**CNOOC**	2	**2011**	**2035**	DES	
	Ras Laffan	Qatargas III	**JERA**	0.7	**2013**	**2028**	DES	
	Ras Laffan	Qatargas III	**Kansai Electric**	0.5	**2013**	**2027**	DES	
	Ras Laffan	Qatargas III	**PGNiG**	1.1	**2015**	**2034**	DES	
	Ras Laffan	Qatargas III	**PGNiG**	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
	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	Extended until 2027
	Ras Laffan	RasGas II T3	**ENI**	2.05	**2007**	**2027**	DES/FOB	Former Distrigas contract

(*) Duration above 4 years

Medium-term and long-term contracts in force in 2020

Export Country	Loading Point	Seller	Buyer	ACQ (MTPA)	Start date	End date	Delivery Format	Comments
Qatar	**Ras Laffan**	RasGas III	**GAIL, IOCL, BPCL and GSPC**	1	**2016**	**2028**	CFR	Former buyer: Petronet LNG
	Ras Laffan	RasGas III T1	**EDF Trading**	2	**2017**	**2021**	DES	
	Ras Laffan	RasGas III T1	**KOGAS**	2.1	**2007**	**2026**	DES	
	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	**Total**	2	**2009**	**2029**	DES	
	Balhaf	Yemen LNG T2	**Total**	2.55	**2009**	**2029**	FOB	
PACIFIC BASIN								
Australia	**Ashburton North (Wheatstone)**	Chevron, Kufpec, Woodside	**JERA**	3.3	**2017**	**2036**	DES	Inherited from TEPCO; Total 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**	0.4	**2017**	**2036**	DES (Equity+Inc.)	Inherited from TEPCO in 2016
	Ashburton North (Wheatstone)	Chevron, Kufpec, Woodside	**JERA**	0.8	**2017**	**2036**	FOB	Inherited from Chubu; 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; 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	
	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	**SK Group**	0.83	**2017**	**2021**	FOB	4.15 MTPA of LNG over a 5-year period
	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**	**2036**	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	**Kansai Electric**	1	**2017**	**2035**	FOB	
	Curtis Island	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	

(*) Duration above 4 years

Medium-term and long-term contracts in force in 2020*

Export Country	Loading Point	Seller	Buyer	ACQ (MTPA)	Start date	End date	Delivery Format	Comments
Australia	Darwin	Ichthys LNG	JERA	0.49	2018	2032	FOB	Inherited from Chubu
	Darwin	Ichthys LNG	JERA	1.05	2018	2032	FOB	Inherited from TEPCO in 2016
	Darwin	Ichthys LNG	JERA, Toho Gas	0.77	2018	2032	FOB	
	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	Tokyo Gas	1.05	2018	2032	FOB	
	Darwin	Ichthys LNG	Total	0.9	2018	2033	FOB	
	Darwin	Santos, EN, INPEX, JERA, Tokyo Gas	JERA, Tokyo Gas	3	2006	2022	FOB	
	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	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, BHP, BP Australia, Chevron, Japan Australia LNG (Mitsubishi & Mitsui)	Chugoku Electric	1.43	2009	2021	DES	
	Withnell Bay		GDLNG	3.3	2006	2031	FOB	
	Withnell Bay		JERA	0.3	2009	2024	DES	
	Withnell Bay		JERA	0.6	2009	2029	DES	
	Withnell Bay		Kansai Electric	0.93	2009	2024	DES	0.5~0.93 MTPA
	Withnell Bay		Kansai Electric	0.44	2009	2024	DES	0.2~0.44 MTPA
	Withnell Bay		Kyushu Electric	0.7	2009	2023	FOB	
	Withnell Bay		Kyushu Electric	0.5	2006	2021	DES	
	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	
	Lumut	Brunei LNG	Petronas	0.9	2013	2023	DES	
	Lumut	Brunei LNG	Shell	0.8	2013	2023	FOB	
Indonesia	Bontang	Pertamina	JERA, Kansai Electric, Kyushu Electric, Nippon Steel Corporation, Osaka Gas, Toho Gas	2	2011	2020	DES/FOB	
	Bontang	Pertamina	Nusantara Regas	1	2012	2022	FOB	2016-2020 = 1 MTPA; 2021-2022 = 0.8 MTPA
	Bontang	Pertamina	PPT ETS	0.8	2019	2025	FOB	Start Aug. 2019; + SLA for cargo arrangement in 2020
	Bontang	Pertamina, ENI Muara bakau	ENI	1	2017	2027	FOB	Nominal quantity (ACQ) 2011/2015:3 MTPA; 2016/2020:2 MTPA
	Bontang	Pertamina, ENI Muara bakau	Pertamina	1.4	2017	2024	FOB	
	Bontang	Pertamina, IDD Chevron	Pertamina	0.06	2016	2021	FOB	2020 = 0.06 MTPA; 2021 = 0.06 MTPA
	Donggi-Senoro	PT Donggi-Senoro LNG	JERA	1	2015	2027	DES	
	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		Kansai Electric	1	2014	2035	DES	
	Tangguh		PLN	2.49	2015	2033	DES	44 cargoes per year

(*) Duration above 4 years

Export Country	Loading Point	Seller	Buyer	ACQ (MTPA)	Start date	End date	Delivery Format	Comments
Indonesia	Tangguh	Tangguh PSC Contractor Parties	Posco	0.55	2005	2024	DES	
	Tangguh		Sempra LNG	3.7	2008	2029	DES	3.4 MTPA divertible
	Tangguh		SK E&S	0.6	2006	2026	DES	
	Tangguh		Tohoku Electric	0.12	2010	2024	DES	
Malaysia	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	CPC	2	2015	2020	DES	
	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	
	Bintulu	Malaysia LNG Dua	Shizuoka Gas	0.33	2016	2025	DES	
	Bintulu	Malaysia LNG Dua	Tohoku Electric	0.37	2016	2026	DES	
	Bintulu	Malaysia LNG Dua	Tokyo Gas	0.9	2015	2025	DES	
	Bintulu	Malaysia LNG Satu	Hiroshima Gas	0.1	2016	2031	FOB	
	Bintulu	Malaysia LNG Satu	Saibu Gas	0.45	2014	2028	DES/FOB	
	Bintulu	Malaysia LNG Satu	Shikoku Electric	0.36	2010	2025	DES	
	Bintulu	Malaysia LNG Tiga	CNOOC	3	2009	2029	DES	
	Bintulu	Malaysia LNG Tiga	Japan Petroleum Exploration Co.	0.48	2002	2021	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	
Papua New Guinea	Port Moresby	PNG LNG	BP Singapore	0.45	2018	2023	DES	0.45 MTPA in 2018-2021; 0.90 MTPA in 2022-2023
	Port Moresby	PNG LNG	CPC	1.2	2014	2033	DES	
	Port Moresby	PNG LNG	JERA	1.8	2014	2034	DES/FOB	
	Port Moresby	PNG LNG	Osaka Gas	1.5	2014	2034	DES/FOB	
	Port Moresby	PNG LNG	Sinopec	2	2014	2034	DES	
Peru	Pampa Melchorita	Peru LNG	Shell	4.2	2014	2028	FOB	
Russia	Prigorodnoye	Sakhalin Energy Investment	CPC	0.75	2017	2022	DES	
	Prigorodnoye	Sakhalin Energy Investment	Gazprom Global LNG	1	2009	2028	DES	
	Prigorodnoye	Sakhalin Energy Investment	Hiroshima Gas	0.21	2008	2028	FOB	
	Prigorodnoye	Sakhalin Energy Investment	JERA	1.5	2009	2029	FOB	
	Prigorodnoye	Sakhalin Energy Investment	JERA	0.5	2011	2026	DES	
	Prigorodnoye	Sakhalin Energy Investment	KOGAS	1.5	2008	2028	FOB	
	Prigorodnoye	Sakhalin Energy Investment	Kyushu Electric	0.5	2009	2031	DES	
	Prigorodnoye	Sakhalin Energy Investment	Osaka Gas	0.2	2008	2031	FOB	
	Prigorodnoye	Sakhalin Energy Investment	Saibu Gas	0.065	2014	2027	DES	
	Prigorodnoye	Sakhalin Energy Investment	Shell	1	2009	2028	DES	
	Prigorodnoye	Sakhalin Energy Investment	Toho Gas	0.5	2009	2033	DES	
	Prigorodnoye	Sakhalin Energy Investment	Tohoku Electric	0.42	2010	2030	FOB	
	Prigorodnoye	Sakhalin Energy Investment	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
BP Portfolio	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	CPC	0.75	2017	2021	DES	
	BP	Glencore	0.39	2020	2025	DES	Start late 2020
	BP	JERA	1.2	2017	2034	DES	
	BP	JERA	0.5	2012	2028	DES	Inherited from Chubu in 2016
	BP	Kansai Electric	0.5	2017	2032	DES	
	BP	Kansai Electric	0.52	2015	2038	DES	Total maximum quantity of LNG during contract duration: approx 13 MT
	BP	Kuwait Petroleum Corporation	0.5	2014	2020	DES	
	BP	Pavilion Energy	0.4	2020	2040	DES/FOB	
	BP	PTT	1	2017	2037	DES	
Centrica Portfolio	Centrica	PGNiG	0.13	2018	2023	DES	Up to 9 cargoes/Sourced From Point Fortin
Cheniere Portfolio	Cheniere	PetroChina	1.2	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	PGNiG	0.13	2019	2043	DES	0.13 MTPA in 2019-2022; 1.45 MTPA starting from 2023
	Cheniere	Total	0.8	2019	2024	DES	Inherited from ENGIE
	Cheniere	Trafigura	1	2019	2034	FOB	
	Cheniere	Vitol	0.7	2018	2033	FOB	
Chevron Portfolio	Chevron	CPC	1.12	2017	2022	DES	
	Chevron	ENN	0.65	2018	2028	DES	
	Chevron	GS Caltex		2019			Start Oct. 2019
	Chevron	JOVO	0.5	2018	2023	DES	
ENGIE Portfolio	ENGIE	Ecoelectrica	0.6	2000	2020	DES	Sourced From Point Fortin
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	
Gazprom Portfolio	Gazprom	EGAS	0.42	2015	2020		35 cargoes over 5 years
	Gazprom	GAIL	2.5	2018	2041		Renegotiated in 2018 (extended)
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
	JERA	Shizuoka Gas	0.26	2014	2032	DES	
Kansai Electric Portfolio	Kansai Electric	Hokkaido Electric Power	0.2	2018	2028	DES	
	Kansai Electric	Total	0.4	2018	2023	FOB	Sourced from Cove Point
KOGAS Portfolio	KOGAS	Total	0.7	2018	2038	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
	Mitsui	Kuwait Petroleum Corporation	1.5	2020	2035	DES	
Naturgy Portfolio	Naturgy Energy Group	Endesa	0.75	2016	2036	DES	Sourced from Sabine Pass
	Naturgy Energy Group	BHP Billiton	0.5	2016	2021	DES	
	Naturgy Energy Group	Puerto Rico Electric Power Authority (PREPA)	1.47	2020	2032	DES	
	Naturgy Energy Group	Repsol	0.7	2016	2036	FOB	
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	Total	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	2023	DES	Option to extend for 5 years
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 Energy Portfolio	Pavilion Energy	BP	0.38	2012	2021		Before 2020 under Iberdrola Portfolio
	Pavilion Energy	Glencore	0.72	2011	2021	DES	Before 2020 under Iberdrola Portfolio; Glencore acquired Ørsted LNG business in 2020

(*) Duration above 4 years

Export Country	Seller	Buyer	ACQ (MTPA)	Start date	End date	Delivery Format	Comments
Pertamina Portfolio	Pertamina	Total	0.4	2020	2030	FOB	Sourced from Corpus Christi
	Pertamina	Posco		2019	2024	FOB/DES	MSPA; Start Dec. 2019
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	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
Shell Portfolio	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 contract with Enel Chile (subsidiary of Enel Group)
	Shell	GSPC	1.3	2015	2034	DES	Up to 2.5 MTPA
	Shell	JERA	0.72	2014	2034	DES	Maximum 12 cargoes per year
	Shell	JERA	*	2014	2034	DES	Inherited from Chubu by JERA and from BG by Shell; 122 cargoes for the contract duration
	Shell	KOGAS	3.64	2013	2038	DES	
	Shell	Kuwait Petroleum Corporation		2020	2034	DES	
	Shell	Naturgy Energy Group	1.16	2006	2023	DES	
	Shell	NEPCO	1.1	2015	2020	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	Sinolam LNG	0.4	2020	2035	DES	
	Shell	SOCAR	0.3	2016	2026	DES	
	Shell	Tokyo Gas	0.5	2020	2030	DES	HoA; Start Apr. 2020
	Shell	Total	0.4	2014	2034	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	
Total Portfolio	Total	AES (Dominican Republic)	0.7	2017	2029	DES	
	Total	AES (Panama)	0.4	2018	2028	DES	
	Total	Chugoku Electric	0.4	2019	2036	DES	
	Total	CNOOC	1.5	2010	2029	DES	Extension to 1.5 MTPA as of 2020
	Total	ENGIE Energia Chile	0.27	2012	2026	DES	
	Total	ENGIE Energia Chile	0.2	2018	2032	DES	
	Total	ENN	0.5	2019	2028	DES	
	Total	Guanghui Energy	0.7	2020	2030	DES	Jun. 2020
	Total	INPEX	0.2	2018	2032	DES	
	Total	Kansai Electric	0.4	2018	2032	DES	
	Total	KOGAS	2	2014	2031	DES	
	Total	Pavilion Energy	0.14	2018	2028	FOB	
	Total	Pertamina	0.4	2020	2035	DES	1 MTPA starting from 2024; + SLA for cargo arrangement in 2020
	Total	Shell	0.53	2019	2023	DES	
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 Trading Singapore	Pertamina	0.6	2019	2039	DES	0.6-1.1 MTPA; provisions to increase up to 1.1 from 2024 to 2038; + SLA for cargo arrangement in 2020

(*) Duration above 4 years

LNG shipping

642 vessels at the end of 2020

The total LNG tanker fleet consisted of **642[1] vessels** at the end of 2020. It included **43 FSRUs** and **58 vessels** of less than 50,000 cubic meters. Total cargo capacity at the end of 2020 stood at 95.2 million cubic meters. Total operational capacity (vessels known to be in service) amounted to 93.4 million cubic meters.

In 2020, the average spot charter rate for a 160,000 cubic meters LNG carrier stood at around $59,300/day, compared to an average of around $69,300/day in 2019.

A total of **47 vessels were delivered** in 2020 while 40 units were ordered, compared with 62 new orders in 2019. This included 2 vessels of less than 50,000 cubic meters. The orderbook consisted of 147 units of 22.7 million cubic meters including 7 FSRUs at the end of 2020. The orderbook represented 24% of the existing LNG carrier fleet. 72 of the vessels on order were scheduled for delivery in 2021.

LNG VESSELS SCRAPPED IN 2020

6 ships were demolished during the year:

Built	Vessel Name	IMO Number	Type	Capacity (m³)	CCS*	Owner	Builder	Manager
1979	GCL (ex LNG Libra)	7413232	LNG Carrier	126,400	Moss	Golden Concord Hldg.	General Dynamics	Thome Ship Mngt
1981	Lucky FSU (ex Tenaga Dua)	7428469	LNG Carrier	130,000	Membrane	Dalian Inteh Group	Ch. de France	Dalian Inteh Group
1981	Fortune FSU (ex Tenaga Tiga)	7428471	LNG Carrier	130,000	Membrane	Dalian Inteh Group	Ch. de France	Dalian Inteh Group
1984	Atlantic Energy (ex LNG Finima)	7702401	LNG Carrier	133,000	Membrane	Sinokor Merchant	Kockums M/V AB	Sinokor Ship Mngt
1981	Pacific Energy (ex LNG Bonny)	7708948	LNG Carrier	135,293	Membrane	Sinokor Merchant	Kockums M/V AB	Sinokor Ship Mngt
1984	Senshu Maru	8014473	LNG Carrier	125,835	Moss	Mitsui OSK Lines(MOL)	Mitsui SB (Chiba)	MOL LNG Transport

LNG VESSELS LAID-UP, IDLE OR OTHERWISE OUT OF SERVICE AT THE END OF 2020

14 vessels were laid-up, idle or otherwise out of service at the end of the year. In addition, 1 vessel was idle, awaiting conversion:

Built	Vessel Name	IMO Number	Type	Capacity (m³)	CCS*	Owner	Builder	Manager
1994	LNG Vesta	9020766	LNG Carrier	127,547	Moss	MOL	MHI Nagasaki	MOL LNG Transport

LNG VESSELS DELIVERED IN 2020

47 ships were delivered during the year, including 6 FSRUs and 11 ships of less than 50,000 cubic meters. The average capacity of vessels delivered (excluding FSRUs and ships of less than 50,000 cubic meters) amounted to 174,765 cubic meters.

Built	Vessel Name	IMO Number	Type	Capacity (m³)	CCS*	Owner	Builder	Manager
2020	Coral Encanto	9693719	LNG Carrier	30,000	Other	Anthony Veder	Jiangnan SY Group	Anthony Veder
2020	CNTIC VPower Global	9696735	LNG Carrier	28,000	Other	CNTIC Vpower	COSCO HI (Dalian)	LNG STS
2020	GasLog Windsor	9819650	LNG Carrier	180,000	Membrane	Gaslog	Samsung HI	Gaslog
2020	SM Jeju LNG2	9830757	LNGBV	7,500	Membrane	Korea Line	Samsung HI	KLC SM
2020	Avenir Advantage	9830898	LNGBV	7,500	Other	Avenir LNG	Keppel Nantong	Avenir LNG
2020	LNG Merak	9834301	LNG Carrier	174,000	Membrane	MOL China COSCO JV	Hudong Zhonghua	MOL LNG Transport (E)

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[1] including LNG Bunkering Vessels

* Cargo Containment System

Built	Vessel Name	IMO Number	Type	Capacity (m³)	CCS*	Owner	Builder	Manager
2020	LNG Phecda	9834313	LNG Carrier	174,000	Membrane	MOL China COSCO JV	Hudong Zhonghua	MOL LNG Transport (E)
2020	LNG Megrez	9834325	LNG Carrier	174,000	Membrane	MOL China COSCO JV	Hudong Zhonghua	MOL LNG Transport (E)
2020	Maran Gas Psara	9844863	LNG Carrier	173,595	Membrane	Maran Gas Maritime	Daewoo (DSME)	Maran Gas Maritime
2020	Global Energy	9845013	LNG Carrier	173,514	Membrane	Maran Nakilat	Daewoo (DSME)	Nakilat Shipping
2020	La Seine	9845764	LNG Carrier	174,000	Membrane	TMS Cardiff Gas	Hyundai HI (Ulsan)	TMS Cardiff Gas
2020	Amberjack LNG	9845776	LNG Carrier	174,000	Membrane	TMS Cardiff Gas	Hyundai HI (Ulsan)	TMS Cardiff Gas
2020	Bonito LNG	9845788	LNG Carrier	174,000	Membrane	TMS Cardiff Gas	Hyundai HI (Ulsan)	TMS Cardiff Gas
2020	SCF La Perouse	9849887	LNG Carrier	174,000	Membrane	Sovcomflot	Hyundai Samho HI	Sovcomflot
2020	Q-LNG 4000	9850197	LNGBV	4,000	Other	Q-LNG	VT Halter Marine	Harvey Gulf
2020	BW Magnolia	9850666	LNG Carrier	173,400	Membrane	BW Gas	Daewoo (DSME)	BW Fleet Mngt
2020	BW Pavilion Aranthera	9850678	LNG Carrier	173,400	Membrane	BW Gas	Daewoo (DSME)	BW Fleet Mngt
2020	Gas Agility	9850680	LNGBV	18,600	Membrane	MOL	Hudong Zhonghua	MOL LNG Transport (E)
2020	Flex Artemis (ex-Flex Reliance)	9851634	LNG Carrier	173,400	Membrane	FLEX LNG	Daewoo (DSME)	FLEX Fleet Mngt.
2020	Flex Resolute	9851646	LNG Carrier	173,400	Membrane	FLEX LNG	Daewoo (DSME)	FLEX Fleet Mngt.
2020	Qogir	9851787	LNG Carrier	174,000	Membrane	TMS Cardiff Gas	Samsung HI	TMS Cardiff Gas
2020	Elisa Larus	9852975	LNG Carrier	174,000	Membrane	NYK	Hyundai Samho HI	Gazocean (NYK)
2020	Gaslog Wales	9853137	LNG Carrier	180,000	Membrane	Gaslog	Samsung HI	Gaslog
2020	Energy Pacific	9854612	LNG Carrier	173,400	Membrane	Alpha Tankers	Daewoo (DSME)	Alpha Gas
2020	Traiano Knutsen	9854765	LNG Carrier	180,000	Membrane	Knutsen	Hyundai HI (Ulsan)	Knutsen
2020	GasLog Westminster	9855812	LNG Carrier	180,000	Membrane	Gaslog	Samsung HI	Gaslog
2020	Flex Aurora	9857365	LNG Carrier	173,400	Membrane	FLEX LNG	Hyundai Samho HI	FLEX Fleet Mngt.
2020	Flex Amber	9857377	LNG Carrier	173,400	Membrane	FLEX LNG	Hyundai Samho HI	FLEX Fleet Mngt.
2020	FueLNG Bellina	9859636	LNGBV	7,500	Other	FueLNG	Keppel Nantong	K-Line Energy Mgt
2020	Woodside Charles Allen	9859753	LNG Carrier	173,583	Membrane	Maran Gas	Daewoo (DSME)	Maran Gas Maritime
2020	Cool Discoverer	9861031	LNG Carrier	174,000	Membrane	Thenamaris	Hyundai HI (Ulsan)	Thenamaris LNG
2020	Kaguya	9862293	LNGBV	3,500	Other	Central LNG Shipping	Kawasaki HI	Central LNG Shipping
2020	Pearl Lng	9862346	LNG Carrier	174,000	Membrane	TMS Cardiff Gas	Samsung HI	TMS Cardiff Gas
2020	Diamond Gas Metropolis	9862487	LNG Carrier	174,000	Membrane	NYK Mitsubishi JV	Hyundai Samho HI	NYK
2020	ARISTOS I	9862891	LNG Carrier	174,000	Membrane	Capital Gas Carrier	Hyundai HI (Ulsan)	Capital Ship Management
2020	DRADO LNG	9863182	LNG Carrier	174,000	Membrane	TMS Cardiff Gas	Samsung HI	TMS Cardiff Gas Ltd
2020	Vivit Americas LNG	9864667	LNG Carrier	174,000	Membrane	TMS Cardiff Gas	Hyundai HI (Ulsan)	TMS Cardiff Gas Ltd
2020	SCF Barents	9864746	LNG Carrier	174,000	Membrane	Sovcomflot	Hyundai Samho HI	Sovcomflot
2020	Celsius Copenhagen	9864784	LNG Carrier	180,000	Membrane	Celsius Shipping	Samsung HI	Celsius Shipping ApS
2020	GasLog Georgetown	9864916	LNG Carrier	174,000	Membrane	Gaslog	Samsung HI	GasLog Ltd
2020	FlexFueler 002	NA	LNGBV	1,480	Other	Titan LNG	Kooiman Marine Group	Titan LNG
2020	LNG Croatia (ex Golar Viking)	9256767	FSRU	140,208	Membrane	Golar LNG	Hudong Zhonghua	Golar Management
2020	FSRU Hua Xiang (ex Hua Xiang 8)	9738569	FSRU	14,000	Other	Zhejiang Huaxiang	Fengshun Ship Hvy	PT Humpuss
2020	Excelerate Sequoia	9820843	FSRU	173,611	Membrane	Maran Gas Maritime	Daewoo (DSME)	Excelerate Energy
2020	VASANT 1	9837066	FSRU	180,000	Membrane	Triumph Offshore	Hyundai HI (Ulsan)	Regas Venture India One
2020	FSRU Jawa Satu	9854935	FSRU	170,000	Membrane	Jawa Satu Regas	Samsung HI	Jawa Satu Regas PT
2020	Torman	9870757	FSRU	28,000	Other	Gasfin development	Jiangnan SY Group	Gasfin development

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* Cargo Containment System

FSRU fleet

The total FSRU fleet consisted of **43 units** at the end of 2020. Total FSRU cargo capacity at the end of 2020 stood at around 6.4 million cubic meters. The orderbook comprised of 7 FSRUs, 5 of which were scheduled for delivery in 2021.

