The LNG industry

GIIGNL ANNUAL REPORT 2019

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 81 members to enhance safety, reliability and efficiency of LNG import activities and the operation of LNG import terminals in particular.

GIIGNL has a worldwide focus and its membership is composed of nearly all companies in the world active in the import and regasification terminalling of LNG.

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The LNG industry in 2018

"For LNG importers, long-term partnerships and flexibility remain key".

Jean-Marie Dauger
President

Dear Colleagues,

In 2018, the LNG market growth accelerated at a rate of 8%, with deliveries amounting to 314 MT or more than three times the level reached in 2000.

New additions in liquefaction capacity, driven mostly by Australia, the United States and Russia, were not as high as might have been initially expected, due to some delays in start-ups in the United States. As in 2017, new volumes continued to be absorbed by large Northeast Asian buyers, in particular by China where policy decisions to improve air quality contributed to a sharp increase in LNG imports for the third year in a row.

In general, 2018 saw the return of an active market for LNG, with higher oil and spot LNG prices for most of the year and record-high charter rates for spot shipping during the last quarter.

Investment activity also rose with 3 FIDs taken (LNG Canada, Corpus Christi Train 3 and Tortue LNG) and a concomitant increase in long-term contracting activity spurred by large Asian and European buyers, portfolio players as well as commodity traders. Besides signaling the industry's renewed focus on strategies to grow their supply portfolios, such activity was also a sign that security of supply remains a strong motivation for LNG importers. In spite of a significant increase in spot and short-term transactions in 2018, the commoditization of LNG could still require some years to become a reality, although with several trains due to come on-stream in the US over the next two years, the additions of destination-free and non-oil indexed volumes will be substantial, and further enhance the liquidity of the LNG market.

On the demand side, two new countries - Bangladesh and Panama - joined the importers' ranks last year, bringing the total number of importing countries to 42, compared with only 18 ten years ago. Several other countries are planning to commission or build onshore or floating LNG import infrastructure. As in 2017, policy choices in the Asia-Pacific region largely drove the growth in LNG imports, fostered by measures to improve air quality in China and by uncertainties regarding nuclear power in South Korea. In Europe, cross-basin arbitrage opportunities continued to determine the level of LNG inflows as the reduction of price spreads led to a strong rise of import activity in Northwest Europe towards the end of the year. Inversely, the combined LNG imports by emerging countries decreased last year, mainly due to rising domestic production in Egypt and in Argentina, showing that LNG demand remains hard to predict.

Last year we were also reminded that LNG - as most energies – can become entwined in global politics, as evidenced for instance by the EU and US statement of intent in July or by the reciprocal tariff increase between US and China in September.

In this context, affordability and flexibility are essential for governments and consumers. For LNG importers, long-term partnerships, destination and volume flexibility as well as the ability to optimize, or arbitrage, between Asian and European markets remain key.

Notwithstanding the geopolitical tensions, the uncertainties regarding nuclear power in certain countries and the competitive pressure from cheap coal and renewables, big surges in LNG supply and demand are on the horizon. In China, in India and South East Asia, in particular, LNG's environmental benefits and its versatility make it particularly attractive as a destination fuel for thermal power generation and cogeneration, in the industrial and commercial sectors as well as in a growing variety of fields like marine and road transportation.

Many long-term supply contracts are starting to expire and as new supply comes on-stream, our industry is on the verge of profound changes in terms of market structure. « The second gas revolution » , recently projected by the International Energy Agency, could well become « the first LNG revolution », as the Japanese minister of Economy observed in his statement to the General Assembly of GIIGNL in Fukuoka in November of last year. In this (r)evolution, our industry will need to become more innovative and efficient in trading and fully embrace opportunities offered by digital technology.