FSRU FLEET AT THE END OF 2020

Built	Vessel Name	Storage Capacity (m³)	CCS*	Nominal Send-out Capacity (MTPA)	Owner	Builder	Location
1977/2010	Golar Freeze	125,000	Moss	3.6	Golar LNG	Keppel Shipyard	Old Harbour, Jamaica
1977/2012	Nusantara Regas Satu (ex Khannur)	125,000	Moss	3.0	Golar LNG	Jurong Shipyard	Nusantara, Indonesia
1981/2008	Golar Spirit	129,000	Moss	1.8	Golar LNG	Keppel Shipyard	Laid up
2003/2013	FSRU Toscana (ex Golar Frost)	137,500	Moss	2.8	OLT Offshore	Drydocks World Dubai	Toscana, Italy
2004/2009	Golar Winter	137,000	Membrane	3.8	Golar LNG	Keppel Shipyard	Bahia, Brazil
2005	Excellence	138,000	Membrane	3.8	Excelerate Energy	DSME	Moheshkhali, Bangladesh
2005	Excelsior	138,000	Membrane	3.5	Excelerate Energy	DSME	Hadera, Israel
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	3.7	Höegh LNG	SHI	LNGC
2010	Cape Ann (ex GDF Suez Cape Ann)	145,130	Membrane	3.7	Höegh LNG	SHI	LNGC
2010	Exemplar	150,900	Membrane	4.8	Excelerate Energy	DSME	LNGC
2010	Expedient	150,900	Membrane	5.2	Excelerate Energy	DSME	GNL Escobar, Argentina
2014	Experience	173,400	Membrane	6.0	Excelerate Energy	DSME	Pecem, Brazil
2014	Golar Eskimo	160,000	Membrane	3.8	Golar LNG	SHI	Aqaba, Jordan
2014	Golar Igloo	170,000	Membrane	5.8	Golar LNG	SHI	Mina Al Ahmadi, Kuwait
2014	Höegh Gallant	170,000	Membrane	2.8	Höegh LNG	HHI	LNGC
2014	Independence	170,000	Membrane	4.0	Höegh LNG	HHI	Klaipeda, Lithuania
2014	PGN FSRU Lampung	170,000	Membrane	2.9	Höegh LNG	HHI	Lampung LNG, Indonesia
2015	BW Singapore	170,000	Membrane	5.7	BW Gas	SHI	Sumed, Egypt
2015	Golar Tundra	170,000	Membrane	5.5	Golar LNG	SHI	LNGC
2016	Höegh Grace	170,000	Membrane	4.0	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	Jaigarh, India
2017	MOL FSRU Challenger	263,000	Membrane	4.1	MOL	DSME	Dörtyol, Turkey
2017	S188 (ex Exmar FSRU)	25,000	Other	4.6	Exmar Offshore	Wison Zhoushan	Laid up
2018	Golar Nanook	170,000	Membrane	5.5	Golar LNG	SHI	Sergipe, Brazil
2018	Höegh Esperanza	170,000	Membrane	6.0	Höegh LNG	HHI	Tianjin, China
2018	Höegh Gannet	170,000	Membrane	5.5	Höegh LNG	HHI	LNGC
2018	Karunia Dewata	26,000	Other	0.4	JSK Group	PaxOcean Zhoushan	Benoa, Indonesia
2018	Marshal Vasilevskiy	174,000	Membrane	2.0	Gazprom	HHI	Kaliningrad, Russia
2009/2019	BW Paris (ex BW GDF Suez Paris)	171,793	Membrane	4.2	BW Gas	Keppel Shipyard	LNGC
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 (ex Turkey FSRU)	170,000	Membrane	5.7	Kolin Construction	HHI	Etki, Turkey
2020	Excelerate Sequoia	173,400	Membrane	6.0	Maran Gas Maritime	DSME	LNGC
2016/2020	FSRU Hua Xiang(ex. Hua Xiang 8)	14,000	Other	0.1	Zhejiang Huaxiang	Fengshun Ship Hvy	Amurang, Indonesia
2020	FSRU Jawa Satu	170,000	Membrane	2.4	PT Jawa Satu Regas	SHI	Java, Indonesia
2005/2020	LNG Croatia (ex Golar Viking)	140,208	Membrane	1.9	LNG Hrvatska	Hudong Zhonghua	Krk, Croatia
2020	Torman	28,000	Other	2.0	Gasfin Development	Jiangnan SY Group	Tema LNG, Ghana
2020	Vasant 1	180,000	Membrane	5.0	Swan Energy	HHI	Jafrabad, India

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* Cargo Containment System

FSRU ORDERBOOK AT THE END OF 2020

Built	Vessel Name	Storage Capacity (m³)	CCS*	Nominal Send-out Capacity (MTPA)	Owner	Builder	Location
2021	Ertugrul Gazi	170,000	Membrane	4.1	Botaş	**HHI**	Turkey
2003/2021	BW Tatiana (ex Gallina)	137,001	Moss		BW Gas Invenergy JV	**Keppel Shipyard**	El Salvador
1994/2021	LNGT Powership Africa (ex Dwiputra)	127,386	Moss		KARMOL	**Sembcorp**	Senegal
1991/2021	LNGT Powership Asia (ex NW Shearwater)	127,500	Moss		KARMOL	**Sembcorp**	Mozambique
2021	Transgas Power	174,000	Membrane		Dynagas LNG	**Hudong Zhonghua**	
2022	Transgas Force	174,000	Membrane		Dynagas LNG	**Hudong Zhonghua**	
2002/2022	Galea	136,967	Moss		DEFA	**Hudong Zhonghua**	Cyprus

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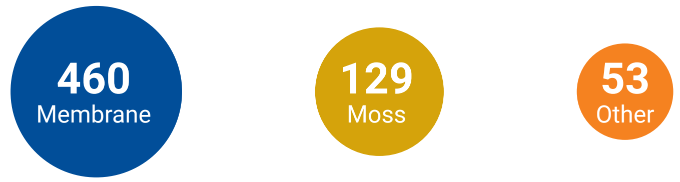
* Cargo Containment System

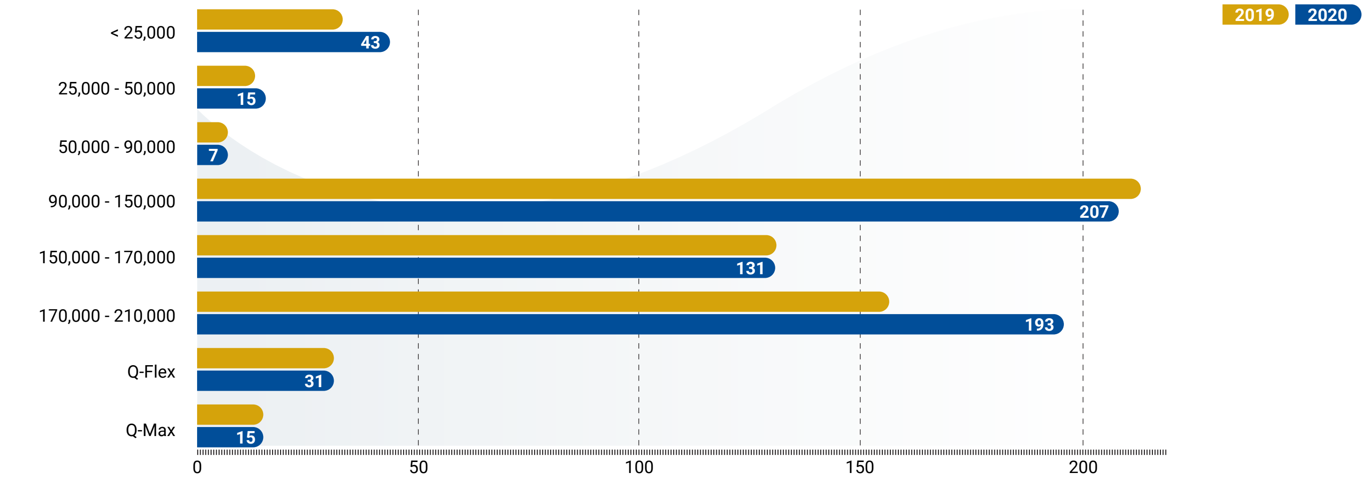
LNG fleet statistics

At the end of 2020, the fleet could be classified as follows:

CONTAINMENT SYSTEM



CARGO CAPACITY (m³)



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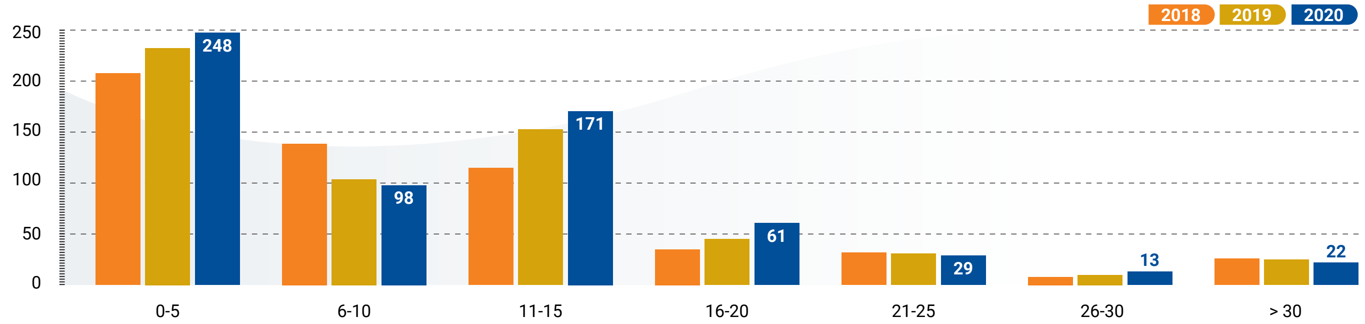
AGE OF THE EXISTING LNG FLEET (years)



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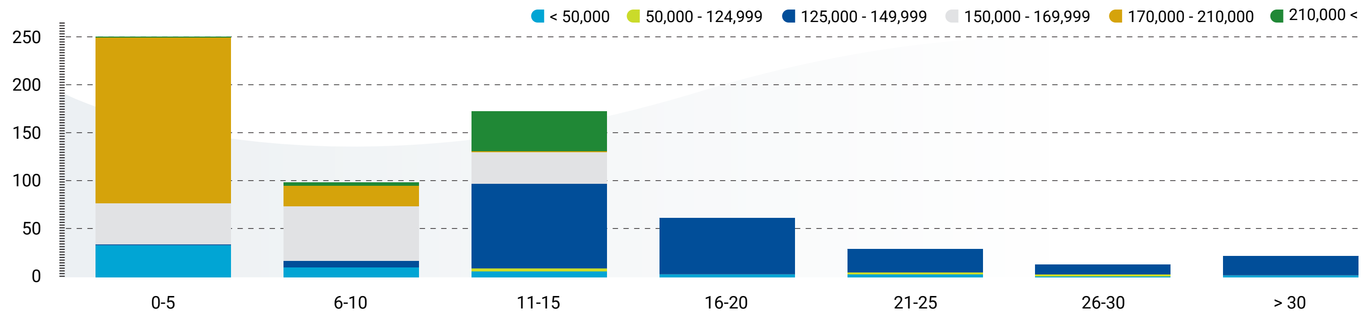
CARGO CAPACITY (in m³) AND AGE (years)



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LNG carrier fleet

Built	Vessel Name	Capacity (m³)	CCS*	Owner	Builder	Manager
1974	Seagas**	167	Other	Aga Gas AB	Loland Verft	Sirius Shipping
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 Merchant
1978	Gulf Energy	126,300	Moss	Sinokor Merchant	General Dynamics	Sinokor Merchant
1978	LNG Capricorn	126,300	Moss	Nova Shpg & Log	General Dynamics	Nova Shpg & Log
1979	Coral Energy	126,400	Moss	Sinokor Merchant	General Dynamics	Sinokor Merchant
1979	LNG Taurus	126,300	Moss	Nova Shpg & Log	General Dynamics	Nova Shpg & Log
1979	Ocean Quest	126,540	Membrane	Hong Kong LNG	Newport News SB	OSM Maritime
1980	Caribbean Energy	126,530	Moss	Sinokor Merchant	General Dynamics	Sinokor Merchant
1980	South Energy	126,530	Moss	Sinokor Merchant	General Dynamics	Sinokor Ship Mgt
1981	Ramdane Abane	126,130	Membrane	Hyproc Shipping Co.	Ch. de l'Atlantique	Hyproc Shipping Co.
1983	Adriatic Energy	125,568	Moss	Sinokor Merchant	MHI	Sinokor Merchant
1983	Baltic Energy	125,660	Moss	Sinokor Merchant	KHI	Sinokor Merchant
1983	North Energy	125,542	Moss	Sinokor Merchant	MHI	Sinokor Ship Mgt
1984	Mediterranean Energy	125,631	Moss	Sinokor Merchant	MHI	Sinokor Ship Mgt
1988	Kayoh Maru	1,517	Other	Daiichi Tanker	Imamura Zosen.	Daiichi Tanker
1989	Grace Energy	127,590	Moss	Sinokor Merchant	MHI	WSM Malaysia
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	Arctic Spirit	89,880	Other	Teekay LNG Partners	I.H.I.	Teekay Shpg. (Gla)
1993	Lucia Ambition	18,928	Membrane	MISC	NKK (Tsu)	MISC
1993	Northwest Sandpiper	127,500	Moss	Aust LNG Ship Op	Mitsui SB (Chiba)	STASCO (Shell)
1993	Polar Spirit	89,880	Other	Teekay LNG Partners	I.H.I.	Teekay Shpg. (Gla)
1994	Al Khaznah	135,496	Moss	National Gas Shpg.	Mitsui SB (Chiba)	ADNOC Log & Serv
1994	Hyundai Utopia	125,182	Moss	Hyundai LNG Shipping	HHI	Hyundai LNG Shipping
1994	LNG Vesta	127,547	Moss	MOL	MHI	MOL LNG Transport
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 Log & Serv
1994	YK Sovereign	127,125	Moss	SK Shipping	HHI	SK Shipping
1995	Ghasha	137,514	Moss	National Gas Shpg.	Mitsui SB (Chiba)	ADNOC Log & Serv
1995	HL Pyeong Taek	130,600	Membrane	H-Line Shipping	HHIC	H-Line Shipping
1995	Ish	137,540	Moss	National Gas Shpg.	MHI	ADNOC Log & Serv
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	NYK	MHI	NYK LNG Ship Mgt
1996	Al Zubarah	137,573	Moss	MOL	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
1996	Surya Aki	19,474	Moss	Humpuss Intermoda	KHI	MOL LNG Transport
1997	Al Hamra	137,000	Moss	National Gas Shpg.	Kvaerner Masa	ADNOC
1997	Al Rayyan	135,358	Moss	K-Line	KHI	K-Line Energy Mgt
1997	Al Wajbah	137,354	Moss	Mitsui OSK Lines	MHI	MOL LNG Transport
1997	Aman Sendai	18,928	Membrane	MISC	NKK (Tsu)	MISC
1997	Portovenere	65,000	Membrane	MISC	Fincantieri Sestri	EagleStar Shipmgmt
1997	Puteri Firus	130,405	Membrane	MISC	Ch. de l'Atlantique	EagleStar Shipmgmt
1997	Umm Al Ashtan	137,000	Moss	National Gas Shpg.	Kvaerner Masa	ADNOC
1998	Al Wakrah	135,358	Moss	MOL	KHI	MOL LNG Transport
1998	Broog	135,466	Moss	NYK	Mitsui SB (Chiba)	NYK LNG Ship Mgt
1998	Lerici	65,000	Membrane	MISC	Fincantieri Sestri	EagleStar Shipmgmt
1998	Pelita Energy	18,944	Membrane	Jaya Samudra	NKK (Tsu)	Jaya Samudra
1998	Zekreet	135,420	Moss	K-Line	Mitsui SB (Chiba)	K-Line Energy Mgmt
1999	Al Bidda	135,279	Moss	MOL	KHI	MOL LNG Transport
1999	Doha	137,354	Moss	NYK	MHI	NYK LNG Ship Mgt
1999	HL 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	NYK	MHI	NYK LNG Ship Mgt
2000	Golar Mazo	136,867	Moss	Golar LNG Partners	MHI	Golar Management
2000	HL Ras Laffan	138,214	Membrane	H-Line Shipping	HHIC	H-Line Shipping
2000	HL 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	DSME	KLC SM
2000	K. Freesia	135,256	Membrane	Korea Line	DSME	KLC SM
2000	LNG Jamal	135,333	Moss	Osaka Gas	MHI	NYK LNG Ship Mgt
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
2000	Triputra	23,096	Membrane	Humpuss Intermoda	NKK (Tsu)	Humolco Trans Inc.
2001	Sohar LNG	137,248	Moss	Oman Shipping Co	MHI	Oman Ship Mgt
2002	Abadi	136,912	Moss	Brunei Gas Carriers	MHI	Brunei Gas Carriers
2002	Excalibur	138,034	Membrane	Exmar	DSME	Exmar Shipmngt
2002	Galea	136,967	Moss	Shell Tank Singapore	MHI	STASCO (Shell)
2002	Gallina	137,001	Moss	Shell Tank Singapore	MHI	STASCO (Shell)
2002	Hispania Spirit	140,500	Membrane	Teekay LNG Partners	DSME	Teekay Shpg. (Gla)
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	Puteri Intan Satu	137,489	Membrane	MISC	MHI	EagleStar Shipmgmt
2002	Trader	138,000	Membrane	Lloyds Ind. Leasing	SHI	K Line LNG Shpg
2003	BW Boston	138,059	Membrane	BW Gas	DSME	BW Fleet Mngt
2003	BW Everett	138,028	Membrane	BW Gas	DSME	BW Fleet Mngt
2003	Castillo de Villalba	138,183	Membrane	Elcano	IZAR (Puerto Real)	Elcano
2003	Catalunya Spirit	138,000	Membrane	Teekay LNG Partners	IZAR (Sestao)	Teekay Shpg. (Gla)
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	138,283	Membrane	Sinokor Merchant	SHI	WSM Malaysia
2003	Methane Princess	138,000	Membrane	Golar LNG Partners	DSME	Golar Management
2003	Pacific Notus	137,006	Moss	JERA	MHI	NYK LNG Ship Mgt
2003	Puteri Nilam Satu	137,585	Membrane	MISC	MHI	EagleStar Shipmgmt
2003	Shinju Maru No. 1	2,513	Other	NS United Tanker	Higaki Zosen	NS United Tanker
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 Gas	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
2004	Galicia Spirit	140,624	Membrane	Teekay LNG Partners	DSME	Teekay Shpg. (Gla)
2004	Gemmata	136,985	Moss	STASCO (Shell)	MHI	STASCO (Shell)
2004	Hongkong Energy	138,000	Membrane	Sinokor Merchant	DSME	WSM Malaysia
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 Gas	DSME	BW Fleet Mngt
2004	Madrid Spirit	138,000	Membrane	Teekay LNG Partners	IZAR (Puerto Real)	Teekay Shpg. (Gla)
2004	Methane Kari Elin	138,209	Membrane	STASCO (Shell)	SHI	STASCO (Shell)
2004	Milaha Ras Laffan	138,270	Membrane	Qatar Shipping	SHI	Pronav Ship Mgt
2004	Pioneer Knutsen	1,100	Other	Knutsen OAS Shipping	Veka SY Lemmer	Knutsen OAS Shipping
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
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 Gas	DSME	BW Fleet Mngt
2005	LNG Oyo	145,842	Membrane	BW Gas	DSME	BW Fleet Mngt
2005	LNG Pioneer	138,000	Membrane	Jovo	DSME	MOL LNG Europe
2005	Lusail	145,000	Membrane	NYK	SHI	NYK LNG Ship Mgt
2005	Maran Gas Asclepius	145,822	Membrane	Maran Nakilat	DSME	Maran Gas Maritime
2005	Nizwa LNG	147,684	Moss	Oman Shipping Co	KHI	Oman Ship Mgt
2005	North Pioneer	2,512	Other	Japan Liquid Gas	Shin Kurushima	Iino Kaiun Kaisha
2005	Puteri Mutiara Satu	137,100	Membrane	MISC	Mitsui SB (Chiba)	EagleStar Shipmgmt
2005	Salalah LNG	145,951	Membrane	Oman Shipping Co	SHI	Oman Ship Mgt
2005	Seri Alam	145,572	Membrane	MISC	SHI	MISC
2005	Umm Bab	145,000	Membrane	Maran Nakilat	DSME	Maran Gas Maritime
2006	Al Marrouna	149,539	Membrane	Teekay LNG Partners	DSME	Teekay Shpg. (Gla)
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	Energy Progress	147,558	Moss	MOL	KHI	MOL LNG Transport
2006	Global Energy	74,130	Membrane	Total	Aker Yards	Gazocean S.A.
2006	Golar Grand	145,879	Membrane	Golar LNG Partners	DSME	Golar Management
2006	Golar Maria	145,700	Membrane	Golar LNG Partners	DSME	Golar Management
2006	Iberica Knutsen	138,120	Membrane	Knutsen OAS Shipping	DSME	Knutsen OAS Shipping
2006	Ibra LNG	147,100	Membrane	Oman Shipping Co	SHI	Oman Ship Mgt
2006	Ibri LNG	147,384	Moss	Oman Shipping Co	MHI	Oman Ship Mgt

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* Cargo Containment System
** LNGBV (LNG Bunkering Vessel)

Clarksons Research, GIIGNL

* Cargo Containment System

LNG shipping

LNG carrier fleet

Built	Vessel Name	Capacity (m³)	CCS*	Owner	Builder	Manager
2006	LNG Benue	145,842	Membrane	BW Gas	DSME	BW Fleet Mngt
2006	LNG Dream	145,000	Moss	Osaka Gas	KHI	NYK LNG Ship Mgt
2006	LNG Lokoja	149,600	Membrane	BW Gas	DSME	BW Fleet Mngt
2006	LNG River Niger	141,000	Moss	Bonny Gas Transport	HHI	Nigeria LNG Ltd.
2006	LNG Unity	154,472	Membrane	Total	Aker Yards	Gazocean (NYK)
2006	Methane Jane Elizabeth	145,000	Membrane	GasLog Partners	SHI	GasLog LNG Services
2006	Methane Lydon Volney	145,000	Membrane	GasLog	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 Mgt
2006	Pacific Eurus	136,942	Moss	JERA	MHI	NYK LNG Ship Mgt
2006	Seri Amanah	145,000	Membrane	MISC	SHI	EagleStar Shipmgmt
2006	Seri Anggun	145,731	Membrane	MISC	SHI	MISC
2006	Seri Angkasa	145,000	Membrane	MISC	SHI	MISC
2006	Simaisma	145,700	Membrane	Maran Nakilat	DSME	Maran Gas Maritime
2006	Stena Blue Sky	145,819	Membrane	Stena Bulk	DSME	Northern Marine Mgt
2007	Al Areesh	148,786	Membrane	Teekay LNG Partners	DSME	Teekay Shpg. (Gla)
2007	Al Daayen	148,853	Membrane	Teekay LNG Partners	DSME	Teekay Shpg. (Gla)
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 Mgt
2007	Al Safliya	210,134	Membrane	Schulte Group	DSME	Pronav Ship Mgt
2007	British Emerald	154,983	Membrane	BP Shipping	HHI	BP Shipping
2007	Cheikh El Mokrani	74,365	Membrane	Hyproc Shipping Co.	Universal SB (Tsu)	Hyproc Shipping Co.
2007	Clean Energy	149,700	Membrane	Dynagas LNG	HHI	Dynagas LNG
2007	Ejnan	145,000	Membrane	NYK	SHI	NYK LNG Ship Mgt
2007	Grace Acacia	149,786	Membrane	NYK	HHI	Gazocean (NYK)
2007	Grace Barleria	149,700	Membrane	NYK	HHI	NYK LNG Ship Mgt
2007	Grand Elena	145,580	Moss	Sovcomflot JSC	MHI	NYK LNG Ship Mgt
2007	LNG Alliance	154,472	Membrane	Total	Aker Yards	Gazocean (NYK)
2007	LNG Borno	149,600	Membrane	NYK	SHI	NYK LNG Ship Mgt
2007	LNG Kano	149,600	Membrane	BW Gas	DSME	BW Fleet Mngt
2007	LNG Ogun	149,600	Membrane	NYK	SHI	NYK LNG Ship Mgt
2007	LNG Ondo	148,300	Membrane	BW Gas	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	GasLog Partners	SHI	GasLog LNG Services
2007	Methane Nile Eagle	145,144	Membrane	STASCO (Shell)	SHI	GasLog LNG Services
2007	Methane Shirley Elisabeth	145,127	Membrane	GasLog Partners	SHI	GasLog LNG Services
2007	Neo Energy	149,700	Membrane	Tsakos Energy Nav	HHI	Hyundai Ocean
2007	Ob River	149,700	Membrane	Dynagas LNG	HHI	Dynagas LNG
2007	Seri Ayu	145,894	Membrane	MISC	SHI	MISC
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	Sun Arrows	19,100	Moss	Maple LNG Transport	KHI	MOL LNG Transport
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 Mgt
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	Teekay LNG Partners	SHI	Teekay Shpg. (Gla)
2008	Al Kharsaah	217,000	Membrane	Teekay LNG Partners	SHI	Teekay Shpg. (Gla)
2008	Al Khuwair	217,000	Membrane	Teekay LNG Partners	SHI	Teekay Shpg. (Gla)
2008	Al Oraiq	210,100	Membrane	Nakilat, JC	DSME	K Line LNG Shpg.
2008	Al Sahla	216,200	Membrane	Nakilat, JC	HHI	NYK LNG Ship Mgt
2008	Al Shamal	217,000	Membrane	Teekay LNG Partners	SHI	Teekay Shpg. (Gla)
2008	Al Thumama	216,200	Membrane	Nakilat, JC	HHI	NYK LNG Ship Mgt
2008	Al Utouriya	215,000	Membrane	Nakilat, JC	HHI	NYK LNG Ship Mgt
2008	Alto Acrux	147,798	Moss	JERA	MHI	NYK LNG Ship Mgt
2008	Amur River	149,743	Membrane	Dynagas LNG	HHI	Dynagas LNG
2008	Arwa Spirit	165,500	Membrane	Malt LNG	SHI	Teekay Shpg. (Gla)
2008	British Diamond	155,046	Membrane	BP Shipping	HSHI	BP Shipping
2008	British Sapphire	155,000	Membrane	BP Shipping	HHI	BP Shipping
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	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 Mgt
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 JSC	MHI	SCF Mngt Dubai
2008	Grand Mereya	145,964	Moss	MOL	Mitsui SB (Chiba)	MOL LNG Transport
2008	Hyundai Ecopia	149,700	Membrane	Hyundai LNG Shipping	HHI	Hyundai Ocean
2008	K. Jasmine	145,877	Membrane	Korea Line	DSME	KLC SM
2008	K. Mugungwha	151,812	Membrane	Korea Line	DSME	KLC SM
2008	Kakurei Maru	2,536	Other	Tsurumi Sunmarine	Higaki Zosen	Tsurumi Sunmarine
2008	LNG Barka	155,982	Moss	Osaka Gas	KHI	NYK LNG ShipMgt
2008	LNG Ebisu	147,546	Moss	KEPCO	KHI	MOL LNG Transport
2008	LNG Imo	148,300	Membrane	BW Gas	DSME	BW Fleet Mngt
2008	LNG Kolt	153,595	Membrane	Pan Ocean	HHIC	POS SM Co Ltd
2008	Marib Spirit	165,500	Membrane	Malt LNG	SHI	Teekay Shpg. (Gla)
2008	Methane Spirit	165,500	Membrane	Malt LNG	SHI	Teekay Shpg. (Gla)
2008	Mozah	267,335	Membrane	Qatar Gas (Nakilat)	SHI	Nakilat Shipping
2008	Murwab	210,100	Membrane	Nakilat, JC	DSME	MOL LNG Transport (E)
2008	Seri Balhaf	157,721	Membrane	MISC	MHI	MISC
2008	Seri Bijaksana	152,888	Membrane	MISC	MHI	MISC
2008	Shinju Maru No. 2	2,536	Other	NS United Tanker	Higaki Zosen	NS United Tanker
2008	Tangguh Batur	145,700	Membrane	Sovcomflot JSC	DSME	NYK Shipmngt Pte.
2008	Tangguh Foja	155,641	Membrane	K-Line	SHI	K-Line Energy Mgt
2008	Tangguh Hiri	154,971	Membrane	Teekay LNG Partners	HHI	Teekay Shpg. (Gla)
2008	Tangguh Jaya	155,641	Membrane	K-Line	SHI	K-Line Energy Mgt
2008	Tangguh Towuti	145,700	Membrane	Sovcomflot JSC	DSME	NYK Shipmngt. Pte.
2008	Trinity Arrow	154,982	Membrane	K-Line	Imabari	K Line LNG Shpg.
2008	Tristar Ruby	155,000	Membrane	Tristar Energy	HHI	Wilh. Ship Mngt
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
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	STASCO (Shell)
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 Gas	DSME	BW Fleet Mngt
2009	Coral Methane**	7,500	Other	Anthony Veder	Remontowa Repair	Anthony Veder
2009	Cygnus Passage	147,200	Moss	Cygnus LNG Shipping	MHI	NYK LNG Ship Mgt
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 Ship Mgt
2009	Magellan Spirit	165,500	Membrane	Malt LNG	SHI	Teekay Shpg. (Gla)
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	Oizmendi**	600	Other	ITSAS Gas Bunker	Francisco Cardama	Nakilat Shipping
2009	Onaiza	210,100	Membrane	Qatar Gas (Nakilat)	DSME	STASCO (Shell)
2009	Pacific Enlighten	147,200	Moss	Kyushu Electric	MHI	NYK LNG Ship Mgt
2009	Seri Balqis	157,611	Membrane	MISC	MHI	MISC
2009	Shagra	267,335	Membrane	Qatar Gas (Nakilat)	SHI	STASCO (Shell)
2009	Taitar No. 1	147,362	Moss	Nimic Ship Mgmt	MHI	Nimic Ship Mgt
2009	Taitar No. 2	147,500	Moss	Nimic Ship Mgmt	KHI	Nimic Ship Mgt
2009	Tangguh Palung	155,642	Membrane	K-Line	SHI	K-Line Energ Mgt
2009	Tangguh Sago	154,971	Membrane	Teekay LNG Partners	HSHI	Teekay Shpg. (Gla)
2009	Trinity Glory	154,999	Membrane	K-Line	Imabari	K Line LNG Shpg.
2009	Woodside Donaldson	165,936	Membrane	Malt LNG	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	Coral Favia	10,030	Other	Anthony Veder	Taizhou Skaugen	Anthony Veder
2010	Coral Fraseri**	10,030	Other	Anthony Veder	Taizhou Skaugen	B. Schulte (Hellas)
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	173,870	Membrane	MOL	HHI	MOL LNG Transport (E)
2010	Meridian Spirit	165,772	Membrane	Malt LNG	SHI	Teekay Shpg. (Gla)
2010	Methane Becki Anne	170,678	Membrane	GasLog Partners	SHI	GasLog LNG Services
2010	Methane Julia Louise	170,000	Membrane	Lepta Shipping Co	SHI	GasLog LNG Services
2010	Methane Mickie Harper	170,000	Membrane	STASCO (Shell)	SHI	STASCO (Shell)
2010	Methane Patricia Camila	170,000	Membrane	STASCO (Shell)	SHI	STASCO (Shell)
2010	Point Fortin	154,914	Membrane	Trinity LNG Carrier	Imabari	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	Sevilla Knutsen	173,400	Membrane	Knutsen OAS Shipping	DSME	Knutsen OAS Shipping
2010	Spirit of Hela	173,010	Membrane	MOL	HSHI	MOL LNG Transport (E)

Clarksons Research, GIIGNL

* Cargo Containment System

** LNGBV (LNG Bunkering Vessel)

LNG shipping

LNG carrier fleet

Built	Vessel Name	Capacity (m^3)	CCS*	Owner	Builder	Manager
2010	**Taitar No. 3**	147,366	Moss	Nimic Ship Mgmt	MHI	Nimic Ship Mgt
2010	**Taitar No. 4**	147,546	Moss	Nimic Ship Mgmt	KHI	Nimic Ship Mgt
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	**Akebono Maru**	3,556	Other	NS United Tanker	Higaki Zosen	NS United Tanker
2011	**Amali**	148,000	Membrane	Brunei Shell Tankers	DSME	STASCO (Shell)
2011	**Arkat**	147,228	Membrane	Brunei Gas Carriers	DSME	STASCO (Shell)
2011	**Coral Fungia**	10,030	Other	Anthony Veder	Taizhou Skaugen	Anthony Veder
2011	**Coral Furcata**	10,030	Other	Anthony Veder	Taizhou Skaugen	B. Schulte (Hellas)
2011	**Energy Horizon**	177,441	Moss	Tokyo LNG Tanker Co.	KHI	NYK LNG Ship Mgt
2011	**Lobito**	160,276	Membrane	MiNT LNG	SHI	Teekay Shpg. (Gla)
2011	**Malanje**	160,276	Membrane	MiNT LNG	SHI	Mitsui & Co
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 Shpg. (Gla)
2011	**Stena Clear Sky**	173593	Membrane	Stena Bulk	DSME	Northern Marine Mgt
2011	**Stena Crystal Sky**	173,611	Membrane	Stena Bulk	DSME	Northern Marine Mgt
2011	**Unikum Spirit**	12,000	Other	Teekay LNG Partners	AVIC Dingheng SB	OSM Tanker
2011	**Vision Spirit**	12,022	Other	Teekay LNG Partners	AVIC Dingheng SB	OSM Tanker
2012	**Coral Energy****	15,600	Other	Anthony Veder	Neptun Werft	Anthony Veder
2012	**Cubal**	160,276	Membrane	MiNT LNG	SHI	NYK LNG Ship Mgt
2012	**Shen Hai**	147,210	Membrane	CLNG	HZ	CLNG
2013	**Arctic Aurora**	154,899	Membrane	Dynagas LNG	HHI	Dynagas LNG
2013	**Cool Voyager**	160,372	Membrane	Thenamaris	SHI	Thenamaris LNG
2013	**Coral Anthelia**	6,500	Other	Anthony Veder	AVIC Dingheng SB	Anthony Veder
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	**Golar Celsius**	160,000	Membrane	Golar LNG	SHI	Golar Management
2013	**Golar Seal**	160,000	Membrane	Golar LNG	SHI	Golar Management
2013	**Grace Dahlia**	177,630	Moss	NYK	KHI	NYK LNG Ship Mgt
2013	**Kakuyu Maru**	2,538	Other	Tsurumi Sunmarine	KHI	Tsurumi Sunmarine
2013	**Lena River**	155,165	Membrane	Dynagas LNG	HHI	Dynagas
2013	**Wilforce**	156,007	Membrane	Teekay LNG Partners	DSME	Awilco LNG Technical
2013	**Wilpride**	156,007	Membrane	Teekay LNG Partners	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	HHI	Dynagas LNG
2014	**Adam LNG**	161,870	Membrane	Oman Shipping Co	HHI	Oman Ship Mgt
2014	**Amani**	154,800	Membrane	Brunei Gas Carriers	HHI	STASCO (Shell)
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 LNG
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	**Esshu Maru**	155,300	Moss	Trans Pacific Shipping 2 Ltd.	MHI	MOL LNG Transport (E)
2014	**GasLog Saratoga**	155,000	Membrane	GasLog	SHI	GasLog LNG Services
2014	**Golar Bear**	160,000	Membrane	Golar LNG	SHI	Golar LNG
2014	**Golar Crystal**	160,000	Membrane	Oriental Fleet Intl	SHI	Golar Management
2014	**Golar Frost**	160,000	Membrane	Golar LNG	SHI	Golar LNG
2014	**Golar Glacier**	162,000	Membrane	Golar LNG	HSHI	Golar Management
2014	**Golar Penguin**	160,000	Membrane	Golar LNG	SHI	Golar Management
2014	**Kita LNG**	160,118	Membrane	TMS Cardiff Gas	DSME	TMS Cardiff Gas
2014	**LNG Venus**	155,873	Moss	Osaka Gas	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 Ship Mgt
2014	**Palu LNG**	160,000	Membrane	TMS Cardiff Gas	DSME	TMS Cardiff Gas
2014	**Pskov**	170,200	Membrane	Sovcomflot JSC	STX SB (Jinhae)	SCF Mngt Dubai
2014	**Seishu Maru**	155,300	Moss	Trans Pacific Shipping 1 Ltd.	MHI	NYK LNG Ship Mgt
2014	**Solaris**	155,000	Membrane	GasLog Partners	SHI	GasLog LNG Services
2014	**Velikiy Novgorod**	170,567	Membrane	Sovcomflot JSC	STX SB (Jinhae)	SCF Mngt Dubai
2014	**Yari LNG**	160,000	Membrane	TMS Cardiff Gas	DSME	TMS Cardiff Gas
2015	**Amadi**	154,800	Membrane	Brunei Gas Carriers	HHI	STASCO (Shell)
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 Gas	HHI	BW Fleet Mngt
2015	**BW Pavilion Vanda**	161,870	Membrane	BW Gas	HHI	BW Fleet Mngt

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* Cargo Containment System
** LNGBV (LNG Bunkering Vessel)

Built	Vessel Name	Capacity (m^3)	CCS*	Owner	Builder	Manager
2015	**Clean Horizon**	161,870	Membrane	Dynagas	HHI	Dynagas LNG
2015	**Cool Explorer**	161,352	Membrane	Thenamaris	SHI	Thenamaris LNG
2015	**Energy Atlantic**	159,924	Membrane	Alpha Tankers	STX SB (Jinhae)	B. Schulte (Hellas)
2015	**GasLog Salem**	155,000	Membrane	GasLog	SHI	GasLog LNG Services
2015	**Golar Ice**	160,000	Membrane	Golar LNG	SHI	Golar Management
2015	**Golar Kelvin**	162,000	Membrane	Golar LNG	HSHI	Golar Management
2015	**Golar Snow**	160,000	Membrane	Golar LNG	SHI	Golar Management
2015	**Hai Yang Shi You 301**	31,043	Other	CNOOC EnerTech	Jiangnan SY Group	CNOOC EnerTech
2015	**JS Ineos Ingenuity**	27,566	Other	Evergas AS	Sinopacific Offshore	Thome Ship Mgt
2015	**JS Ineos Insight**	27,566	Other	Evergas AS	Sinopacific Offshore	Thome Ship Mgt
2015	**JS Ineos Intrepid**	27,566	Other	Evergas AS	Sinopacific Dayang	Thome Ship Mgt
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	Bonny Gas Transport
2015	**LNG Jurojin**	155,300	Moss	KEPCO	MHI	MOL LNG Transport
2015	**LNG Port Harcourt II**	174,900	Membrane	Bonny Gas Transport	SHI	Bonny Gas Transport
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	**SCF Melampus**	170,200	Membrane	Sovcomflot JSC	STX SB (Jinhae)	SCF Mgt Dubai
2015	**SCF Mitre**	170,200	Membrane	Sovcomflot JSC	STX SB (Jinhae)	SCF Mgt Dubai
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 JSC	DSME	Sovcomflot JSC
2016	**Clean Vision**	162,000	Membrane	Dynagas LNG	HHI	Dynacom Tankers Mgmt
2016	**Creole Spirit**	173,545	Membrane	Teekay LNG Partners	DSME	Teekay Bermuda
2016	**Gaslog Geneva**	174,000	Membrane	GasLog Partners	SHI	GasLog Partners
2016	**GasLog Gibraltar**	174,000	Membrane	GasLog Partners	SHI	GasLog Partners
2016	**GasLog Glasgow**	174,000	Membrane	GasLog Partners	SHI	GasLog Partners
2016	**GasLog Greece**	174,000	Membrane	GasLog Partners	SHI	GasLog Partners
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
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	Bonny Gas Transport
2016	**LNG Abuja II**	174,900	Membrane	Bonny Gas Transport	SHI	Bonny Gas Transport
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	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**	173479	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
2016	**Maria Energy**	174,000	Membrane	Tsakos Energy Nav	HHI	Tsakos Energy Nav
2016	**Oak Spirit**	173,545	Membrane	Teekay LNG Partners	DSME	Teekay Bermuda
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	**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 LNG	DSME	Dynagas LNG
2017	**Cardissa****	6,469	Other	Shell Western LNG	STX SB (Jinhae)	STASCO (Shell)
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	**Coralius****	5,737	Other	Anthony Veder	Royal Bodewes SY	Anthony Veder
2017	**Eduard Toll**	172652	Membrane	Teekay Corp CLNG JV	DSME	Teekay Shpg. (Gla)
2017	**Green Zeebrugge****	5,100	Other	NYK	HHIC	NYK LNG Ship Mgt
2017	**Fedor Litke**	172,636	Membrane	Dynagas LNG	DSME	Dynagas LNG
2017	**Hyundai Peacepia**	174,000	Membrane	Hyundai LNG Shipping	DSME	Hyundai Ocean
2017	**Hyundai Princepia**	174,000	Membrane	Hyundai LNG Shipping	DSME	Hyundai Ocean
2017	**JS Ineos Independence**	27,566	Other	Evergas AS	Sinopacific Offshore	Evergas
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

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* Cargo Containment System
** LNGBV (LNG Bunkering Vessel)

LNG carrier fleet

Built	Vessel Name	Capacity (m³)	CCS*	Owner	Builder	Manager
2017	**Macoma**	**173,545**	Membrane	Teekay LNG Partners	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	Teekay LNG Partners	DSME	STASCO (Shell)
2017	**Ougarta**	**171,800**	Membrane	ITOCHU Corp	HHI	Hyproc Shipping Co.
2017	**Pan Asia**	**174,000**	Membrane	Teekay LNG Partners	HZ	Teekay LNG Partners
2017	**Seri Cempaka**	**150,200**	Moss	MISC	HHI	MISC
2017	**Seri Cenderawasih**	**150,200**	Moss	MISC	HHI	EagleStar Shipmgmt
2017	**SK Audace**	**180,000**	Membrane	SK & Marubeni JV	SHI	SK Shipmngt
2017	**SM Eagle**	**174,263**	Membrane	Korea Line	DSME	KLC SM
2017	**SM Seahawk**	**174,263**	Membrane	Korea Line	DSME	KLC SM
2017	**Torben Spirit**	**173,545**	Membrane	Teekay LNG Partners	DSME	Teekay Bermuda
2018	**Baharain Sprit**	**180,000**	Membrane	Teekay	DSME	Teekay
2018	**Boris Davydov**	**172,636**	Membrane	Dynagas LNG	DSME	Dynagas LNG
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	**Bunker Breeze****	**4,864**	Other	Grupo Suardiaz	Ast. Zamakona	Grupo Suardiaz
2018	**BW Lilac**	**174,284**	Membrane	BW Gas	DSME	BW Fleet Mngt
2018	**BW Tulip**	**174,284**	Membrane	BW Gas	DSME	BW Fleet Mngt
2018	**Castillo de Caldelas**	**178,817**	Membrane	Elcano	Imabari Saijo	Elcano
2018	**Castillo de Merida**	**178,817**	Membrane	Elcano	Imabari Saijo	Elcano
2018	**CESI Lianyungang**	**174,323**	Membrane	China Energy Shpg	HZ	China Energy Mgt
2018	**CESI Wenzhou**	**174,323**	Membrane	China Energy Shpg	HZ	China Energy Mgt
2018	**Clean Jacksonville****	**2,200**	Membrane	TOTE	Conrad Shipyard	Harvey Gulf
2018	**Coral Energice****	**18,000**	Other	Anthony Veder	Neptun Werft	Anthony Veder
2018	**Diamond Gas Orchid**	**165,000**	Moss	NYK	MHI	NYK LNG Ship Mgt
2018	**Diamond Gas Rose**	**165,000**	Moss	NYK	MHI	NYK LNG Ship Mgt
2018	**Energy Liberty**	**166,571**	Other	MOL	JMU Tsu Shipyard	MOL LNG Transport
2018	**Enshu Maru**	**165,257**	Moss	K-Line	KHI	K-Line Energy Mgmt
2018	**Flex Endeavour**	**173,400**	Membrane	Hyundai Glovis	DSME	FLEX Fleet Mgt
2018	**Flex Enterprise**	**173,400**	Membrane	Hyundai Glovis	DSME	FLEX Fleet Mgt
2018	**Flex Rainbow**	**174,000**	Membrane	FLEX LNG	SHI	FLEX Fleet Mgt
2018	**Flex Ranger**	**174,101**	Membrane	FLEX LNG	SHI	FLEX Fleet Mgt
2018	**GasLog Genoa**	**174,000**	Membrane	GasLog	SHI	GasLog
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 LNG	DSME	Dynagas LNG
2018	**Kairos****	**7,500**	Other	Schulte Group	Hyundai Mipo	B. Schulte (Deutsch)
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 Ship Mgt
2018	**LNG Schneeweisschen**	**180,125**	Membrane	MOL	DSME	MOL LNG Transport (E)
2018	**Magdala**	**173,545**	Membrane	Teekay LNG Partners	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	Teekay LNG Partners	DSME	STASCO (Shell)
2018	**Myrina**	**173,545**	Membrane	Teekay LNG Partners	DSME	STASCO (Shell)
2018	**Oceanic Breeze**	**155,671**	Moss	K-Line	MHI	K-Line Energy Mgt
2018	**Pacific Breeze**	**183,352**	Moss	K-Line	KHI	K-Line Energy Mgmt
2018	**Pacific Mimosa**	**155,727**	Moss	NYK	MHI	NYK LNG Ship Mgt
2018	**Pan Americas**	**174,000**	Membrane	Teekay LNG Partners	HZ	Teekay Shpg. (Gla)
2018	**Pan Europe**	**174,000**	Membrane	Teekay LNG Partners	HZ	Teekay LNG Partners
2018	**Patris**	**174,000**	Membrane	Chandris (Hellas)	DSME	K Line LNG Shpg.
2018	**Rudolf Samoylovich**	**172567**	Membrane	Teekay Corp CLNG JV	DSME	Teekay Shpg. (Gla)
2018	**Sean Spirit**	**174,162**	Membrane	Teekay LNG Partners	HSHI	Teekay Bermuda
2018	**Seri Camar**	**150,200**	Moss	MISC	HHI	MISC
2018	**Seri Cemara**	**150,200**	Moss	MISC	HHI	EagleStar Shipmgmt
2018	**SK Resolute**	**180,082**	Membrane	SK & Marubeni JV	SHI	SK Shipmngt
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 Europe
2018	**Vladimir Vize**	**172,658**	Membrane	Arctic LNG	DSME	MOL LNG Europe
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
2019	**British Sponsor**	**173,644**	Membrane	BP Shipping	DSME	BP Shipping
2019	**Bushu Maru**	**180,000**	Moss	NYK	MHI	NYK LNG Ship Mgt
2019	**BW Pavilion Aranda**	**173,400**	Membrane	BW Gas	DSME	BW Fleet Mngt
2019	**Diamond Gas Sakura**	**165,000**	Moss	NYK	MHI	NYK LNG Ship Mgt
2019	**Energy Glory**	**166,686**	Other	NYK	JMU Tsu Shipyard	NYK LNG Ship Mgt
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 Mgt
2019	**FlexFueler 001****	**1,480**	Other	Titan LNG	Kooiman Marine Group	Titan LNG
2019	**GasLog Gladstone**	**174,000**	Membrane	GasLog	SHI	GasLog
2019	**GasLog Warsaw**	**180,000**	Membrane	GasLog	SHI	GasLog

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* Cargo Containment System
** LNGBV (LNG Bunkering Vessel)