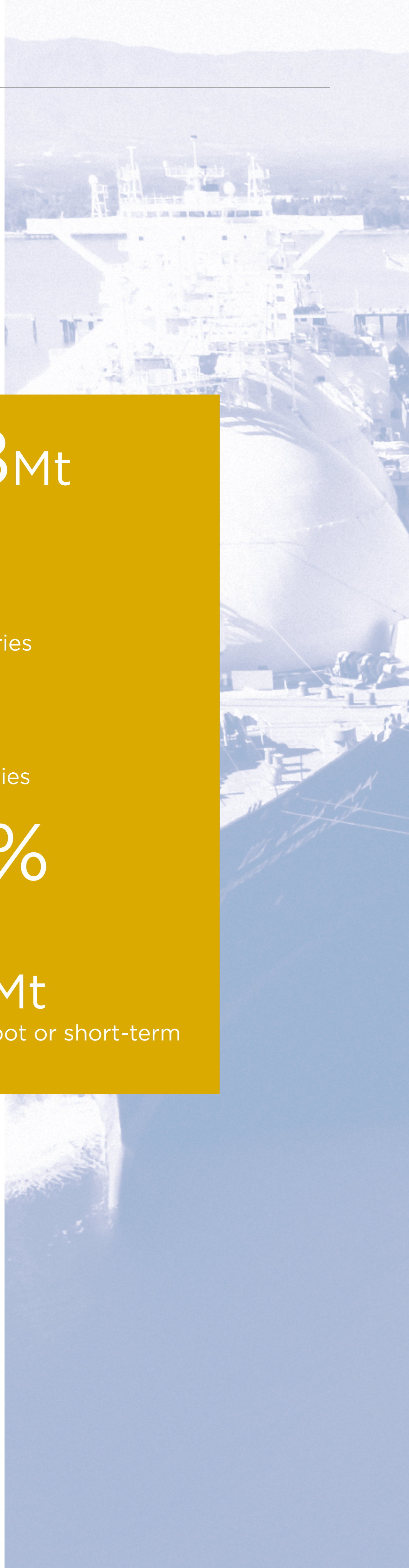
Since 1964, more than 97 000 cargoes have been safely delivered. As the LNG industry is maturing, I am confident in GIIGNL's ability to address the challenges ahead and to continue fulfilling its missions: addressing issues common to importers, diffusing knowledge and best practices, with a particular and continuing focus on safety and on the contribution of LNG to a sustainable energy future.

Yours Sincerely,

Jean-Marie Dauger

President

Key figures 2018



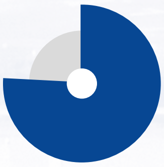
313.8Mt
imported

42
importing countries

20
exporting countries

+8.3%
growth vs. 2017

99.3Mt
imported on a spot or short-term basis



76%
of global LNG demand in Asia

44%
of global LNG supplied from the Pacific Basin

32%
of global LNG imported on a spot or short-term basis

2
new importing countries

10
new regasification terminals

868MTPA
total regasification capacity

406MTPA
total liquefaction capacity

LNG trade in 2018

In 2018, global LNG imports reached 313.8 million tons (MT), an increase of 24 MT or 8.3% compared with the previous year, the third largest annual increase behind 2010 and 2017.

One new country (Cameroon) started exporting LNG in 2018, the number of exporting countries is now 20.

Two new countries imported LNG for the first time (Bangladesh and Panama), bringing the total number of importing countries to 42.

52%

of US exports delivered to Asia. 28% to the Americas. 13% to Europe and 7% to the Middle East

82.5 MT

imported into Japan, followed by China (54 MT)

+38%

Increase in China LNG imports, following a 42% growth in 2017

5th consecutive year of LNG supply growth

New LNG supply volumes were mostly driven by new production from Australia, the United States and Russia. Many of the legacy projects did not perform as well as they did in 2017. While increased feed gas supply contributed to higher exports from Oman (+1.8 MT) and Trinidad (+1.4 MT), a number of countries including Algeria, Nigeria, Malaysia and Papua New Guinea experienced a decline in exports. In the Pacific Basin, Australia was the only country to record an increase in exports (+11.1 MT). LNG supplies from Algeria (-2.2 MT) decreased mainly due to an arbitrage in favor of pipeline exports. Malaysian LNG exports (-2.2 MT) were constrained by pipeline problems which affected natural gas supply to the plant and in Papua New Guinea (-1.1 MT) the LNG plant was offline for nearly two months following a major earthquake in the Highlands region which damaged some of the project's facilities.

Eight new onshore liquefaction trains were commissioned in 2018: 3 in Australia (Wheatstone Train 1 and Ichthys Train 1 & 2), 3 in the United States (Sabine Pass Train 5, Cove Point and Corpus Christi Train 1) and 2 in Russia (Yamal Train 2 & 3). In addition, a floating liquefaction unit came online in Cameroon.

As in 2017, supply from the Atlantic Basin was the main contributor to incremental volumes (+16.9 MT) although the country that registered the largest increase in supply was Australia.

The Pacific Basin remains the largest source of LNG supplies with 137.5 MT or 43.8% of the global market, followed by the Middle East (29.4%) and the Atlantic Basin (26.8%).

Due to the increase in production from Australia, the gap between supply from the Pacific Basin and the Middle East has widened, from 40 MT in 2017 to 45 MT in 2018. Between the Atlantic Basin and the Middle East the gap has narrowed from 24.2 MT to 8.4 MT because of the increase in US and Russian LNG production.

In 2019, the share of Atlantic Basin LNG supply in global trade is expected to continue to increase, as 21 MT of new liquefaction capacity is scheduled to come online in the United States.