Built	Vessel Name	Capacity (m³)	CCS*	Owner	Builder	Manager
2019	**Georgiy Ushakov**	**172,652**	Membrane	Teekay Corp CLNG JV	DSME	Teekay Corp CLNG JV
2019	**LNG Dubhe**	**174,000**	Membrane	MOL China COSCO JV	HZ	MOL LNG Transport
2019	**LNG London****	**3,000**	Other	LNG Shipping		LNG Shipping
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	NYK	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	Teekay Corp CLNG JV	DSME	Teekay Corp CLNG JV
2019	**Nikolay Zubov**	**172,636**	Membrane	Dynagas LNG	DSME	Dynagas LNG
2019	**Nohshu Maru**	**180,000**	Moss	MOL	MHI	MOL LNG Transport
2019	**Pan Africa**	**174,000**	Membrane	Teekay LNG Partners	HZ	Teekay Shpg. (Gla)
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	**Saga Dawn**	**45,000**	Membrane	Saga LNG Shpg Pte.	CMHI (Jiangsu)	Saga LNG Shpg Pte.
2019	**Shinshu Maru**	**177,481**	Moss	Nippon Yusen Kaisha	KHI	NYK LNG Ship Mgt
2019	**SM Jeju LNG1****	**7,654**	Membrane	Korea Line	SHI	KLC SM
2019	**Sohshu Maru**	**177,474**	Moss	Mitsui OSK Lines	KHI	MOL LNG Transport
2019	**Vladimir Voronin**	**172,608**	Membrane	Teekay Corp CLNG 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	Teekay Corp CLNG JV	DSME	Teekay Corp CLNG JV
2019	**Yamal Spirit**	**174,174**	Membrane	Teekay LNG Partners	HSHI	Teekay Bermuda
2020	**Amberjack LNG**	**174,000**	Membrane	TMS Cardiff Gas	HHI	TMS Cardiff Gas
2020	**Aristos I**	**174,000**	Membrane	Capital Gas Carrier	HHI	Capital Ship Management Corp
2020	**Avenir Advantage****	**7,500**	Other	Avenir LNG	Keppel Nantong	Avenir LNG
2020	**Bonito LNG**	**174,000**	Membrane	TMS Cardiff Gas	HHI	TMS Cardiff Gas
2020	**BW Magnolia**	**173,400**	Membrane	BW Gas	DSME	BW Fleet Mngt
2020	**BW Pavilion Aranthera**	**173,400**	Membrane	BW Gas	DSME	BW Fleet Mngt
2020	**Celsius Copenhagen**	**180,000**	Membrane	Celsius Shipping	SHI	Celsius Shipping ApS
2020	**CNTIC VPower Global**	**28,000**	Other	CNTIC Vpower	COSCO HI (Dalian)	LNG STS
2020	**Cool Discoverer**	**174,000**	Membrane	Thenamaris	HHI	Thenamaris LNG
2020	**Coral Encanto**	**30,000**	Other	Anthony Veder	Ningbo Xinle SB	Anthony Veder
2020	**Diamond Gas Metropolis**	**174,000**	Membrane	NYK Mitsubishi JV	HSHI	NYK
2020	**DRADO LNG**	**174,000**	Membrane	TMS Cardiff Gas	SHI	TMS Cardiff Gas Ltd
2020	**Elisa Larus**	**174,000**	Membrane	NYK	HSHI	Gazocean (NYK)
2020	**Energy Pacific**	**173,400**	Membrane	Alpha Tankers	DSME	Alpha Gas
2020	**Flex Amber**	**173,400**	Membrane	FLEX LNG	HSHI	FLEX Fleet Mgt
2020	**Flex Artemis (ex-Flex Reliance)**	**173,400**	Membrane	FLEX LNG	DSME	FLEX Fleet Mgt
2020	**Flex Aurora**	**173,400**	Membrane	FLEX LNG	HSHI	FLEX Fleet Mgt
2020	**Flex Resolute**	**173,400**	Membrane	FLEX LNG	DSME	FLEX Fleet Mgt
2020	**FlexFueler 002****	**1,480**	Other	Titan LNG	Kooiman Marine Group	Titan LNG
2020	**FueLNG Bellina****	**7,500**	Other	FueLNG	Keppel Nantong	MOL LNG Transport (E)
2020	**Gas Agility****	**18,600**	Membrane	MOL	HZ	MOL LNG Transport (E)
2020	**GasLog Georgetown**	**174,000**	Membrane	Gaslog	SHI	GasLog Ltd
2020	**Gaslog Wales**	**180,000**	Membrane	Gaslog	SHI	Gaslog
2020	**GasLog Westminster**	**180,000**	Membrane	Gaslog	SHI	Gaslog
2020	**GasLog Windsor**	**180,000**	Membrane	Gaslog	SHI	Gaslog
2020	**Global Energy**	**173,514**	Membrane	Maran Nakilat	DSME	Nakilat Shipping
2020	**Kaguya**	**3,500**	Other	Central LNG Shipping	KHI	Central LNG Shipping
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	**Q-LNG 4000****	**4,000**	Other	Q-LNG	VT Halter Marine	Harvey Gulf
2020	**Qogir**	**174,000**	Membrane	TMS Cardiff Gas	SHI	TMS Cardiff Gas
2020	**SCF Barents**	**174,000**	Membrane	Sovcomflot	HSHI	Sovcomflot
2020	**SCF La Perouse**	**174,000**	Membrane	Sovcomflot	HSHI	Sovcomflot
2020	**SM Jeju LNG2****	**7,500**	Membrane	Korea Line	SHI	KLC SM
2020	**Traiano Knutsen**	**180,000**	Membrane	Knutsen	HHI	Knutsen
2020	**Vivit Americas LNG**	**174,000**	Membrane	TMS Cardiff Gas	HHI	TMS Cardiff Gas Ltd
2020	**Woodside Charles Allen**	**173,583**	Membrane	Maran Gas	DSME	Maran Gas Maritime

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

Clarksons Research, GIIGNL

* Cargo Containment System
** LNGBV (LNG Bunkering Vessel)

LNG imports in 2020

LNG imports in 2020 (net of re-exports)

Market	10^6 m^3 liquid	10^6 T	Global Share	Var. 2020/2019
Japan	164.82	74.43	20.9%	-3.2%
China	155.99	68.91	19.3%	11.7%
South Korea	91.81	40.81	11.5%	1.7%
India	59.31	26.63	7.5%	11.0%
Taiwan	39.61	17.76	5.0%	6.6%
Pakistan	16.67	7.42	2.1%	-8.5%
Thailand	12.65	5.61	1.6%	12.2%
Bangladesh	9.38	4.18	1.2%	2.5%
Singapore	7.28	3.19	0.9%	-3.2%
Indonesia	6.23	2.75	0.8%	-24.6%
Malaysia	5.99	2.57	0.7%	-5.3%
Myanmar	0.41	0.18	0.1%	N/A
ASIA	570.15	254.43	71.4%	3.4%
Spain	34.99	15.37	4.3%	-2.2%
United Kingdom	30.69	13.43	3.8%	-0.8%
France	29.37	13.06	3.7%	-16.1%
Turkey	24.13	10.72	3.0%	14.4%
Italy	20.49	9.07	2.5%	-7.2%
Netherlands	12.14	5.33	1.5%	-8.0%
Portugal	9.14	4.07	1.1%	-1.1%
Belgium	7.33	3.21	0.9%	-36.9%
Poland	6.16	2.70	0.8%	9.8%
Greece	4.99	2.20	0.6%	4.2%
Lithuania	3.27	1.44	0.4%	2.7%
Sweden	0.82	0.36	0.1%	35.6%
Malta	0.74	0.32	0.1%	-13.7%
Finland	0.35	0.15	0.0%	12.4%
Norway	0.27	0.12	0.0%	-2.1%
Gibraltar	0.11	0.05	0.0%	-11.6%
EUROPE	185.00	81.59	22.9%	-5.0%

Market	10^6 m^3 liquid	10^6 T	Global Share	Var. 2020/2019
Chile	6.21	2.69	0.8%	9.8%
Brazil	5.52	2.39	0.7%	3.2%
Mexico	4.34	1.88	0.5%	-61.5%
Argentina	3.12	1.37	0.4%	13.8%
Dominican Republic	2.71	1.17	0.3%	1.2%
Puerto Rico	2.19	0.93	0.3%	-32.0%
United States	2.07	0.89	0.3%	-13.6%
Jamaica	1.66	0.72	0.2%	160.1%
Canada	1.48	0.63	0.2%	59.6%
Colombia	0.69	0.30	0.1%	28.2%
Panama	0.50	0.22	0.1%	-49.8%
AMERICAS	30.48	13.18	3.7%	-16.3%
Kuwait	9.13	4.07	1.1%	14.5%
United Arab Emirates	3.26	1.46	0.4%	7.6%
Jordan	1.88	0.82	0.2%	-41.2%
Israel	1.34	0.57	0.2%	0.0%
MIDDLE EAST & AFRICA	15.61	6.92	1.9%	-0.3%
GLOBAL NET IMPORTS	801.24	356.12	100.0%	0.4%

Source: GIIGNL, Kpler

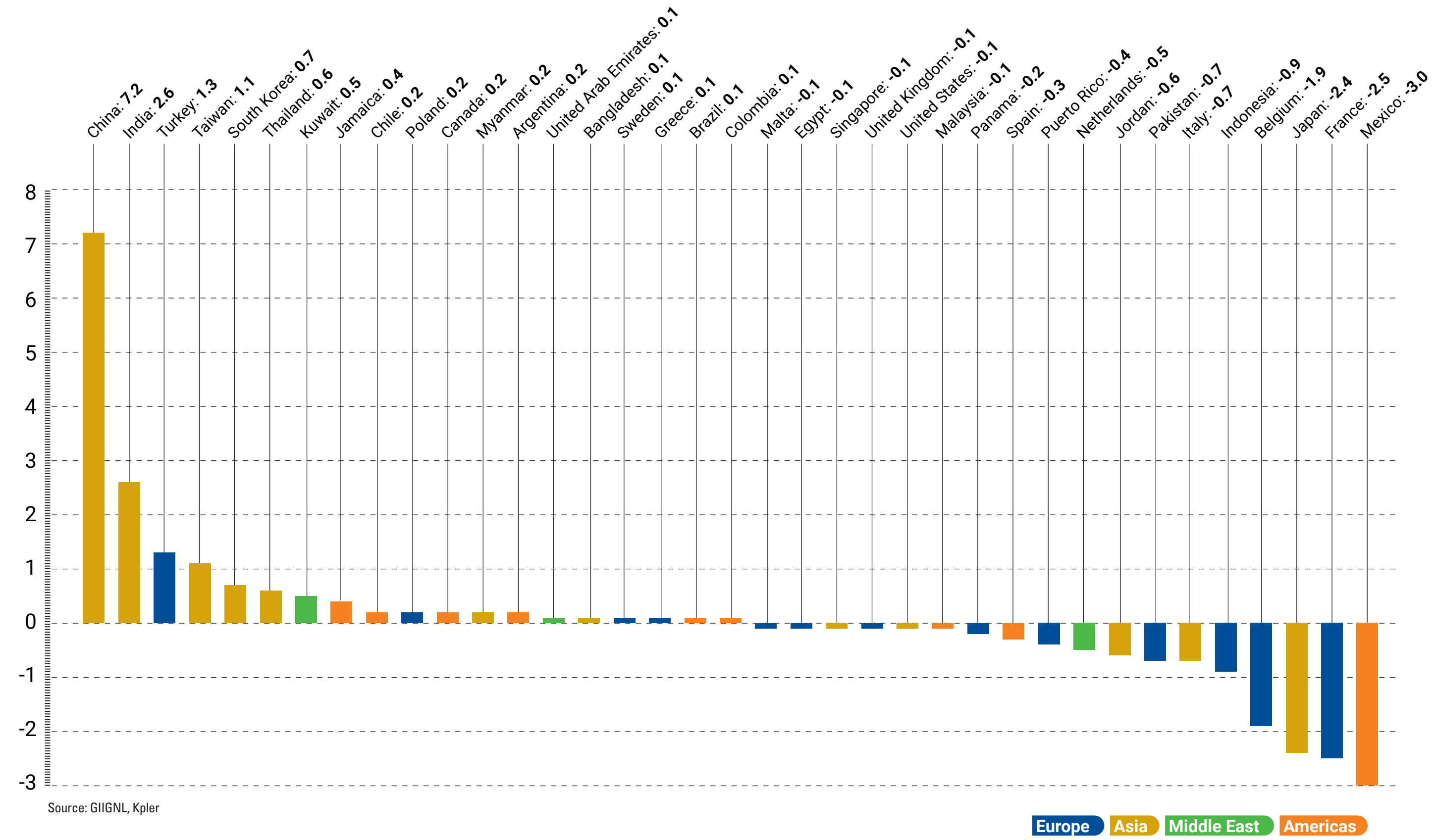
Source of LNG imports in 2020

Country	10^6 m^3 liquid	10^6 T	Global Share	Var. 2020/2019
Australia	175.46	77.77	21.8%	3.2%
Malaysia	52.70	23.85	6.7%	-9.0%
Indonesia	33.96	14.99	4.2%	-3.1%
Russia (Asia)	25.01	11.25	3.2%	0.8%
Papua New Guinea	17.90	8.33	2.3%	1.2%
Brunei	13.69	6.22	1.7%	-2.9%
Peru	8.37	3.76	1.1%	-1.1%
PACIFIC BASIN	327.08	146.17	41.0%	-0.3%
United States	103.41	44.76	12.6%	32.6%
Nigeria	45.51	20.55	5.8%	-1.4%
Russia (Europe)	41.76	18.35	5.2%	1.1%
Algeria	23.50	10.58	3.0%	-13.5%
Trinidad and Tobago	23.64	10.08	2.8%	-19.3%

Country	10^6 m^3 liquid	10^6 T	Global Share	Var. 2020/2019
Angola	10.47	4.64	1.3%	5.3%
Norway	7.02	3.15	0.9%	-33.2%
Equatorial Guinea	5.96	2.61	0.7%	-6.6%
Egypt	3.08	1.34	0.4%	-61.2%
Cameroon	2.44	1.10	0.3%	-13.7%
Argentina	0.47	0.21	0.1%	282.8%
ATLANTIC BASIN	267.26	117.36	33.0%	2.8%
Qatar	173.22	77.13	21.7%	-0.9%
Oman	21.26	9.76	2.7%	-4.9%
United Arab Emirates	12.41	5.71	1.6%	-2.1%
MIDDLE EAST	206.89	92.60	26.0%	-1.4%
TOTAL	801.24	356.12	100.0%	0.4%

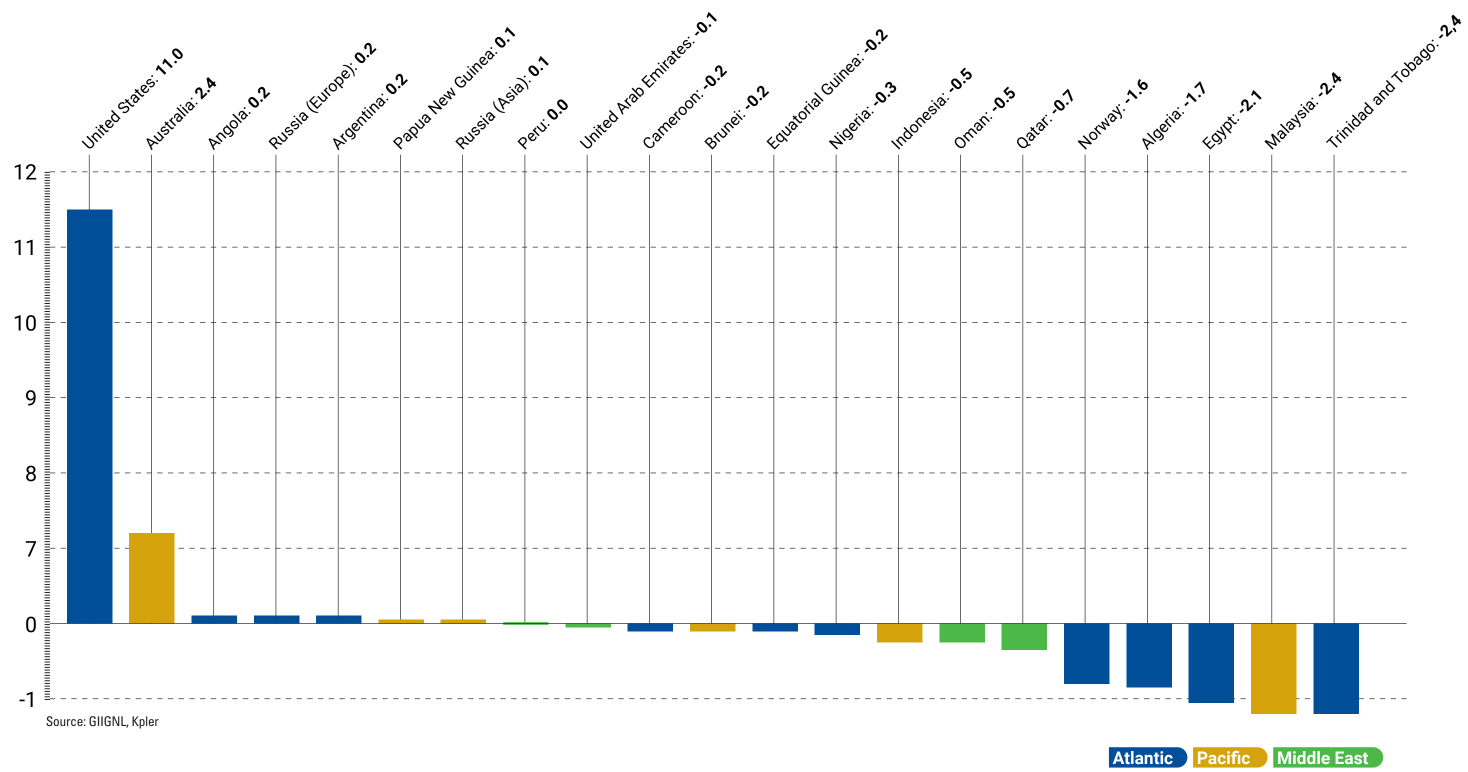
Source: GIIGNL, Kpler

LNG IMPORTS: 2020 VS. 2019 (MT)



Source: GIIGNL, Kpler

SOURCE OF LNG IMPORTS: 2020 VS. 2019 (MT)



Source: GIIGNL, Kpler

LNG imports in 2020

Quantities (in MT) received in 2020

Markets	Algeria	Angola	Argentina	Australia	Brunei	Cameroon	Egypt	Equatorial Guinea	Indonesia	Malaysia	Nigeria	Norway	Oman	Papua New Guinea	Peru	Qatar	Russia (Asia)	Russia (Europe)	Trinidad and Tobago	UAE	USA	Re-exports Received	Re-exports Loaded	2020 Net imports
Bangladesh	0.07							0.06			0.55					2.98		0.07			0.27	0.18		4.18
China	0.06	0.35		29.67	0.66	0.39	0.13	0.14	5.37	6.38	2.54		1.16	2.90	1.13	8.20	1.56	3.36	0.19	0.30	3.21	1.22		68.91
India	0.21	2.35		1.04	0.07	0.39	0.13	0.56			2.94		1.24			10.72		0.68	0.50	3.32	2.36	0.14		26.63
Indonesia									2.75															2.75
Japan				29.05	3.96		0.06		2.16	10.59	1.36		2.45	3.42	0.63	8.69	5.86	0.28		1.03	4.73	0.15		74.43
Malaysia				1.94	0.70						0.07												-0.14	2.57
Myanmar										0.12												0.06		0.18
Pakistan	0.27	0.07					0.32		0.13	0.06	0.46		0.20			4.64		0.13		0.33	0.79			7.42
Singapore		0.20		2.31	0.06		0.06	0.08	0.22				0.13			0.46	0.06		0.07		0.61	0.00	-1.08	3.19
South Korea		0.40		8.10	0.32	0.13	0.06	0.06	2.77	5.00	0.34		4.01	0.29	1.66	9.46	1.77	0.33	0.07	0.18	5.83	0.06	-0.03	40.81
Taiwan				4.73	0.25		0.12		1.14	0.71	0.39		0.06	1.62		4.96	1.99	0.41	0.12	0.18	1.01	0.07		17.76
Thailand				0.79	0.19	0.06	0.07	0.05	0.21	0.98	0.19		0.15	0.07		2.18			0.13		0.54			5.61
ASIA	0.61	3.37		77.63	6.22	0.97	0.95	0.95	14.74	23.85	8.83		9.41	8.30	3.42	52.29	11.25	5.26	1.08	5.34	19.34	1.88	-1.25	254.43
Belgium												0.02				1.84		0.64			0.88		-0.16	3.21
Finland												0.01						0.14						0.15
France	2.96	0.13									2.91	0.53			0.07	1.38		3.44	0.30		1.79	0.00	-0.46	13.06
Gibraltar																						0.05		0.05
Greece	0.19						0.05				0.16	0.06				0.54		0.07			1.05	0.07		2.20
Italy	2.14	0.06						0.06			0.14					5.05			0.06		1.57	0.00		9.07
Lithuania												0.75						0.21			0.48			1.44
Malta																			0.22		0.10			0.32
Netherlands	0.06	0.20						0.07			0.28	0.37			0.07	0.18		2.58	0.25		1.71	0.00	-0.44	5.33
Norway												0.10						0.01				0.01		0.12
Poland											0.06	0.25				1.64			0.05		0.70			2.70
Portugal	0.06	0.07						0.06			2.28	0.06				0.21		0.49	0.06		0.78			4.07
Spain	0.39	0.28	0.12				0.07	0.70			2.97	0.38			0.13	2.25		2.61	1.57		3.88	0.05	-0.02	15.37
Sweden												0.14						0.15				0.06		0.36
Turkey	3.96	0.07				0.07	0.07	0.13			1.32	0.07				2.26		0.16	0.39		2.22			10.72
United Kingdom	0.03						0.14				0.26	0.30				6.53		2.07	0.74		3.36			13.43
EUROPE	9.80	0.80	0.12			0.07	0.33	1.02			10.36	3.04			0.26	21.89		12.58	3.65		18.51	0.24	-1.08	81.59
Argentina	0.04		0.04													0.62		0.08	0.25		0.30	0.04		1.37
Brazil		0.08	0.05								0.03								0.26		1.98			2.39
Canada																			0.63					0.63
Chile				0.07				0.51											0.53		1.58			2.69
Colombia																			0.20		0.09			0.30
Dominican Republic	0.06											0.05							0.55		0.57		-0.06	1.17
Jamaica														0.03					0.34		0.43	0.07	-0.16	0.72
Mexico				0.07				0.07	0.24		0.15				0.07				0.45		0.76	0.06		1.88
Panama																					0.20	0.01		0.22
Puerto Rico												0.00							0.77			0.16		0.93
USA											0.15	0.06							0.72				-0.04	0.89
AMERICAS	0.10	0.08	0.09	0.14				0.58	0.24		0.32	0.11		0.03	0.07	0.62		0.08	4.70		5.92	0.34	-0.25	13.18
Israel																			0.24		0.33			0.57
Jordan											0.14					0.06		0.21	0.27		0.13			0.82
Kuwait	0.06	0.26				0.06	0.06	0.06			0.69		0.13			2.27					0.34	0.13		4.07
UAE		0.13									0.21		0.22					0.21	0.13	0.37	0.19			1.46
MIDDLE EAST & AFRICA	0.06	0.39				0.06	0.06	0.06			1.03		0.35			2.34		0.42	0.65	0.37	0.99	0.13	0.00	6.92
GLOBAL NET IMPORTS	10.58	4.64	0.21	77.77	6.22	1.10	1.34	2.61	14.99	23.85	20.55	3.15	9.76	8.33	3.76	77.13	11.25	18.35	10.08	5.71	44.76	2.59	-2.59	356.12

Source: GIIGNL, Kpler

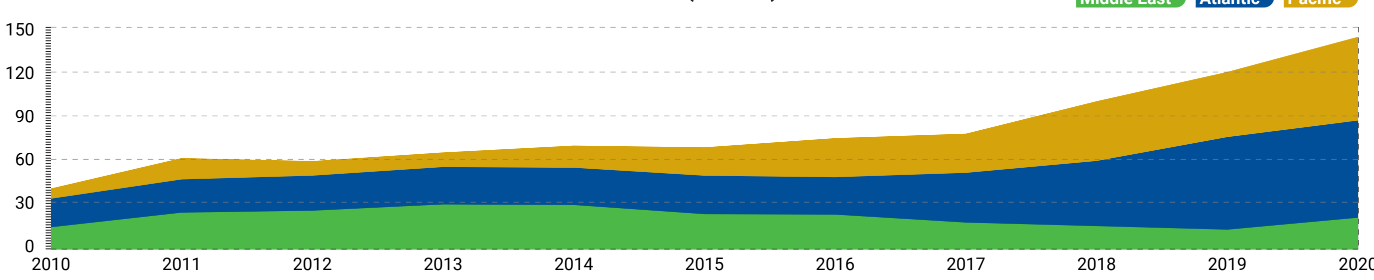
LNG imports in 2020

Spot and short-term quantities* (in 10³T) received in 2020

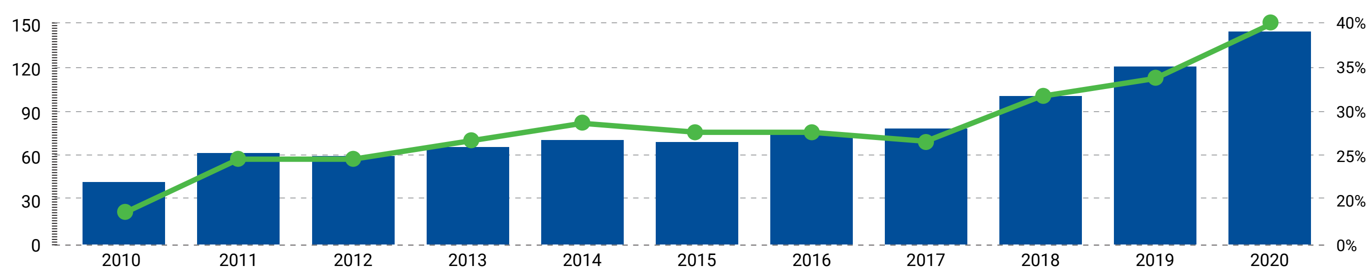
Markets	Algeria	Angola	Argentina	Australia	Brunei	Cameroon	Egypt	Equatorial Guinea	Indonesia	Malaysia	Nigeria	Norway	Oman	Papua New Guinea	Peru	Qatar	Russia (Asia)	Russia (Europe)	Trinidad and Tobago	UAE	USA	Re-exports Received	Re-exports Loaded	2020 Net imports
Bangladesh	70							58			550					1,348					272	178		2,477
China	63	350		11,827	458	391	66	135	2,382	3,547	2,193		963	764	402	597	1,048	842	194	297	1,878	1,217		29,612
India	70	2,280		473		272		563			2,515		898			1,179		473	359	2,957	1,457	136		13,633
Indonesia									1,002															1,002
Japan				8,344	1,260		64		314	3,465	1,286		486	1,280	337	452	1,706	281		612	2,292	152		22,330
Malaysia				192	68						68												-141	188
Myanmar										120												62		182
Pakistan	270	69					321		65	64	460		203			805		135		332	719			3,444
Singapore		205		1,078	63				137				131			332	65				247	4	-1,084	1,177
South Korea		397		5,070	323	126		62	583	4,343	271		2,642	140	604	1,922	560	137	68	176	2,719	63	-30	20,175
Taiwan				1,050	130		121		1,136	194	391		63	157		546	320	69	52	59	797	67		5,151
Thailand				280		59	65			499	68			72		152					334			1,530
ASIA	473	3,301		28,315	2,302	848	637	819	5,618	12,231	7,802		5,386	2,412	1,343	7,333	3,698	1,937	672	4,432	10,715	1,879	-1,254	100,900
Belgium																490		218			592		-164	1,136
Finland												10						142						152
France		67									188	61			66	58		488	181		1,262	3	-460	1,916
Gibraltar																						48		48
Greece	29						54				158	62				542		69			1,052	67		2,034
Italy	569	60						58			138					652			55		1,434	1		2,967
Lithuania												7						212			477			696
Malta																			219		98			318
Netherlands	57	66						67			218	1			71			1,513	197		1,578	2	-440	3,332
Norway												73						13				7		92
Poland											57	246							54		567			924
Portugal	64	66						63			134	60				93			59		267			806
Spain	255	275	115				65	194			1,285	129				457		559	431		2,557	48	-19	6,350
Sweden												74						153				61		288
Turkey	680	70				68	66	132			236	68				466		160	394		2,216			4,556
United Kingdom	33										135	185						698	249		2,824			4,124
EUROPE	1,687	604	115			68	186	515			2,549	975			137	2,758		4,225	1,841		14,925	237	-1,084	29,740
Argentina	40		39													618		85	249		296	39		1,365
Brazil		76	52								26								256		1,980			2,391
Canada																			572					572
Chile								120													336			457
Colombia																			204		92			296
Dominican Republic																			221		156		-56	322
Jamaica														28					340		431	72	-156	716
Mexico				74				67			151								451		763	65		1,570
Panama																						11		11
Puerto Rico												3							170			156		329
USA											147	62							663				-39	833
AMERICAS	40	76	91	74				187			324	65		28		618		85	3,125		4,055	343	-251	8,860
Israel																			244		199			443
Jordan											70							143	135		67			415
Kuwait	61	197				63	62				486		65			259					339	130		1,662
UAE											68		147							182	61			459
MIDDLE EAST & AFRICA	61	197				63	62				625		212			259		143	379	182	666	130	0	2,979
GLOBAL NET IMPORTS	2,262	4,178	206	28,389	2,302	979	885	1,520	5,618	12,231	11,300	1,040	5,598	2,441	1,480	10,969	3,698	6,390	6,017	4,615	30,361	2,589	-2,589	142,479

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

SPOT & SHORT TERM FLOWS BY EXPORTING REGION (MTPA)



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



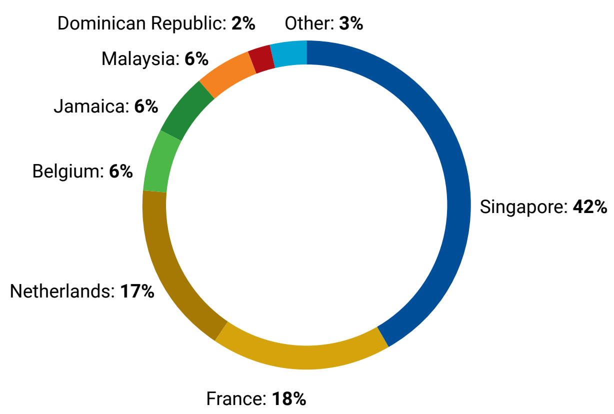
Re-exports (in MT)

(Based on cargoes received in 2020)

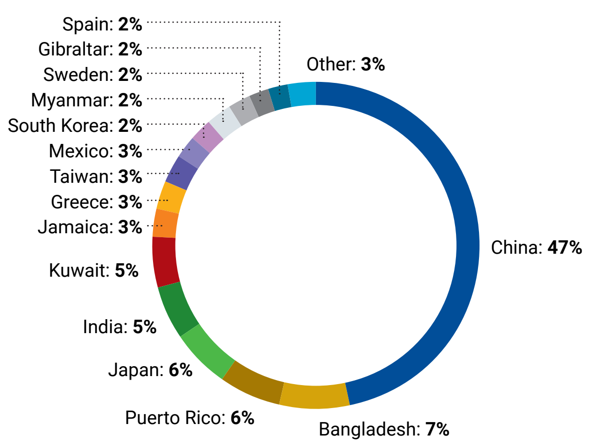
To ▼ From ▶	Belgium ▼	Dominican Republic ▼	France ▼	Jamaica ▼	Malaysia ▼	Netherlands ▼	Singapore ▼	South Korea ▼	Spain ▼	USA ▼	Total ▼
Bangladesh					0.14		0.04				0.18
China	0.08		0.19			0.15	0.80				1.22
India						0.14					0.14
Japan							0.12	0.03			0.15
Myanmar							0.06				0.06
Singapore									0.004		0.004
South Korea							0.06		0.002		0.06
Taiwan			0.07								0.07
ASIA	0.08		0.26		0.14	0.28	1.08	0.03	0.01		1.88
France									0.003		0.003
Gibraltar	0.002					0.04			0.01		0.05
Greece						0.07					0.07
Italy	0.001										0.001
Netherlands	0.002										0.002
Norway	0.001					0.01					0.01
Spain			0.05			0.003					0.05
Sweden	0.02					0.05					0.06
EUROPE	0.02		0.05			0.16			0.01		0.24
Argentina										0.04	0.04
Jamaica		0.04	0.03								0.07
Mexico			0.06								0.06
Panama		0.01									0.01
Puerto Rico				0.16							0.16
AMERICAS		0.06	0.09	0.16						0.04	0.34
Kuwait	0.07		0.06								0.13
MIDDLE EAST & AFRICA	0.07		0.06								0.13
WORLD	0.16	0.06	0.46	0.16	0.14	0.44	1.08	0.03	0.02	0.04	2.59

Source: GIIGNL, Kpler

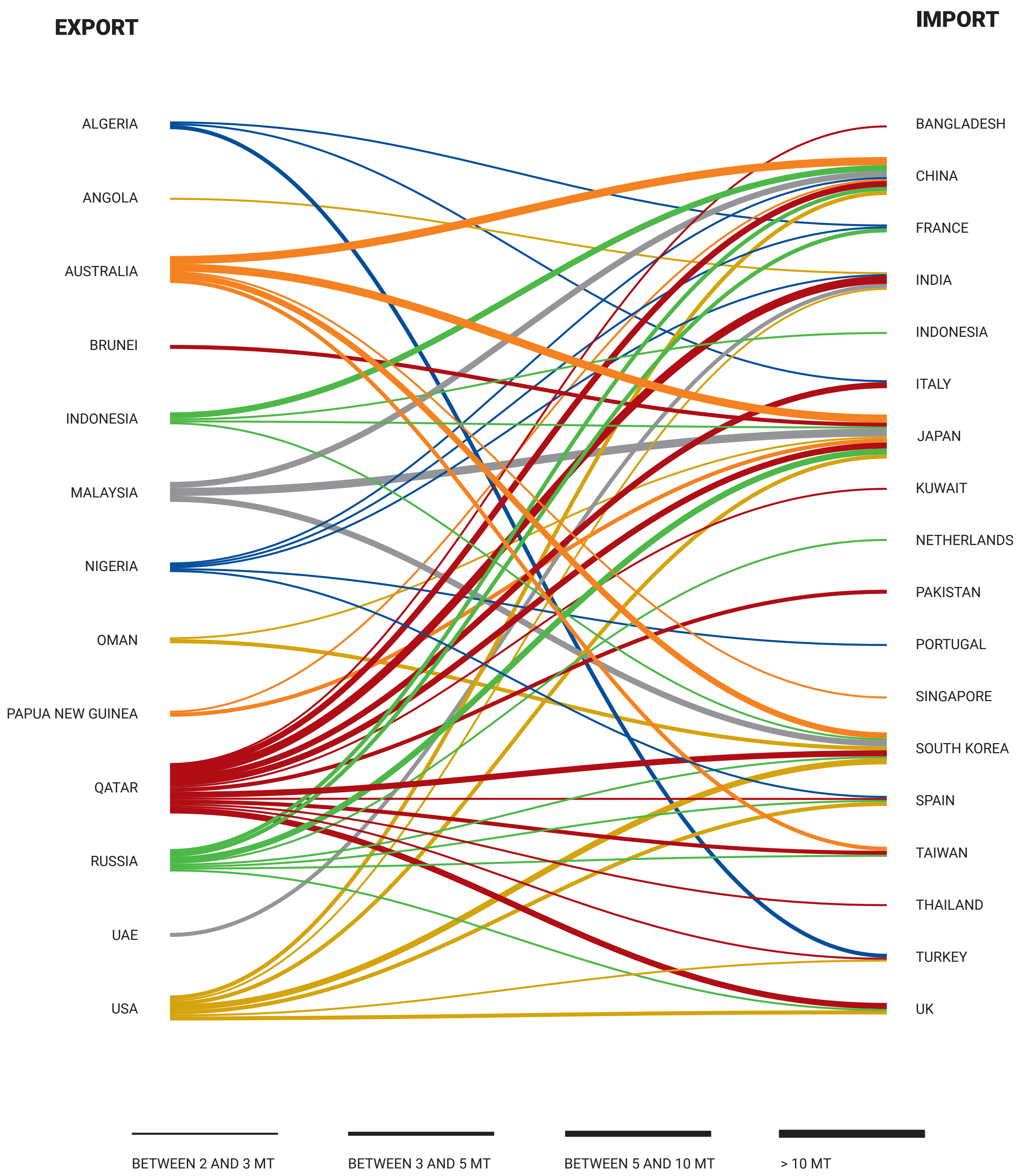
RE-EXPORTS LOADED IN 2020 (2.6 MT)



RE-EXPORTS RECEIVED IN 2020 (2.6 MT)



Major LNG flows in 2020



Liquefaction plants

In 2020 global liquefaction capacity reached **454 MTPA** by year end. New additional capacity amounted to **24 MTPA.**

5 new large-scale liquefaction trains, all located in the United States, exported their first LNG volumes in 2020: Cameron LNG trains 2 and 3, Corpus Christi LNG train 3, and Freeport LNG trains 2 and 3.

Only 1 FID was taken in 2020, on the 3.25 MTPA Energía Costa Azul LNG project in Mexico.*

At the end of the year approximately 108 MTPA of new liquefaction capacity was under construction.

* In February 2021, Qatar Petroleum took FID on the expansion of the North Field East LNG project, which will take Qatar's nameplate liquefaction capacity from 77 MTPA to 110 MTPA by 2027.

Algeria

In June 2020 Total and Sonatrach signed an agreement to renew their LNG partnership. The agreement extends the existing supply contracts for 3 additional years to provide 2 MTPA of Algerian LNG to the French market, primarily through the LNG terminal at Fos Cavaou. The agreement also includes the sub-charter of a Total LNG tanker to Sonatrach.

Argentina

The 0.5 MTPA liquefaction plant ***Tango FLNG***, on charter from Belgian company Exmar by the Argentinian oil and gas company YPF SA, ceased operations in May 2020. The tolling agreement was terminated and Tango FLNG left the Port of Bahía Blanca.

Australia

The production at ***Prelude FLNG***, located offshore Western Australia, was halted in February 2020 due to technical problems with electrical equipment. The 3.6 MTPA LNG facility resumed operations in January 2021.

The production at **Gorgon LNG** was reduced to 67% of the plant's capacity between June and October 2020, as its train 2 was shut down due to cracks discovered in the propane heat exchangers. The two other trains were operating above capacity in October. Train 2 resumed operations in November 2020.

In December 2020 Chevron temporarily shut down a unit that separates natural gas and associated liquids at the **Wheatstone** offshore processing platform for precautionary reasons following the discovery of an "anomaly" within a nozzle on an inlet separator vessel during routine maintenance.

Woodside is planning construction of a second train at **Pluto LNG** project. FID is expected by the second half of 2021 and operations could start in 2026.

In April 2020 Shell Australia took FID to develop the first phase of Arrow Energy's Surat Gas Project in Queensland, Australia. This decision will bring up to 1.9 MTPA of new gas to market at peak production, which will flow to the Shell-operated QGC to be sold locally and exported through **Queensland Curtis LNG** plant on Curtis Island. The Arrow joint venture partners' decision not to build another two trains on Curtis Island has provided the opportunity to create this alternative pathway to market for the resource.

In January 2021, Santos announced FID for the infill drilling programme at the Bayu-Undan gas field offshore Timor-Leste, with production start targeted by the third quarter of 2021. The programme would extend the life of the 3.7 MTPA **Darwin LNG** plant. Another project, Barossa, is intended to provide a new supply source to the plant as production from Bayu-Undan facility declines. Santos announced the sale of a 25% stake in the Darwin LNG project and Bayu-Undan gas field to SK E&S, conditional on FID for the Barossa project, which is expected in 2021.

Canada

The construction of the 14 MTPA two-train **LNG Canada** project located in British Columbia is ongoing, with possible delays due to containment measures related to the pandemic. The project is expected to be online by 2025. Works on dredging and marine activities, marine terminal, module haul road and LNG tank construction are underway. A second phase of the project is planned to double the LNG plant's capacity.

FIDs for the planned 2.1 MTPA **Woodfibre LNG** and 9.6 MTPA **Goldboro LNG** projects were delayed until 2021 due to the pandemic.

In January 2020, the 8.7 MTPA **Bear Head LNG** project in Nova Scotia received an extension of its construction permit, which allows for construction to start in 2022.

Egypt

As a result of the discoveries made in the Zohr and Nooros fields, Egypt has regained its capacity to meet domestic gas demand and to allocate surplus production for export through its LNG plants.

Following the agreements signed by Eni, the Arab Republic of Egypt, the Egyptian General Petroleum Corporation, the Egyptian Natural Gas Holding Company (EGAS) and Naturgy, the 5 MTPA **Damietta** liquefaction plant which had been idle since the end of 2012 resumed operations in February 2021. According to the agreements the resulting shareholdings in SEGAS, the owner of the Damietta plant, are Eni 50%, EGAS 40% and EGPC 10%. Eni has taken over the feed gas supply contracts and received corresponding liquefaction rights at the plant.

Indonesia

In August 2020, BP announced that the start of the **Tangguh LNG** Train 3 would be postponed until 2022. According to SKK Migas the delay is due to labour shortages caused by the pandemic.

In February 2020, INPEX signed two MoUs, one with

PLN for LNG offtake from the proposed 9.5 MTPA **Abadi LNG** project and another one with PT Pupuk for regasified gas. In December 2020, a third MoU was signed with PT Perusahaan Gas Negara (PGN).

Malaysia

In February 2021, Petronas commissioned its second floating LNG, ***PFLNG Dua***, which is its first deepwater facility. Located at the Rotan gas field, offshore in the state of Sabah in Northern Borneo, the 1.5 MTPA facility can reach gas fields in water depths of up to 1.5 km. The project was realized in collaboration with Petronas' upstream Production Sharing Contract partner, PTT Exploration and Production. PFLNG Dua has an expected design life of two decades without dry docking.

Mauritania/Senegal

In February 2020 Kosmos Energy and its partners (SMHPM, Petrosen and BP) signed an SPA for an initial term of 20 years with BP Gas Marketing, the sole offtaker from the 2.5 MTPA **Greater Tortue Ahmeyim** project. In April 2020, due to the pandemic, BP declared force majeure on receiving the FLNG vessel *Gimi* from Golar for the project, which delayed the start-up of the project until 2023. *Gimi* is being converted from a Moss LNG carrier to a floating LNG production unit in the Keppel yard in Singapore.

Mexico

In November 2020, ECA LNG (a joint venture between Sempra LNG, its Mexican subsidiary IEnova, and Total) took FID for phase 1 of the Energía Costa Azul LNG export project and followed the decision by issuing a Limited Notice To Proceed (LNTP) to TechnipFMC. The 3.25 MTPA single-train liquefaction facility located in Baja California (Mexico) will be built on the site of IEnova's existing **Energía Costa Azul** LNG regasification terminal. It is expected to start operations by late-2024. The feed gas for the project will come from the United States. In April 2020, the project entered into definitive 20-year SPAs with Mitsui and Total for the purchase, in aggregate, of approximately 2.5 MTPA of LNG on a FOB basis.

ECA LNG Phase 2 will include either the addition of two large trains or an incremental combination of smaller midscale sized trains and the addition of one LNG storage tank.

Two other liquefaction projects, allowing export of excess US gas, are under consideration in Mexico: a plant in the **Topolobampo** port near the Guaymas-el Oro pipeline and a second plant in **Salina Cruz,** in the state of Oaxaca. Other projects planned on the Pacific coast of Mexico are: a 12 MTPA facility in **Puerto Libertad** to be developed by Mexico Pacific Ltd. and the 7 MTPA **Amigo** LNG facility, both in the Sonora state.

Mozambique

In July 2020, ExxonMobil announced that FID on the **Rovuma LNG** project would be delayed until market conditions improve.

The same month, Total announced the signing of $14.9 Bn senior debt financing agreement for **Mozambique LNG**, which includes the development of the Golfinho and Atum natural gas fields located in the Offshore Area 1 concession and the construction of a two-train liquefaction plant with a total capacity of 13.1 MTPA. In August, Total and the Government of Mozambique signed a security pact to protect the $20 billion natural gas (LNG) project from terrorist attacks in the region.

Drilling operations at the **Coral South** project are to be resumed in 2021 after the suspension of works in April 2020. First LNG is expected to be produced in 2022. The FLNG unit is expected to leave Samsung Heavy Industries shipyard in South Korea in the last quarter of 2021.

Nigeria

Nigeria LNG signed 10-year LNG SPAs for 1.5 MTPA with Total and Eni in January 2020 and for 1 MTPA with Galp Trading in February 2020, both to be supplied from remarketed volumes from **Nigeria LNG Trains 1-3.** This follows the signature of a 0.5 MTPA LNG SPA for Train 1-3 remarketed volumes with Vitol in December 2019.

In May 2020 **Nigeria LNG** announced the signature of the EPC contract for its **Train 7** project, which together with the debottlenecking of the existing six trains, will add around 8 MTPA of capacity to the Bonny Island facility, taking the total to around 30 MTPA by 2025. The EPC contract for US$4 billion was awarded to the SCD consortium, a joint venture between Saipem, Daewoo and Chiyoda.

Liquefaction plants

Norway

In September 2020 a fire at the **Snohvit LNG** plant in Hammerfest shutdown production. In addition to damage caused by the fire on the air intake on one of the plant's five power turbines, seawater used to extinguish the fire damaged other auxiliary systems including electrical equipment and cables. The duration of the shutdown will depend on the delivery time of necessary equipment and will also be affected by the current restrictions related to the pandemic. Snohvit is expected to remain shut down for repairs until March 2022.

Papua New Guinea

In August 2020, ExxonMobil announced a delay in the **PNG LNG** expansion project beyond 2025. The project was initially planned to add a third train with a capacity of 2.6 MTPA.

In February 2021, the Papua New Guinea government signed a fiscal stability agreement with Total for the **Papua LNG** project. The 5.4 MTPA project will have two new production units to be built on a site next to the PNG LNG and sharing some of the facilities. The plant will be supplied with gas from the Elk and Antelope fields.

Qatar

In February 2021 Qatar reached FID on the **North Field East** Project (NFE). The 33 MTPA project is expected to start production in Q4 2025 and will raise Qatar's LNG production to approximately 110 MTPA by late-2026 or early 2027. The project will be comprised of 4 mega LNG trains of 8 MTPA each, at an estimated cost of $28.75Bn including upstream facilities, but excluding shipping. It will also include associated facilities for gas treatment, natural gas liquids recovery, helium extraction and refining within the Ras Laffan Industrial City, and will integrate a CCS system within the wider CCS scheme in Ras Laffan. The second phase of the project, North Field South Project (NFS), which involves the construction of two additional 8 MTPA mega LNG trains and associated offshore and onshore facilities, is planned to further increase Qatar's LNG production capacity to around 126 MTPA by 2027.

Russia

The commissioning of the fourth train at **Yamal LNG**, scheduled for the third quarter of 2020, was delayed due to technical problems with the pipelines, which need to be replaced with ones adapted for the extreme low temperatures in the region. In 2020, Yamal LNG took delivery of three new LNG carriers (*LNG Merak*, *LNG Phecda* and *LNG Megrez*) from MOL. The vessels, built in a Chinese shipyard, will transport the LNG from European transshipment terminals to Asia.

In August 2020, Novatek launched its first mini-LNG 0.04 MTPA liquefaction plant in the **Chelyabinsk** region. LNG will be sold as fuel for passenger and cargo transport and mining vehicles in the region and neighbouring areas.

In September 2020 **Arctic LNG-2** entered into long-term charter agreements for 14 Arc7 ice-class LNG carriers with SMART LNG, a joint venture between Novatek and Sovcomflot, with the construction of the vessels at the Zvezda Shipbuilding Complex. In November 2020, **Arctic LNG-2** signed charter agreements for two icebreaking LNG carriers to be built at Korean DSME shipyard with delivery scheduled for 2023. The vessels will transport LNG from Gydan Peninsula in the Russian Arctic to the FSUs to be installed at the transshipment terminal in Kamchatka (eastbound) and at Murmansk (westbound) via the Northern Sea route.

In February 2021, Gazprom took delivery of an FSU, converted from an LNG carrier, for the 1.5 MTPA **Portovaya LNG** production, storage and shipment complex in the Leningrad region, which is currently under construction. LNG will be produced onshore and stored in the 138,000 m^3 FSU, which will load LNG to LNG carriers via ship-to-ship operations or be used for bunkering. The first production is targeted by late 2021.