China and South Korea continue to drive global demand

In 2018, Asia firmed up its position of leading importing region with a 76% share of global LNG imports, up from 73% in 2017. Asian LNG imports grew by 13% to 238.6 MT. Japan remained the leading importing country, with 82.5 MT or a 26.3% market share, followed by China (54 MT). As was the case in 2017, global LNG import growth in 2018 was led by China and South Korea, the world's second and third largest LNG importers, which together received 21 MT more LNG than in 2017. China's policy of substituting coal by gas to reduce air pollution in major cities and to complement domestic gas production, meant that it consolidated its position as second largest LNG importer globally and increased LNG demand by 15 MT or +38.4% compared with 2017. In two years (2016-2018), Chinese imports have doubled. South Korea also recorded a sharp increase in LNG imports (+16.2%) as a result of nuclear power plants being off-line for maintenance and of restrictions on the use of older coal-fired plants to improve air quality.

In Europe, net LNG imports (after deducting reloads) were up by 2.9 MT (+6.4%) reaching 48.9 MT. Imports into Belgium (+1.0 MT) and the Netherlands (+1.3 MT) rose strongly due to the decline in domestic production in the Netherlands and to the narrowing of price differentials between Northwest Europe and Asia. On the contrary, LNG volumes imported into Spain decreased (-1.4 MT) partly due to stronger pipeline imports. With 8.3 MT of imports in 2018, Turkey is now Europe's second largest LNG importer behind Spain (10.8 MT).

Imports into the American region remained overall stable, ending the year slightly higher (+2.5%) than in 2017. Mexico's share of the American region's imports remained at around 29% due to constraints on pipeline imports from the United States. Argentina's imports were well down on 2017 (-22.5%) because of the increase in domestic shale gas production from the Neuquén Basin.

Overall, LNG imports into the Middle East declined again in 2018, with deliveries falling by 42.5% (-6.7 MT) as increased availability of renewables in the UAE and new production from the recently discovered gas fields in Egypt improved the gas supply balance in both countries.

A strong rise in spot and short-term imports

Whereas the share of spot and short-term volumes had tended to stabilize at around 27% of total imports in recent years, the share jumped in 2018 to 32%. Spot and short-term volumes accounted in 2018 for 99.3 MT (+ 21.7 MT or a 28% increase over 2017). This expansion was supported by the ramp-up of flexible volumes from the United States and from Russia and by the rise of LNG volumes handled by aggregators and traders who are able to optimize their portfolios by purchasing and selling LNG on different contract durations. On the other hand, the output from several projects which started-up in the Pacific Basin in recent years was committed under long-term contracts between exporters and buyers. The overall increase in Australian exports and the diversion of a significant number of cargoes to China resulted in spot and short-term volumes supplied from Australia rising from 13% to 17% of global spot and short-term imports last year. Qatar's market share shrank from 20% to 12% and the country lost its historical position as the leading supplier of flexible volumes, dropping to the third place behind Australia and the United States.

With 78.7 MT, "true" spot volumes (i.e. LNG delivered within three months from the transaction date) reached 25% of total imports in 2018, compared with 20% in 2017 (58.5 MT). China, South Korea and Japan together absorbed 52% of spot volumes (41 MT). India also recorded a strong increase in spot purchases (+2.9 MT) due to stronger natural gas demand growth which could not be met by domestic production.

Re-exports recovered in 2018 as a result of better arbitrage opportunities between basins during the first half of the year, reaching 3.8 MT globally. Re-exports were supported by the output from Yamal, which is being transshipped from ice-class vessels to conventional LNG carriers in terminals in Northwest Europe and, from November, in northern Norway or unloaded into the tanks at a terminal before being re-exported. In 2018, 12 countries re-exported LNG and 22 countries received re-exported LNG. Europe accounted for 77% (2.9 MT) of the re-exported volumes. As in 2017, France had the largest market share (43% or 1.6 MT), followed by Singapore (15%) and the Netherlands (14%).