USA

In March and August 2020 trains 2 and 3 of **Cameron LNG,** located in Hackberry, Louisiana, started commercial operations respectively. Each train has a capacity of 4.5 MTPA. This marked the completion of Cameron LNG Phase 1 which includes three liquefaction trains with total nameplate capacity of 13.5 MTPA of LNG. The liquefaction capacity of trains 1- 3 is fully contracted under 20-year tolling agreements. Cameron LNG Phase 2 has been authorized by the Federal Energy Regulatory Commission (FERC) and includes up to two additional liquefaction trains and up to two additional LNG storage tanks.

In December 2020 the first commissioning cargo was exported from Train 3 of **Corpus Christi** LNG Terminal. Train 3 is expected to achieve substantial completion in the first quarter of 2021.

In August 2020, the last unit of the 10 movable modular liquefaction units of the **Elba Island** facility entered in service. With all ten liquefaction trains online the plant has a total capacity of 2.5 MTPA. The project is supported by a 20-year contract with Shell, which has subscribed to 100% of the liquefaction capacity.

In January and May 2020 respectively, trains 2 and 3 at the **Freeport LNG** facility, began commercial operations. Train 2 is supported by a 20-year tolling agreement with BP and train 3 is supported by tolling agreements with Total and SK E&S. The facility is capable of producing in excess of 15 MTPA. In September 2020, FERC granted Freeport LNG three additional years to build the train 4 expansion project. Originally planned for 2023, the expansion is now expected to be completed by 2026.

In April 2020, Freeport LNG took FID on its project to extract helium from the boil-of-gas stream at its gas pretreatment facility. Regulatory approval is expected by 2021 with operation anticipated by mid-2022.

Train 6 at the **Sabine Pass** liquefaction facility is expected to achieve substantial completion in the second half of 2022. In October 2020, Kinder Morgan received permission from the FERC to start construction of the proposed Acadiana natural gas pipeline project in Louisiana. The pipeline will deliver additional feed gas to the Sabine Pass plant when the sixth liquefaction train enters into service. Cheniere gave Bechtel notice to proceed on the construction of a third marine berth at the SPL facility in mid-2020 and the project is expected to be complete in the first half of 2023.

In addition to the **Sabine Pass** and **Corpus Christi** expansions, two new projects are under construction in the US: **Calcasieu Pass** and **Golden Pass.**

The **Calcasieu Pass** 10 MTPA project is expected to start in late 2021 or early 2022.

In November 2020, **Golden Pass** asked the FERC to extend the first construction phase to April 2021 (initial date: January 2021). First LNG is expected by 2024.

In January 2020, **Port Arthur** LNG and Aramco Services Company signed an Interim Project Participation Agreement (IPPA) for the **Port Arthur** LNG export project, a greenfield project consisting of a two-train 13.5 MTPA nameplate liquefaction export facility with two tanks and one berth. FID on Port Arthur LNG Phase 1 is targeted for the second half of 2021.

In December 2020, FERC approved conversion of **Kenai LNG** export terminal in Alaska into an LNG receiving terminal.

The total liquefaction capacity under construction in the US reached around 35 MTPA in 2020, while over 200 MTPA of additional liquefaction capacity has both FERC and Department of Energy approval. Eleven out of 16 approved projects in the United States are aiming to take FID in 2021, with a combined capacity of more than 150 MTPA.

Liquefaction plants at the end of 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
ATLANTIC BASIN									
Algeria	**Arzew GL1Z T1 - T6**	6	**7.9**	3	**300,000**	Sonatrach	**Sonatrach**	Botaş, Cepsa Gas, DEPA, Enel, Total	**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%, Total 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 (stopped)***	1	**5**	2	**300,000**	SEGAS (ENI 50%, EGPC 40%, EGAS 10%)	**SEGAS SERVICES**	BP, ENI	**2005**
	Idku T1	1	**3.6**	2	**280,000**	Egyptian LNG (Shell 35.5%, Petronas 35.5%, EGPC 12%, EGAS 12%, Total 5%)	**Egyptian LNG**	Total	**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%, Total 15%, ENI 10.4%)	**NLNG**	Botaş, Enel, Galp Energía, Naturgy, Total	**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, Total	**2006**
	NLNG T6	1	**4.1**					Shell, Total	**2008**
Norway	**Snøhvit**	1	**4.2**	2	**250,000**	Equinor 36.8%, Petoro 30%, Total 18.4%, Neptune Energy 12%, DEA 2.8%	**Equinor**	Equinor, Pavilion Energy, RWE Supply & Trading, Total	**2007**
Russia	**Vysotsk LNG**	1	**0.66**	1	**42,000**	Novatek 51%, Gazprombank 49%	**CryoGAS Vysotsk**		**2019**
	Yamal T1 - T3	3	**16.5**	4	**640,000**	Yamal LNG (Novatek 50.1%, CNPC 20%, Total 20%, Silk Road Fund 9.9%)	**Yamal LNG**	CNPC, Gazprom Marketing & Trading, Naturgy, Novatek, Total	**T1: 2017 T2: 2018 T3: 2018**
Trinidad and Tobago	**Atlantic LNG T1**	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	**Cameron LNG T1**	1	**4.5**	3	**480,000**	Sempra 50.2%, Total 16.6%, Mitsui 16.6%, Japan LNG Investment (a joint venture between Mitsubishi and NYK) 16.6%	**Cameron LNG**	Mitsubishi, Mitsui & Co, Total	**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, EDF, EDP, Endesa, Pavilion Energy, Naturgy, Pertamina, PetroChina, Trafigura, Woodside	**2018**
	Corpus Christi T2	1	**5.0**						**2019**
	Corpus Christi T3	1	**5.0**						**2020**
	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**	Osaka Gas, JERA	**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		Total S.A. and SK E&S	**2020**
	Sabine Pass T1	1	**5.0**	5	**800,000**	Sabine Pass Liquefaction (Cheniere 100%)	**Cheniere**	Centrica, Cheniere Marketing, GAIL, KOGAS, Naturgy, Shell, Total	**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**
ATLANTIC BASIN TOTAL			**183.9**		**7,689,800**				

*Resumed operations in February 2021

Liquefaction plants

Liquefaction plants at the end of 2020

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
MIDDLE EAST									
Oman	**Oman T1 - T2**	2	**7.1**	2	**240,000**	Government of Oman 51%, Shell 30%, Total 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%, Total 2.1%, Korea LNG 1.9%, Mitsui 1%, PTTEP 0.7%		Mitsubishi, Osaka Gas, Naturgy	**2005**
Qatar	**Qatargas I T1 - T3**	3	**9.5**	4	**340,000**	Qatar Petroleum 65%, ExxonMobil 10%, Total 10%, Marubeni 7.5%, Mitsui 7.5%	**Qatargas Operating Company**	Chugoku Electric, JERA, Kansai Electric, Naturgy, Osaka Gas, Shizuoka Gas, Toho Gas, Tohoku Electric, Tokyo Gas	**T1:1996 T2: 1997 T3: 1998**
	Qatargas II T1	1	**7.8**	8	**1,160,000**	Qatar Petroleum 70%, ExxonMobil 30%	**Qatargas Operating Company**	Botas, ExxonMobil, KPC, Pakistan State Oil, Petrochina	**2009**
	Qatargas II T2	1	**7.8**			Qatar Petroleum 65%, ExxonMobil 18.3%, Total 16.7%		CNOOC, ExxonMobil, Petrochina, Total	**2009**
	Qatargas III	1	**7.8**			Qatar Petroleum 68.5%, ConocoPhillips 30%, Mitsui 1.5%	**Qatargas Operating Company**	CNOOC, JERA, Kansai Electric, PGNiG, PTT, RWE Supply & Trading, Tohoku Electric	**2010**
	Qatargas IV	1	**7.8**			Qatar Petroleum 70%, Shell 30%	**Qatargas Operating Company**	Centrica, CNPC, Petronas, Shell, Uniper	**2011**
	Rasgas I T1 - T2	2	**6.6**	6	**840,000**	Qatar Petroleum 63%, ExxonMobil 25%, KORAS 5%, Itochu 4%, LNG Japan 3%	**Qatargas Operating Company**	KOGAS	**T1: 1999 T2: 2000**
	Rasgas II T1	1	**4.7**			Qatar Petroleum 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%, Total 5%)	**ADNOC LNG**	Vitol, Total, BP	**T1: 1977 T2: 1977 T3: 1994**
Yemen	**Balhaf T1 - T2 (stopped)**	2	**7.2**	2	**280,000**	Yemen LNG (Total 39.6%, Hunt Oil Co. 17.2%, SK Innovation 9.6%, KOGAS 6%, Yemen Gas 16.7%, Hyundai 5.9%, GASSP 5%)	**Yemen LNG**	Total	**T1: 2009 T2: 2010**
MIDDLE EAST TOTAL			**100.4**		**3,100,000**				
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**	Chugoku Electric, 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 68.4%, 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%, Total 27.5%, KOGAS 15%	**Santos**	KOGAS, Petronas	**T1: 2015 T2: 2016**
	APLNG T1	1	**4.5**	2	**320,000**	ConocoPhillips 37.5%, Origin Energy 37.5%, 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**	JERA, Chevron, KUFPEC, Kyushu Electric, Tohoku Electric, Woodside	**T1: 2017 T2: 2018**
	Ichthys T1 - T2	2	**8.9**	2	**330,000**	INPEX 66.3%, Total 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, Total	**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%, Total 10%)**	ENI, JERA, Kansai Electric, Kyushu Electric, Nippon Steel, Osaka Gas, PLN, Toho Gas	**Tr. E: 1990 Tr. F: 1994 Tr. G: 1998 Tr. 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, Saibu Gas, Shikoku Electric, S-Oil, PTT, Tokyo Gas	**1983**
	MLNG 2 Dua	3	**9.6**			Petronas 80%, Mitsubishi 10% Sarawak state government 10%		CPC, 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 Satu *(FLNG)*	1	**1.2**	1	**180,000**	Petronas	**Petronas**		**2017**
Papua New Guinea	**PNG LNG T1 - T2**	2	**8.3**	2	**320,000**	PNG LNG (Exxon Mobil 33.2%, Oil Search 29%, Kumul Petroleum 16.8%, Santos 13.5%, Nippon Papua New Guinea LNG LLC 4.7%, MRDC 2.8%)	**PNG LNG**	BP, CNPC, 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 Investment Company (Gazprom 50%, Shell 27.5%, Mitsui 12.5%, Mitsubishi 10%)	**Sakhalin Energy Investment Company**	CPC, Gazprom, Hiroshima Gas, JERA, KOGAS, Kyushu Electric, Osaka Gas, Saibu Gas, Shell, Toho Gas, Tohoku Electric, Tokyo Gas	**2009**
PACIFIC BASIN TOTAL			**169.5**		**5,463,000**				
TOTAL			**453.8**		**16,252,800**				

Regasification terminals

At the end of 2020, global regasification capacity reached **947 MTPA.**

8 new regasification terminals were commissioned in 2020 totaling 25.9 MTPA of capacity. 5* of these terminals started commercial operations during the year: two onshore terminals - one in India and one in Puerto Rico, two FSRUs - one in Brazil and one in Indonesia, and one FSU combined with onshore regasification facilities in Myanmar, adding a combined 12.3 MTPA of operational regasification capacity in 2020.

Four expansion programs were completed in 2020: three in China and one in Japan, adding around 5.8 MTPA of regasification capacity.

At the end of the year, 11 new floating and 22 new onshore terminals were reported to be under construction. Total regasification capacity under construction at the end of the year reached 157 MTPA, with 74% located in Asia.

* The 6.1 MTPA Bahrain LNG terminal was commissioned in 2020 but has not started commercial operations yet. The 1.9 MTPA FSRU LNG Croatia and the 5.6 MTPA Port of Açu LNG-to-power project in Brazil were commissioned in December 2020 and started commercial operations in January 2021.

Argentina

GNL Escobar, the only regasification terminal in operation in the country at the time of writing, has increased its regasification capacity to 6.1 MTPA since February 2020. In 2020 optimization in ship traffic and regasification capacity enabled the terminal to increase the number of LNG carriers received per month. Truck loading facilities are being proposed to develop small and micro-LNG solutions. Bunkering solutions are also under development, such as bunker for cruises in Tierra del Fuego or on the Parana River.

Australia

Five import terminal projects are currently under study and are targeting start-up between 2022-2024, all using FSRU schemes: Outer Harbor (North of Adelaide, in South Australia), Crib Point (South East of Melbourne), Port Kembla (South of Sydney), GasDock (North of Sydney) and Geelong (Victoria).

Bahrain

The construction of the first LNG import terminal in Bahrain, owned by Bahrain LNG and located at the port of **Hidd**, was completed in January 2020. The terminal consists of onshore regasification facilities coupled with an FSU. After receiving the commissioning cargo, the 174,000 m^3 FSU *Bahrain Spirit* was redeployed as an LNG carrier.

Bangladesh

The planned 7.5 MTPA land-based LNG terminal project at **Matarbari** is still in the process of preparing feasibility studies and application documents for selecting the final bidder to build the facility. It is now expected that the terminal will come online by the end of 2024.

Belgium

In July 2020, Fluxys LNG, owner and operator of the **Zeebrugge** import terminal, reframed its Small-Scale Berthing Rights service into Stand Alone Berthing Rights, making the loading and unloading of additional small and large LNG cargoes possible.

In September, the first LNG container was loaded at the terminal for rail transport from the port, creating an intermodal logistics chain.

In October 2020 Fluxys LNG consulted the market regarding a new LNG service - Virtual Liquefaction - that would be available as of January 2021 and will enable liquefaction by counter-nominating gas on regasified flows.

In February 2021, Fluxys LNG reached FID to build 6 MTPA of additional regasification capacity at the Zeebrugge LNG terminal. 4.7 MTPA will be completed by early 2024 and the remainder by 2026.

Benin

Total has proposed a 0.5 MTPA LNG-to-power project in **Maria Gléta,** which includes an FSRU connected to the existing and planned power plant via an offshore pipeline. Technical studies have been completed and the project is seeking government and environmental permits.

Brazil

The first integrated LNG-to-power project in Brazil, **Porto de Sergipe I**, started commercial operations in March 2020. The project includes a 1.5 GW gas-fired combined-cycle power plant and an LNG import and regasification terminal, using the *Golar Nanook,* a newbuild FSRU with a storage capacity of 170,000 m^3 and 21 Mm^3/day of regasification capacity, located 8.5 km off the coast and connected by pipeline the power plant. Owned and operated by Hygo Energy Transition, which was acquired by New Fortress Energy in 2021, it is the first private LNG import terminal in Brazil.

FSRU *BW Magna,* purpose built for the Gas Natural Açu (GNA) LNG-to-power project developed at the **Port of Açu,** received its commissioning LNG cargo at the end of 2020. The project includes two natural gas-fired power stations of 1.3 GW and 1.6 GW capacity and an LNG import terminal with a regasification capacity of 21 Mm^3/day. The newly built FSRU owned by BW has 173,400 m^3 of storage capacity. Klaipedos Nafta (KN), the Lithuanian LNG terminal operator, has been appointed as the operator of the Port of Açu LNG terminal onshore facilities. The LNG will be supplied by BP, which is a shareholder of the GNA project along with Prumo Logistica and Siemens. The Port of Açu regasification facility is planned to start commercial operations in the first half of 2021.

In 2020 Petrobras moved FSRUs between its 3 regasification terminals (Bahia, Guanabara Bay and Pecem) depending on the regional LNG demand conditions, mainly for power generation. In August, Petrobras launched a bidding process to lease out the **Bahia** LNG terminal and its pipeline from 2021 to 2023. FSRU *Golar Winter* was sent to **Pecem** in late 2020, while FSRU *Excelerate Experience* has been temporarily redeployed at **Guanabara Bay** since October 2020.

Chile

In 2020 reloading services became available at the **Quintero** LNG terminal with a reloading capacity rate which depends on operational conditions of the terminal. In December 2020 an additional 1,400 - 1,600 mm HDPE sea water discharge pipeline with a capacity of 20,000 m^3/h was installed in parallel to the original line to improve availability and reliability of the system.

China

Three expansion programs were completed in China in 2020. In June, Guanghui commissioned Phase 3 of its LNG receiving terminal in **Qidong, Jiangsu** which increased the terminal's receiving capacity to 3.0 MTPA. Phase 4 expansion works started in May 2020 and are scheduled to be completed by the end of 2022. The terminal will then have a 4 MTPA receiving capacity. Also, the **Yangshan** terminal added two new storage tanks in November 2020. The 3.0 MTPA expansion at the **Ningbo** terminal in Zheijiang was competed in December 2020.

PetroChina has started the expansion of its LNG receiving terminal in **Rudong, Jiangsu** to 10 MTPA, adding two 200,000 m^3 tanks in the 3rd phase, which is expected to be completed in 2021. Two additional 160,000 m^3 storage tanks are under construction at the **Zhoushan** LNG terminal, owned and operated by ENN Energy. Completion is expected by July 2021.

Expansion programs at other existing terminals are ongoing at the **Caofeidian, Putian, Qingdao, Shenzhen** and **Tianjin** terminals. These expansions are expected to add around 12 MTPA of regasification capacity by 2023.

In addition, new land-based regasification terminals are under construction in **Binhai, Chaozhou, Guangzhou, Jiaxing, Longkou, Tianjin Nangang, Wenzhou, Yangjiang, Yantai** and **Zhangzhou.** These terminals are expected to add around 30 MTPA of regasification capacity by 2024.

Among terminals under construction, an integrated LNG project is under development by CNOOC in **Binhai, Jiangsu,** which will include a 3 MTPA LNG receiving terminal for the Phase 1, two 100 MW CCGTs and a dedicated transmission pipeline. The LNG terminal will have four 220,000 m^3 storage tanks and a jetty to accommodate Q-Max ships. The project is expected to come online in 2022.

Beijing Gas is developing a new 5 MTPA LNG terminal in the **Tianjin Nangang** Industry Zone. The project will consist of 1 LNG berth, 10 storage tanks, and a 229 km gas pipeline connecting to Beijing. The Tianjin Nangang terminal received the government's approval in January 2020 and started tank construction in March. The terminal is expected to come online as scheduled in phases during 2023–24.

Private LPG distributor Chaozhou Huafeng Group is converting one of its LPG terminals in **Chaozhou, Guangdong** into a 1 MTPA LNG receiving terminal. Construction started in January 2016 and commissioning is expected in 2021.

Following ongoing gas market reforms, 7 LNG terminals (Diefu, Fangchenggang, Tianjin, Yangpu, Yuedong, Zhangzhou (under construction) and Longkou (under construction)) were transferred from CNOOC to PipeChina by September 2020. CNOOC retains its rights to use the transferred terminals.

In November 2020 PipeChina, which took over ownership of **Beihai LNG** terminal from Sinopec, halted expansion construction works at the second phase of the facility after a fire broke out near its No.2 storage tank, completion of which had been scheduled for June 2021.

Colombia

The Colombian government is considering plans for additional regasification terminals. On the Pacific coast, the proposed onshore **Buenaventura** terminal could start-up as early as 2023. An LNG-to-power project is also proposed in **Sucre,** on the Caribbean Sea.

Croatia

FSRU *LNG Croatia*, converted from *Golar Viking* LNG carrier at the Hudong-Zhonghua shipyard in China, arrived in **Krk** in December 2020 and started commercial operations in January 2021, as scheduled. The FSRU facility, which was purchased from and is operated by Golar LNG Limited, has a technical capacity of 1.9 MTPA. The capacity at the terminal has been booked by HEP, MFGK Croatia, MET Croatia Energy Trade and Power Globe Qatar.

Cyprus

Construction of the FSRU-based import terminal at the **Vasilikos port** in Cyprus started in July 2020. Developed by the Electricity Authority of Cyprus with financial support from the European Bank for Reconstruction and Development (EBRD) the EU CEF Programme and the European Investment Bank (EIB), the terminal is meant to feed an 868 MW power plant as well as industrial and residential demand. It is expected to be completed by the first quarter of 2022.

Dominican Republic

In December 2020, AES issued to POSCO E&C the notice to proceed for the construction of a second LNG storage tank at the **Andrés** LNG terminal in Santo Domingo. The new tank will have a 120,000 m^3 storage capacity and will be located next to the existing tank. The terminal expansion project also envisions the installation of additional vaporizers and of 2 truck loading bays. In 2020 the terminal provided re-exports to Panama and Jamaica as well as re-exports to Guyana via iso-containers.

Ecuador

In February 2021 Sycar, the developer of Ecuador's first LNG project, which includes an FSRU and associated port facilities in Bajo Alto in **El Oro** Province, got approval for LNG trade. Having approvals from port and regulatory authorities, the project is currently in the process of environmental licensing. If FID is taken in 2021, as initially planned, the project could start in 2022.

El Salvador

In October 2020, BW LNG started converting the 137,000 m^3 Moss LNG carrier *Gallina* to an FSRU named *BW Tatiana* to be dedicated to an LNG-to-power project in El Salvador. The LNG-to-power project developed by Energía del Pacífico at the **Port of Acajutla** includes a 378 MW power plant and is expected to be operational by the end of 2021.

France

Dunkerque LNG launched a truck-loading service offering 3,000 slots in 2020 as well as two calls to the market for long-term and short-term capacities. The adaptation of the jetty to enable reloading and unloading services for small-scale LNG vessels (with a capacity > 5,000 m^3) was finalised and its commercial launch will take place in 2021. In early 2021 Dunkerque LNG ran a Request For Interest (RFI) regarding its small-scale (truck-loading and bunkering) services.

In January 2020, following a call for subscriptions in 2019 for **Fos Tonkin**, Elengy took FID to extend operations until 2028, given that the proposed capacity was entirely booked.

In February 2020 Total completed the sale of its share in Fosmax LNG, owner of the **Fos Cavaou** LNG terminal, to Elengy, French LNG terminal operator. Since January 2021, Fos Cavaou's regasification capacity has been increased to 6.8 MTPA. In 2021, Elengy will launch an open season offering to the market capacities already available as of 2022, as well as the possibility to subscribe additional capacity to be developed, which would bring Fos Cavaou total capacity up to 8.0 MTPA from 2024, and 9.6 MTPA from 2030.

Regasification terminals

Germany

In November 2020, it was announced that Uniper's plans for an FSRU-based LNG terminal in **Wilhelmshaven** were being revaluated as the procedure for gauging interest from market players ended without sufficient response.

German LNG Terminal GmbH, a joint venture between Vopak LNG Holding B.V., Oiltanking GmbH and N.V. Nederlandse Gasunie aims to develop, build, own and operate a multifunctional LNG import terminal in **Brunsbüttel** in Northern Germany. The project scope includes a jetty with two berths for LNG carriers ranging from 1,000 up to 265,000 m³ both with LNG unloading and loading capabilities, two LNG storage tanks, LNG regasification and LNG distribution via barges, truck and railcar for a total capacity up to 8 BCMA. In December 2020 the project was granted an exemption from network third party access and tariff regulation by the German regulatory authority. The decision is subject to review by the European Commission and applies to the total annual throughput capacity on a long-term basis from the date of the terminal's commercial launch.

In February 2021, the non-binding phase of the open season for the **Stade** LNG terminal, proposed by Hanseatic Energy Hub in the region of the Port of Hamburg on the Elbe river, was concluded. The open season confirmed market interest from players supporting the full planned capacity of the terminal. The terminal is planned to have a regasification capacity of around 8.8 MTPA. It will also include a jetty for large scale vessels up to Q-Max size, a dedicated jetty for small scale vessels as well as LNG truck-loading and rail-loading facilities. In March 2021, Fluxys joined the project as an industrial partner.

Gibraltar

In January 2021, Shell was awarded an LNG bunkering license by the Gibraltar government.

Greece

In August and November 2020 DEPA and Bulgartransgaz and DESFA, respectively, acquired each a 20% stake in Gastrade, the Greek gas company which is proposing an FSRU project offshore **Alexandroupolis**. The FSRU would be located 17.6 km southwest of the port of Alexandroupolis. It would have an LNG storage capacity of 170,000 m³ and a send-out capacity of around 4 MTPA. The project is supported by the EU as a Project of Common Interest.

In **Revithoussa**, truck loading and bunkering infrastructure is expected to be ready by 2022 and 2024 respectively.

Ghana

The 1.7 MTPA **Tema LNG** project, the first offshore LNG receiving terminal in sub-Saharan Africa, is being developed by Helios Investment Partners and Africa Infrastructure Investment Managers. The project includes an FRU and an FSU and took delivery of the FRU in January 2021. Spanish LNG terminal operator Reganosa has been awarded the contract to operate and maintain the LNG terminal. The terminal was commercially complete by end-February 2021.

Hong Kong

An offshore LNG terminal is being developed in **Hong Kong,** which will include an FSRU, a double berth jetty, and two subsea gas pipelines connecting the terminal with power stations. MOL will provide the FSRU *Challenger* for the project after the end of the vessel's charter in Turkey.

India

On the West Coast

The 5 MTPA onshore regasification terminal **Mundra** in the state of Gujarat, owned and operated by GPSC LNG Ltd, entered into operations in March 2020. The terminal has two 160,000 m³ storage tanks and a truck loading facility.

Petronet LNG is planning to increase the capacity of its **Dahej** terminal in Gujarat from 17.5 MTPA to 22.5 MTPA. The expansion work will take place in two phases. The first phase, which will add 2.5 MTPA, will take place within 3 to 4 years.

In 2020 the **Dabhol** LNG terminal in Maharashtra commissioned its third 160,000 m³ LNG storage tank. In June, the breakwater construction contract was awarded to Larson and Toubro. It is expected that a fully functional breakwater would be ready by 2022-2023 which will allow the terminal to be fully operational throughout the year.

In November 2020, the expansion of the pipeline connecting the **Kochi LNG** terminal to the grid was completed, allowing an increase in the terminal's utilization rate.

Three terminals are under construction. In September 2020, the 180,000 m³ FSRU *Vasant 1* was completed at Korea's Hyundai shipyard and will be provided by MOL for the 5 MTPA LNG terminal at **Jafrabad** port in Gujarat. Besides the FSRU, the project, led by Swan Energy Ltd., will also include an FSU.

In January 2021, Höegh LNG signed an agreement to supply H-Energy with the FSRU *Höegh Giant* at **Jaigarh** Port, in Ratnagiri district of Maharashtra, starting from the first quarter of 2021. The agreement is for 10 years with annual termination options after year five. *Höegh Giant* will be the first FSRU operating in India and will deliver natural gas to the 56 km Jaigarh-Dabhol pipeline connecting the LNG import terminal to the national gas grid. The project will also develop reloading, truck loading and bunkering facilities.

A new 5 MTPA onshore regasification terminal is being built at the **Chhara** port in Gujarat State. The project is expected to be completed by the end of 2023.

On the East Coast

The infrastructure connecting **Ennore** LNG terminal is currently being expanded.

Two terminals are under construction. The 5 MTPA onshore LNG terminal at **Dhamra** port in Odisha is scheduled to be completed in mid-2022. The dome roofs of the terminal's two 180,000 m³ LNG storage tanks were lifted in the beginning of 2021. The project is a joint venture of Adani Group and Total.

The 1 MTPA LNG import terminal at **Karaikal** Port is under development. ADNOC Logistics & Services will provide a 137,756 m³ Moss-type LNG tanker that would be converted to an FSU for the project. The project, owned and operated by AG&P, will also include truck loading facilities and is scheduled to begin operations by the fourth quarter of 2021.

Indonesia

The world's first LNG-to-Power floating project and Indonesia's second small-scale regasification terminal, located offshore **Amurang** in North Sulawesi, started in September 2020. The project consists of an FSRU and a powership. The 14,000 m³ FSRU *Hua Xiang* is operated by PT Sulawesi Regas Satu, a joint venture of PLN GG and PT Humpuss. The FSRU supplies regasified LNG to the 125 MW *Powership Zeynep Sultan* provided by Turkish Karpowership under an agreement with PLN to deploy five floating power plants with a total capacity of 1 GW in Indonesia.

In October 2020, Pertamina signed an MoU with PT Natuna Eton Energy to build two additional storage tanks at the **Arun** regasification terminal. The terminal started truck loading services in 2020.

In December 2020, the FSRU *Jawa Satu* was completed at Samsung Heavy Industries in South Korea and delivered to PT Jawa Satu Regas, a joint company of PT Pertamina, Marubeni, Sojitz, and MOL, for **Jawa-1** (Cilamaya) integrated gas-to-power project. The 2.4 MTPA FSRU with a storage capacity of 170,000 m³ will provide gas to the 1.76 GW gas-fired combined cycle power plant. The produced power will be sold to PT PLN (Persero) over 25 years. The project is scheduled to come online in late 2021.

PGN continues construction of a small-scale regasification terminal at the **Teluk Lamong** port. In its first phase, the project will have 0.3 MTPA of regasification capacity and is expected to start in 2021.

Italy

In July 2020, Snam Rete Gas announced that they would recommission an old tank to double the storage capacity of the LNG terminal in **Panigaglia** by the end of 2021 at a cost of €20M.The tank of 50,000 m³ will increase the facility's total storage capacity to 100,000 m³. The terminal regasification capacity will remain at 2.5 MTPA.

In October 2020, OLT Offshore, the operator of the floating import terminal **LNG Toscana,** was permitted to perform small-scale operations.

A small-scale regasification, truck loading, and bunkering terminal of 0.18 MTPA capacity, is under construction in Oristano, **Sardinia.** The terminal is developed by Higas, a joint venture of Avenir LNG (80%), Gas & Heat (10%) and CPL Concordia (10%). The terminal includes 6 horizonal low-pressure cryogenic tanks and 2 truck loading bays and is scheduled to be operational by the second quarter of 2021.

Jamaica

In March 2020 New Fortress Energy began commercial operations of its 100 MW gas-fired combined heat and power (CHP) plant at the Jamalco refinery in Halse Hall, Clarendon. This is the second power plant connected to the **Old Harbour** regasification terminal and the only CHP facility in the Caribbean.

Japan

In August 2020, JAPEX announced completion of construction of the second phase of the **Soma** LNG terminal, which included a second 230,000 m³ storage tank. In parallel, No. 2 Unit of the Fukushima Natural Gas Power plant which provides power to Soma Port in Shinchi Town commenced commercial operations.

The expansion of **Ishikari** LNG terminal was completed by Hokkaido Gas with the fourth storage tank of 230,000 m³ capacity entering into service in October 2020.

An expansion program adding a second 230,000 m³ LNG storage tank is ongoing in Tokyo Gas's **Hitachi** terminal and scheduled to be completed in 2021.

The new 1 MTPA **Niihama** LNG terminal is under construction on Shikoku island with operations expected to start by February 2022. The terminal is planned to supply gas to a new 150 MW CCGT power plant scheduled to come online in July 2022.

JERA renovated the **Kawagoe** thermal power station to reload LNG as a marine fuel and started its operation in 2020. JERA is developing LNG bunkering by leveraging its LNG facility and, for this purpose, formed a joint venture company named Central LNG Marine Fuel Japan Corporation (CLMF) with Nippon Yusen Kaisha (NYK), Kawasaki Kisen Kaisha, ltd., and Toyota Tsusho Corporation. In October 2020 CLMF carried out the first LNG ship-to-ship LNG bunkering in Japan via Japan's first bunkering vessel *Kaguya*.

Kuwait

An onshore LNG receiving terminal is being constructed in **Al-Zour,** southeast of Mina Al-Ahmadi. The terminal is part of a complex including a refinery and power and petrochemical facilities. The first phase of the project includes 11 MTPA of regasification capacity and four storage tanks of 225,000 m³ each. The start-up is expected by summer 2021. The regasification and storage capacity could be doubled during the second phase.

Lithuania

In March, the first LNG-powered vessel was successfully bunkered through truck-to-ship in the port of **Klaipėda**. In April PGNiG, commenced commercial operations at the KN-operated Klaipėda LNG reloading station, the capacities of which were allocated to PGNiG for a five-year period.

The European Commission (EC) has positively evaluated Lithuania's goals to secure long-term competitive supply of LNG by purchasing and operating the LNG FSRU from 2024 and has approved granting state aid. According to this model, the state will issue a guarantee that will support the financing of the purchase of the FSRU.

Mexico

In August, New Fortress Energy announced progress on the **Baja California** project, a small-scale regasification facility of 0.8 MTPA with a 135 MW power plant and truck loading bays, located in the port of Pichilingue, in La Paz, Baja California Sur. The project has completed underwater depth surveys and dredging. LNG will be delivered to the terminal via small-scale LNG carriers loaded from a large-scale LNG carrier moored nearby or via ISO containers. Commercial operations are expected to begin in 2021.

Mozambique

Mitsui OSK Lines and Karpower International are constructing the **Nacala** LNG-to-power project, which involves the construction and operation of an FSRU associated with a powership vessel. The project is expected to start operations in 2021 but could be delayed due to Covid-19.

Myanmar

A 0.5 MTPA FSU for the **Thanlyin** LNG-to-power project started operations in June 2020. The FSU supplies LNG to an onshore regasification terminal which feeds two power plants in Yangon, 400 MW Thaketa and 350 MW Thanlyin. This is the first project that uses LNG as a fuel source for power generation in Myanmar. The project is financed, constructed and operated by CNTIC VPower, a joint venture of China National Technical Import and Export Corporation and Hong Kong's VPower Group.

Nicaragua

New Fortress is developing a 0.4 MTPA LNG-to-power project, including a 300 MW gas-fired power plant and an offshore LNG receiving, storage and regasification terminal off the coast of **Puerto Sandino.** In February 2020 New Fortress Energy signed a 25-year power purchase agreement with Nicaragua's electricity distribution companies to supply power produced from around 0.4 MTPA of LNG. The project start-up is expected in the second half of 2021.

Pakistan

In January 2020, Excelerate and Engro Elengy Terminal signed a HOA for the expansion of the floating LNG import terminal located in **Port Qasim, Karachi.** Under the agreement, Excelerate will exchange its existing FSRU *Exquisite* with a newbuild FSRU, *Excelerate Sequoia*, currently employed on a short-term charter to PetroChina. The FSRU will increase the send-out capacity by more than 1 MTPA of LNG and increase LNG storage capacity from 150,900 m³ to 173,400 m³.

Since August 2020 private players are permitted to import LNG to the country, and private sector companies in Pakistan are allowed to use the underutilized PGPC Port **Qasim GasPort** regasification terminal.

Panama

Environmental permitting for the 2.6 MTPA **Sinolam LNG** terminal, which will be associated with a 441 MW Gas-to-Power Panama (GTPP) project, is currently taking place. The terminal will consist of an FSU and onshore regasification facilities. In case of approval, the project could start-up in 2022. It would be Panama's second terminal after AES **Costa Norte** terminal which started in 2019.

Philippines

The 3 MTPA **Pagbilao** LNG terminal is being developed by Energy World Corporation in Quezon Province. The terminal would be connected to a 650 MW gas-fired power plant. The project could start operations by 2022.

First Gen Corporation is developing a fast-track floating terminal at **Batangas** City in Luzon. In 2020 the company received a permit from the Department of Energy authorizing the construction of the terminal.

First Gen also announced the signing of a joint cooperation agreement with Tokyo Gas, under which the latter will have a 20% interest in the proposed project. The project is scheduled to come online by 2022.

Poland

The **Świnoujście** LNG Terminal Expansion Programme consists of two stages. Stage one includes installation of two additional Submerged Combustion Vaporiser units, in order to raise the regasification capacity from 5 Bcm/y to 8.3 Bcm/y. Stage two includes building a second jetty, a third LNG tank (180,000 m^3) and a railway siding for tankers and ISO containers by the end of 2023. As a result of the 2020 Open Season Procedure, in May Polskie LNG signed an agreement with PGNiG S.A. for regasification services which will be available after the expansion of the terminal.

A new regasification terminal (FSRU) which would be located in the area of **Gdansk**, is currently being analysed by Gas Transmission Operator GAZ-SYSTEM S.A. In 2020 the LNG Terminal was included within the list of Projects of Common Interest (PCI status) issued by the European Commission.

In March 2021 the merger between Polskie LNG S.A. and Gas Transmission Operator GAZ-SYSTEM S.A. took place. The assets of Polskie LNG have been transferred to GAZ-SYSTEM.

Puerto Rico

GE Capital sold its 2.5% share in the **Peñuelas** terminal to OCO Partners. A truck loading service will be available from 2022.

In February 2020, the new onshore small scale regasification terminal, **San Juan LNG,** with a capacity of 1.1 MTPA came online in Puerto Rico. Regasified gas is supplied by New Fortress Energy to units 5 and 6 of the 440 MW San Juan power plant, which have been converted from diesel to natural gas. The facility also includes multiple truck loading bays.

Singapore

In October 2020, Pavilion Energy and Gasum signed an MoU to cooperate on developing an LNG bunker supply network for customers in Singapore and Northern Europe.

Singapore LNG, owner and operator of the **Jurong** LNG terminal, is performing studies to build additional jetty capacity to support future small-scale LNG and LNG bunkering demand. In July 2020 the Energy Market Authority of Singapore issued a Request-for-Proposal (RFP) to appoint up to two additional LNG term importers for Singapore. A decision is expected in the first half of 2021.

South Korea

KOGAS is building a new 11.6 MTPA LNG import terminal in **Dangjin**, South Chungcheong Province. The project involves the construction of a new onshore receiving terminal comprising 10 LNG storage tanks, each with a capacity of 200,000 m^3, developed in two phases. The first phase involves the construction of four tanks and is scheduled for completion by 2025. The entire project is expected to be completed in 2031.

In November 2020, KOGAS successfully carried out the first ship-to-ship LNG bunkering test on the island of Geoje off the southern coast.

Spain

In 2020, the infrastructure at the **Barcelona LNG** terminal was adapted to small scale activities, including the maritime structure for a 80,000 m^3 berth: substitution of centric "Duques de Alba" (running jetty), 66 ton fenders (the old 263,000 m^3 mooring will be reused) and hooks.

Cartagena LNG terminal was also adapted to be able to provide bunkering services.

A multitruck-to-ship system is currently being added to the Huelva LNG terminal to facilitate bunkering operations through trucks in the port of Huelva. It is expected to be operational by summer 2021 with bunkering operations starting by the end of 2021.

During 2020, two projects received a 20% subsidy from the European Commission, including the construction and operation of two bunkering vessels, one in Barcelona with a capacity of 5,000 m^3 and the other in the surroundings of the Strait of Gibraltar with a capacity of 12,500 m^3.

Throughout 2020, Enagás has implemented different measures to maximize the LNG truck loading capacity offered in all its LNG plants (Barcelona, Cartagena, Huelva). Loadings increased by 16% in 2020 compared to 2019.

In 2020 a new third-party access model establishing a "Virtual LNG Tank" was implemented for the 6 LNG terminals in Spain. The new access regime consists of offering storage and regasification services in a delocalized (virtual) way, while the services that require a specific location of the LNG terminal, such as cargo unloading, will continue to be allocated by users to a specific LNG terminal of their choice. Once the slot (cargo unloading) is allocated to a specific terminal, users will be able to build up their aggregate services (storage, regas, entry into the network, reload), or to book the services in a non-aggregated way. A new regasification tariff methodology entered into force in October 2020, which resulted in a decrease in the average LNG terminal tariffs.

Taiwan

CPC is developing its third LNG import terminal in the **Taoyuan** district off the coast of Datan Borough in northern Taiwan. The first phase is under construction and could be completed by 2023, while the second phase is proposed with the target of full commissioning by 2025.

The first expansion of the **Taichung** LNG terminal was completed at the end of 2019. Further expansion through the addition of another berth and associated tanks is planned to be carried out in two phases. 2 MTPA of regasification capacity will be added by 2023 and a remaining 2.7 MTPA capacity will be added by 2026.

The 1.8 MTPA expansion project at CPC's **Yung-An** LNG Terminal, which includes three new storage tanks and its related regasification facilities, is estimated to be completed by the end of 2026 and to commence operations in early 2027.

Thailand

PTT successfully tested the reloading facilities at **Map Ta Phut** LNG terminal in 2020. The Energy Regulatory Commission (ERC) granted PTT a commercial trial period for LNG Storage/Reloading activities at the terminal. The first cargo was reloaded at Map Ta Phut in January 2021.

PTT's **Nong Fab** LNG Receiving terminal in Rayong, Thailand with a total capacity of 7.5 MTPA is expected to come online in 2022.

Turkey

Infrastructure adaptations are underway at the **Aliaga** LNG import terminal in order to handle small scale LNG vessels. The works are scheduled to be completed by the end of 2021.

In **Dortyol**, Botas is planning to replace *FSRU Challenger* with a new FSRU. In October 2020, Botas awarded a tender to Unitek Insaat for the construction of a jetty, measuring station and transit pipeline for a new offshore LNG import terminal in the Gulf of **Saros** in northwest Turkey. An FSRU is under construction in South Korea.

United Kingdom

An additional 200,000 m^3 storage tank and associated regasification facilities will be constructed in **Grain**. The expansion will be completed by mid-2025 and will add an additional 3.8 MTPA of regasification capacity. By then, total storage will increase to 1.2 million m^3 and total regasification capacity will reach 18.8 MTPA.

In October, National Grid's Grain LNG and Qatar Terminal Limited (QTL), a subsidiary of Qatar Petroleum, announced a 25-year agreement under which Qatar will book 7.2 MTPA of regasification capacity and 380,000 m^3 of storage capacity from mid-2025 to 2050.

Vietnam

Vietnamese oil company Hai Linh Co Ltd has completed construction of its onshore LNG terminal in the southern province of **Ba Ria-Vung Tau,** which is expected to start commercial operations in 2021. Vietnam's first LNG receiving terminal is expected to have an initial capacity of 2 to 3 MTPA, with the potential to expand to 6 MTPA.

State-run PetroVietnam Gas and its partners have started to construct an onshore LNG receiving terminal at **Thi Vai** in the coastal area southeast of Ho Chi Minh City. The Thi Vai terminal is expected to be completed in October 2022. It will have a capacity of 1 MTPA in its first phase in 2022, which will be raised to 3 MTPA by 2023 in the second phase of development.

Delta Offshore LNG (DeltaOE) is developing the **Bac Lieu** LNG-to-power project, which consists of a 2 MTPA floating LNG import terminal and a 3.2 GW combined-cycle power plant in the Mekong Delta, Bac Lieu, Vietnam.

Regasification terminals at the end of 2020

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
AMERICAS										
Argentina	**Bahia Blanca** ***No vessel chartered***									2008
	GNL Escobar ***Excelerate Expedient (FSRU)***		151,000	6	6.1	Owner: Excelerate Energy Charterer: UTE Escobar (50% Enarsa, 50% YPF)	**FSRU: Excelerate Energy Terminal: YPF**	No		2011
Brazil	**Bahia** **No vessel chartered**									2013
	Guanabara Bay ***Excelerate Experience (FSRU)***		173,400	6	6.0	Owner: Excelerate Energy Charterer: Petrobras	**FSRU: Excelerate Energy Terminal: Petrobras**	No	Reloading	2009
	Pecem ***Golar Winter (FSRU)***		137,000		3.8	Owner: Golar Charterer: Petrobras	**FSRU: Golar Terminal: Petrobras**	No		2009
	Port of Açu ***BW Magna (FSRU)***		173,400		5.6	Owner: BW Charterer: Gas Natural Açu (Prumo Logistica, BP. Siemens)	**FSRU: BW Terminal: Klaipedos Nafta**			2020 (commercial operation from 2021)
	Sergipe ***Golar Nanook (FSRU)***		170,000		5.6	Hygo Energy Transition (Golar LNG 50%.,Stonepeak Infrastructure Partners 50%)	**Hygo Energy Transition**			2020
Canada	**Canaport LNG**	3	480,000	8	7.4	Repsol (75%), Irving Oil (25%)	**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	4.0	Enagas (45.4%), Omers (34.6%), ENAP (20%)	**GNL Quintero**	Yes	Reloading, Truck loading	2009
Colombia	**Cartagena** ***Höegh Grace (FSRU)***	4	170,000	4	3.8	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
Jamaica	**Montego Bay**	7	7,000		0.5	New Fortress Energy	**New Fortress Energy**		Truck loading	2016
	Old Harbour ***Golar Freeze (FSRU)***		125,000		3.6	Owner: Golar 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
Panama	**Costa Norte**	1	180,000		1.5	AES Panama (50.1%), Inversiones Bahia (49.9%)	**AES**		Bunkering, Truck loading	2018
Puerto Rico	**San Juan LNG**				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**			2000
USA	**Cameron LNG**	3	480,000	10	11.4	Sempra (50.2%), Total (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
	Everett	2	155,000	4	5.1	Exelon	**Exelon**	Yes	Truck loading	1971
USA	**Freeport LNG**	3	480,000	7	13.2	Freeport LNG Development, L.P.	**Freeport LNG Development**	Yes		2008
	Golden Pass	5	775,000	8	15.7	QP (70%), ExxonMobil (30%)	**Golden Pass LNG**	No		2010
	Gulf LNG	2	320,000		8.8	Kinder Morgan (50%), GE (40%), AES (10%)	**Gulf LNG Energy**	No		2011
	Lake Charles	4	425,000	14	17.9	Lake Charles LNG	**Lake Charles LNG**	Yes		1982
	Northeast Gateway ***No vessel chartered***		151,000	6	3.0	Excelerate Energy	**Excelerate Energy**			2008
	Sabine Pass	5	800,000	24	30.4	Sabine Pass LNG	**Cheniere**	Yes	Reloading	2008
AMERICAS TOTAL			8,348,800		202.5					
ASIA										
Bangladesh	**Moheshkhali** ***Excelerate Excellence (FSRU)***		138,000		3.8	Owner: Excelerate Energy Charterer: Petrobangla	**Excelerate Energy**			2018
	Summit LNG ***Summit LNG (FSRU)***		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
	Caofeidian (Tangshan), Hebei	4	640,000		6.5	Petrochina (51%), Beijing Gas Blue Sky Holdings Ltd. (29%), Hebei Natural Gas (20%)	**Petrochina**	Yes	Truck loading	2013, 2015
	Chennan, Hainan	2	40,000		0.6	Petrochina (90%), Beijing Gas Bluesky (10%)	**Petrochina**	No		2014
	Dalian, Liaoning	3	480,000	3	6.0	Petrochina Kunlun (75%), Dalian Port Company Limited (20%), Dalian Construction Investment (5%)	**PipeChina**	Yes	Reloading, Truck loading	2011, 2016
	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
	Dongguan, Guangdong	2	160,000	4	1.5	Jovo Group	**Jovo**	No	Truck loading	2012
	Diefu, Shenzhen	4	640,000		4.0	PipeChina (70%), Shenzhen Energy Group (30%)	**PipeChina**	Yes	Truck loading	2018
	Fangchenggang, Guangxi	2	60,000		0.6	PipeChina (51%), Fangchenggang Port Group Co. LTD (49%)	**PipeChina**	Yes	Truck loading	2019
	Hua'an, Guangdong	1	80,000		0.8	Shenzhen Gas	**Shenzhen Gas**		Truck loading	2019
	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, 2020
	Putian, Fujian	6	960,000		6.3	Fujian LNG (CNOOC 60%, Fujian Inv. & Dev.Co. 40%)	**CNOOC**	No	Truck loading	2008, 2011, 2019
	Qidong, Jiangsu	3	420,000		3.0	Guanghui Energy	**Guanghui Energy**		Truck loading	2017, 2018
	Qingdao, Shandong	4	640,000		6.0	Sinopec (99%), Qingdao Port Group (1%)	**Sinopec**	No	Truck loading	2014, 2016
	Rudong, Jiangsu	3	680,000	3	6.5	Petrochina (55%), Pacific Oil & Gas (35%), Jiangsu Guoxin Investment Group (10%)	**Petrochina**	Yes	Truck loading	2011, 2016

Regasification terminals

Regasification terminals at the end of 2020

		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** *Höegh Esperanza (FSRU)* **& Onshore facilities**	4	**390,000**	3	**6.0**	FSRU owner: Höegh LNG Charterer: CNOOC Gas & Power Trading and Marketing Onshore facilities owner: PipeChina (46%), Tianjin Port (40%), Tianjin Gas(9%), Other(5%)	**FSRU: Höegh LNG Terminal: PipeChina**	No	Truck loading	**2013, 2017 (Cape Ann) 2018**
	Tianjin LNG	4	**640,000**		**6.0**	Sinopec (98%), Tianjin Nangang Industrial Zone Developemnt Co., Ltd. (2%)	**Sinopec**		Truck loading	**2018**
	Wuhaogou, Shanghai	5	**320,000**		**1.5**	Shanghai Gas (Shenergy 100%)	**Shenergy Group**	No		**2008, 2017**
	Yangshan, Shanghai	5	**895,000**		**3.0**	Shanghai LNG (CNOOC 45%, Shenergy Group Ltd 55%)	**Shenergy Group**	No	Truck loading	**2009, 2020**
	Yangpu, Hainan	2	**320,000**		**3.0**	PipeChina (65%), Guodian Haikong New Energy (35%)	**PipeChina**	Yes	Truck loading	**2014**
	Yuedong, Guangdong	3	**480,000**		**2.0**	PipeChina	**PipeChina**	Yes	Truck loading	**2017**
	Zhoushan, Zhejiang	2	**320,000**		**3.0**	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, expansion in 2009, 2016 and 2019**
	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	**4.9**	Shell Energy India Private Ltd. (Shell 100%)	**Shell Energy India Private Ltd,**	Nego-tiated	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** *Hua Xiang (FSRU)*		**14,000**		**0.1**	PT Sulawesi Regas Satu	**Karpowership**			**2020**
	Arun Regas	2	**220,000**		**3.0**	PT Perta Arun Gas (Pertamina 70%, Government of Aceh 30%)	**PT Perta Arun Gas**	Yes	Bunkering, Cool-down, Reloading, Truck loading	**2015**
	Benoa *FRU+FSU*				**0.3**	JSK Group (50%), PT Pelindo III (50%)	**PT Pelindo Energi Logistik (PEL)**			**2016**
	Lampung LNG *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 *Nusantara Regas Satu (FSRU)*	6	**125,000**	6	**3.0**	Owner: Golar LNG Charterer: PT Nusantara Regas	**PT Nusantara Regas (Pertamina 60% & PGN 40%)**	No		**2012**
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	Truck loading	**1978**
	Chita-Midorihama Works	3	**620,000**	8	**7.7**	Toho Gas	**Toho Gas**	Yes	Truck loading	**2001**
	Futtsu	12	**1,360,000**	13	**19.1**	JERA	**JERA**	Yes	Truck loading	**1985**

		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
Japan	**Hachinohe**	2	**280,000**	5	**1.0**	ENEOS Corporatoin	**ENEOS 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 services, Gas test services, Truck loading	**2014**
	Higashi-Ohgishima	9	**540,000**	9	**13.2**	JERA	**JERA**	Yes		**1984**
	Himeji	8	**740,000**	7	**5.7**	Osaka Gas	**Osaka Gas**	Yes	Reloading, Truck loading	**1979**
	Himeji LNG	7	**520,000**	8	**8.1**	Kansai Electric	**Kansai Electric**	Yes	Truck loading	**1979**
	Hitachi	1	**230,000**	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	**7.1**	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	12	**990,000**	14	**12.0**	Tokyo Gas / JERA	**Tokyo Gas**	Yes	Truck loading	**1969**
	Niigata	8	**720,000**	13	**8.5**	Nihonkai LNG	**Nihonkai LNG**	Yes	Truck loading	**1984**
	Ohgishima	4	**850,000**	12	**10.4**	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	2	**275,000**	6	**2.2**	Osaka Gas	**Osaka Gas**	Yes	Truck loading	**1972**
	Senboku II	16	**1,435,000**	12	**10.0**	Osaka Gas	**Osaka Gas**	Yes	Truck loading	**1977**
	Shin-Sendai	2	**320,000**	3	**0.8**	Tohoku Electric	**Tohoku Electric**	No		**2015**
	Sodegaura	33	**2,540,000**	38	**35.5**	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**

Regasification terminals at the end of 2020

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	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)*		260,000	3	3.8	Petronas	Petronas Gas	No	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 LNG (FSU)		127,500		0.5	CNTIC Vpower	CNTIC Vpower			2020
Pakistan	Port Qasim Karachi *Excelerate Exquisite (FSRU)*		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)*		170,000		5.0	Owner: BW Charterer: Pakistan GasPort	FSRU: BW Terminal: Pakistan GasPort Consortium			2017
Singapore	Jurong	4	800,000	5	11.0	SLNG	SLNG	Yes	Cool-down, Gassing-up, Reloading, Storage, Transshipment, Truck loading, Wobbe Index Correction	2013
South Korea	Boryeong	4	800,000		4.0	GS Energy (50%), SK E&S (50%)	Boryeong LNG		Reloading	2016
	Gwangyang	5	730,000	2	3.1	POSCO	POSCO	No	Reloading	2005
	Incheon	23	3,480,000	52	40.0	KOGAS	KOGAS	No		1996
	Jeju	2	90,000	5	0.8	KOGAS	KOGAS	No		2019
	Pyeong-Taek	23	3,360,000	38	30.1	KOGAS	KOGAS	No	Truck loading	1986
	Samcheok	12	2,610,000	8	8.5	KOGAS	KOGAS	No		2014
	Tong-Yeong	17	2,620,000	20	19.5	KOGAS	KOGAS	No	Bunkering, Truck loading	2002
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	Map Ta Phut	4	640,000	9	11.5	PTT	PTT LNG	Yes	Reloading, Truck loading	2011 expansion in 2019
ASIA TOTAL			52,211,600		531.6					

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
EUROPE										
Belgium	Zeebrugge	5	566,000	12	6.6	Fluxys LNG	Fluxys LNG	Yes	Bunkering, Cool-down, Reloading, Transshipment, Truck loading	1987
Croatia	Krk *LNG Croatia (FSRU)*	2	140,000		1.9	LNG Hrvatska (HEP, Plinacro)	FSRU: Golar LNG Terminal: LNG Croatia			2020 (commercial operation from 2021)
Finland	Tornio Manga	1	50,000		0.4	Manga LNG (Gasum, Outokumpu, SSAB and EPV Energy)			Bunkering, Truck loading	2018
	Pori	1	28,500		0.1	Gasum	Gasum	Yes	Bunkering, Truck loading	2016
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	6.6	Fosmax LNG (Elengy 100%)	Elengy	Yes	Bunkering, Cool-down, Reloading, Transshipment, Truck loading	2009
	Fos Tonkin	1	80,000	6	2.4	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
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.	DESFA S.A.	Yes		2000
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		1971
	Rovigo (Gravity-Based Structure)	2	250,000	5	5.6	Adriatic LNG (ExxonMobil (70.7%), Qatar Petroleum (22%), SNAM (7.3%))	Adriatic LNG	Yes		2009
Lithuania	Klaipėda *Höegh Independence (FSRU) + KN LNG Reloading Station*	4	170,000	4	2.9	Owner: Höegh LNG Charterer: Klaipedos Nafta	Höegh LNG	Yes	Bunkering, Reloading, Truck cool-down, Truck loading	2014 LNG reloading station in 2017
Malta	Delimara *Armada LNG Mediterrana (FSU)*		125,000		0.5	Owner: BumiArmada Charterer: Electrogas Malta (GEM Holdings Limited (33.34%), Siemens (33.33%), SOCAR (33.33%))	Reganosa			2017
Netherlands	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	5	3.7	Polskie LNG	Polskie LNG	Yes	Truck loading	2016

2020

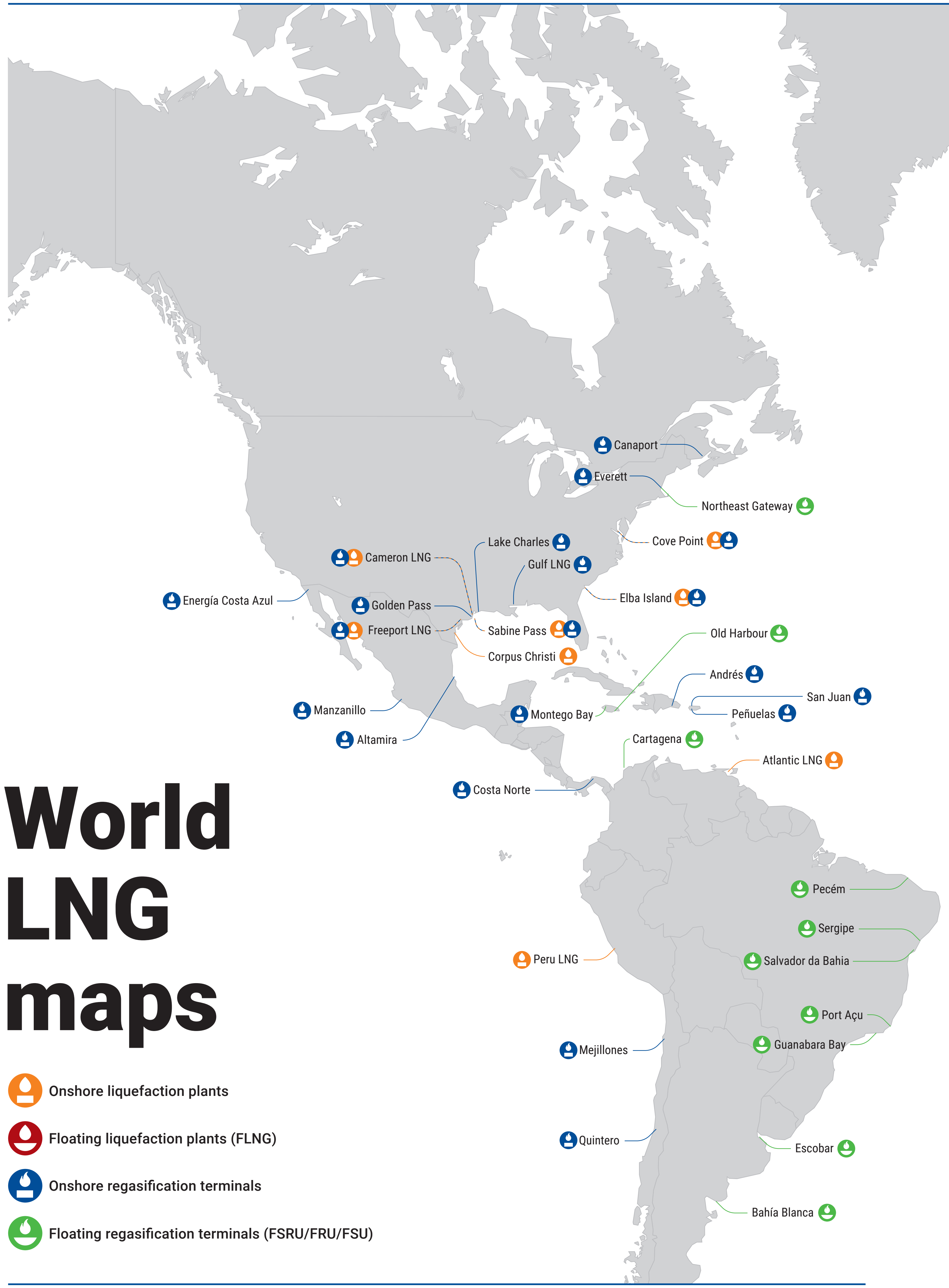
Regasification terminals at the end of 2020

Market	Site	Storage		Send-out		Owner	Operator	Third Party Access	Additional Services offered	Start-up date
		Number of tanks	Total capacity (liq m³)	Number of vaporizers	Nominal capacity (MTPA)					
Portugal	**Sines**	3	**390,000**	7	**5.6**	Ren Atlântico	**Ren Atlântico**	Yes	Cool-down, Reloading, Truck loading	**2004**
Russia	**Kaliningrad** ***No vessel chartered***									**2019**
Spain	**Barcelona**	6	**760,000**	13	**12.6**	Enagás	**Enagás**	Yes	Bunkering, Cool-down, Reloading, Transshipment, Truck loading	**1968**
	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 (mothballed)	2	**300,000**	4	**5.1**	Enagás	**Enagás**	Yes	Reloading, Truck loading	**Construction completed in 2013**
	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**
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** ***MOL FSRU Challenger***		**263,000**		**4.1**	Owner: MOL Charterer: Botas (for 3 years)	**FSRU: MOL 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**	Botaş	**Botas**	No	Truck loading	**1994**
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**	Qatar Petroleum International (67.5%), Exxon Mobil (24.15%), Total (8.35%)	**South Hook LNG Terminal Company Ltd**	Yes		**2009**
	Teesside GasPort Awaiting recommissioning					Trafigura				**2007**
EUROPE TOTAL			**11,158,900**		**183.8**					

Market	Site	Storage		Send-out		Owner	Operator	Third Party Access	Additional Services offered	Start-up date
		Number of tanks	Total capacity (liq m³)	Number of vaporizers	Nominal capacity (MTPA)					
MIDDLE EAST										
Bahrain	**Hidd** ***No vessel chartered***					Bahrain LNG: Nogaholding (30%), Teekay (30%), Gulf Inv. Corp. (24%), Samsung C&T (16%)	**Bahrain LNG**			**2020**
Egypt	**Sumed** ***BW Singapore***		**170,000**	4	**5.7**	Owner: BW Charterer: Egas	**BW**	No		**2015**
Israel	**Hadera** ***Excelerate Excelsior (FSRU)***		**138,000**	6	**3.5**	Owner: Excelerate Energy Charterer: INGL	**FSRU: Excelerate Energy Terminal: IEC**	No		**2013**
Jordan	**Aqaba** ***Golar Eskimo (FSRU)***		**160,000**		**3.8**	Owner: Golar Charterer: MEMR (Jordan Ministry of Energy and Mineral Resources)	**Golar**	No		**2015**
Kuwait	**Mina Al Ahmadi** ***Golar Igloo (FSRU)***		**170,000**		**5.8**	Owner: Golar 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			**939,900**		**28.7**					
WORLD TOTAL			**72,659,200**		**946.7**					

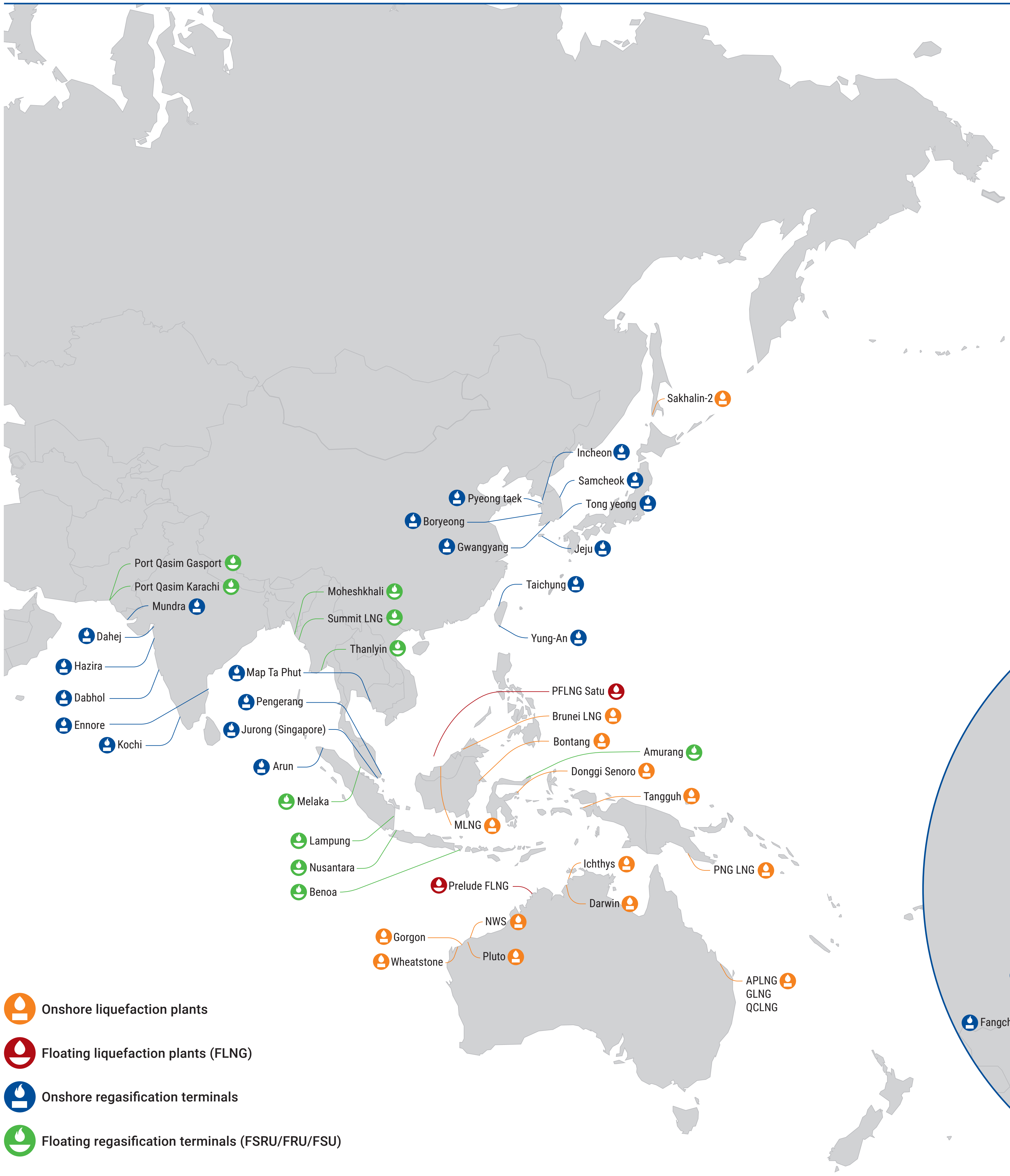
World LNG maps

World LNG maps



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

World LNG maps

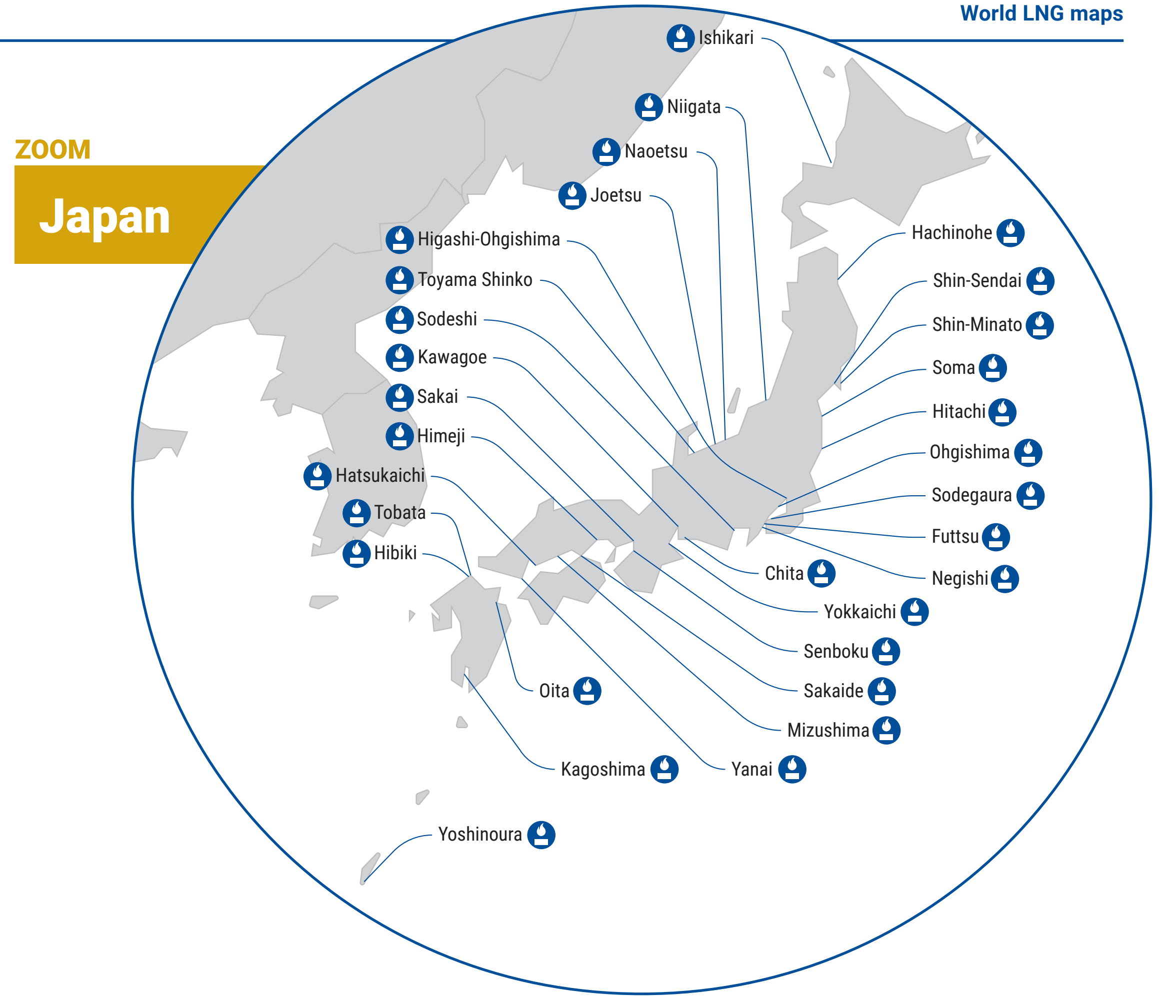


Onshore liquefaction plants

Floating liquefaction plants (FLNG)

Onshore regasification terminals

Floating regasification terminals (FSRU/FRU/FSU)



Retail LNG in 2020

SMALL-SCALE* LNG CARGOES LOADED FROM RECEIVING TERMINALS IN 2020

Country	2020 10^3 T	2019 10^3 T	Var. 2020/2019
BELGIUM	29.4	86.5	-66.1%
INDONESIA	433.7	90.3	380.0%
JAPAN	322.0	426.6	-24.5%
NETHERLANDS	190.2	106.4	78.7%
SINGAPORE	0.0	4.3	-100.0%
SPAIN	30.5	30.7	-0.6%

* Less than 30,000 liq m³

TRUCK-LOADING OF LNG FROM RECEIVING TERMINALS IN 2020

Country	2020 10^3 T	2019 10^3 T	Var. 2020/2019
AMERICAS			
CHILE	228.4	220.5	4%
DOMINICAN REPUBLIC	152.1	169.0	-10%
USA	42.6	70.3	-39%
ASIA			
CHINA	22900.0	16060.0	43%
INDIA	41.3	39.2	5%
INDONESIA	58.9	35.0	68%
JAPAN	1360.1	1427.9	-5%
SINGAPORE	1.1	0.9	21%
SOUTH KOREA	162.2	168.8	-4%
THAILAND	34.5	0.0	NA
EUROPE			
BELGIUM	57.7	46.7	23%
FRANCE	212.8	162.9	31%
LITHUANIA	6.1	4.8	26%
NETHERLANDS	104.5	67.8	54%
POLAND	56.0	40.6	38%
PORTUGAL	129.3	121.7	6%
SPAIN	912.2	831.0	10%
TURKEY	344.0	382.2	-10%
UNITED KINGDOM	39.1	31.0	26%

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.

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LNG Analyst
E. Dukhanina


LNG Advisor
K. Sasaki

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86 member companies

Founded in 1971, GIIGNL gathers 86 companies from 27 countries headquartered in three regions: Americas, 10 members, Asia, 43 and Europe, 33.

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

10 members in Americas

33 members in Europe

43 members in Asia

FULL MEMBERS

BP Global LNG
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Cove Point LNG, LP
CPC Corporation, Taiwan
DEPA
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Dunkerque LNG SAS
Edison S.p.A.
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Hiroshima Gas Co., Ltd.
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Hokkaido Gas Co., Ltd.
Hokuriku Electric Power Company
Iberdrola Generación España, S.A.U.
Itochu Corporation
JERA Co., Inc.
Korea Gas Corporation
Kyushu Electric Power Co., Inc.
LNG Japan Corporation
Marubeni Corporation
Mitsubishi Corporation
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Mitsui O.S.K. Lines, Ltd.
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Naturgy Energy Group S.A.
Nippon Gas Co., Ltd.
N.V. Nederlandse Gasunie
Osaka Gas Co., Ltd.
Pavilion Energy
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PTT Public Company Ltd.
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Saibu Gas Co., Ltd.
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