32%

of volumes delivered on a spot and short-term basis*

25%

of volumes delivered on a spot basis**

3.8 MT

re-exported from 12 countries to 22 destination countries

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

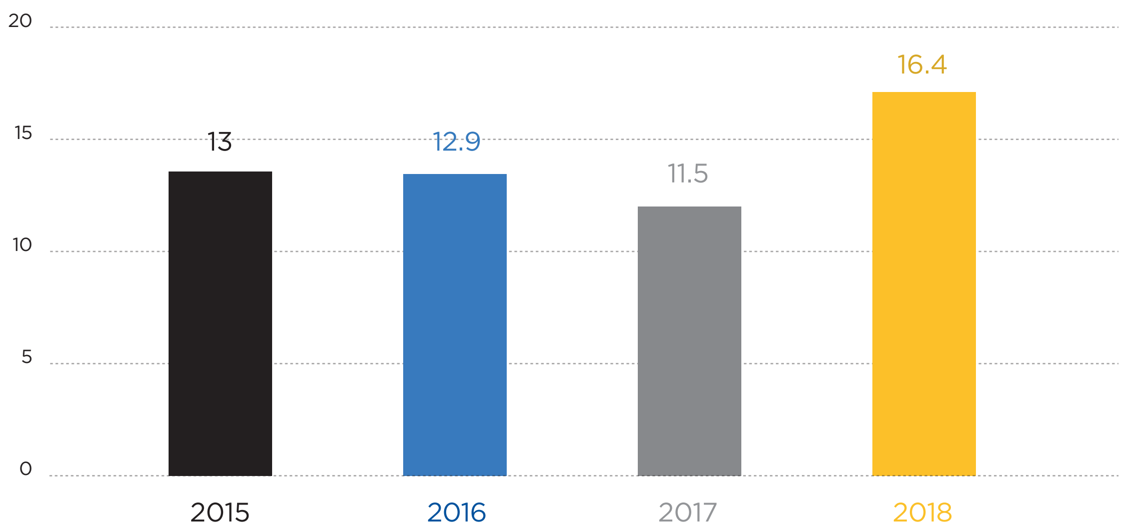
** *Cargoes delivered within 90 days from the transaction date*

Contracts concluded in 2018

Type	Buyer	Import country	Seller	Source	ACQ (MTPA)	Duration (years)	Start	Delivery Format
LONG & MEDIUM TERM CONTRACTS (> 4 YEARS)	BP	Multiple	Venture Global	USA / Calcasieu Pass	2.0	20	2022	FOB
	BP Singapore	Multiple	Oman LNG	Oman	1.1	7	2018	FOB
	BP Singapore	Multiple	PNG LNG	Papua New Guinea	0.45 0.90	3 2	2018-2021 2022-2023	DES
	CLP Power	Hong Kong	Shell	Portfolio	1.2	10	2020	DES
	CPC	Taiwan	Cheniere	USA / Portfolio	2.0	25	2021	DES
	EDF	Europe	Mozambique LNG1	Mozambique / Mozambique LNG	1.2	15		DES
	Galp	Multiple	Venture Global	USA / Calcasieu Pass	1.0	20	2022	FOB
	Ghana National Petroleum	Ghana	Rosneft	Portfolio	1.7	12		DES
	Hiroshima Gas	Japan	PT Pertamina	Indonesia	0.09	5	2018	FOB
	KPC	Kuwait	Mitsui	Portfolio	1.5	15	2020	DES
	Petrobangla	Bangladesh	Oman Trading International	Portfolio	1.0	10	2019	DES
	PetroChina	China	Cheniere	USA / Corpus Christi	1.2	25	2018	FOB
	PetroChina	China	Qatargas	Qatar / Qatargas II	3.4	22	2018	DES
	Petronas	Multiple	Cheniere	USA / Sabine Pass Train 6	1.1	20		FOB
	PGNiG	Multiple	Venture Global	USA / Calcasieu Pass	1.0	20	2022	FOB
	PGNiG	Multiple	Venture Global	USA / Plaquemines	1.0	20	2022	FOB
	PGNiG	Poland	Cheniere	USA / Portfolio	0.52 1.45	24	2019-2022 2023-2042	DES
	PGNiG	Poland	Sempra Energy	USA / Port Arthur LNG	2.0	20	2019	FOB
	Prumo Global Logistics	Brazil	BP	Portfolio	0.7	25	2023	DES
	Repsol	Multiple	Venture Global	USA / Calcasieu Pass	1.0	20	2022	FOB
	Shell	India	Total	Portfolio	0.53	5	2019	DES
	Shell	Multiple	Venture Global	USA / Calcasieu Pass	1.0+	20	2022	FOB
	Sinolam LNG	Panama	Shell	Portfolio	0.4	15	2020	DES
	SK E&S	South Korea	Shell	Portfolio	1.0	15	2021	DES
	Tohoku Electric Power	Japan	Mozambique LNG1	Mozambique / Mozambique LNG	0.28	15		DES
	Tokyo Gas / Centrica	Japan / UK	Mozambique LNG1	Mozambique / Mozambique LNG	2.6	15+		DES
	Trafigura	Multiple	Cheniere	USA / Portfolio	1.0	15	2019	FOB
	Vitol	Multiple	Cheniere	USA / Portfolio	0.7	15	2018	FOB
SHORT TERM CONTRACTS (≤ 4 YEARS)	CNOOC	China	Petronas	Portfolio	0.4	4	2019	DES
	CNOOC	China	PNG LNG	Papua New Guinea	0.3	4	2018	DES
	Eni	Pakistan	Trafigura	Portfolio	0.36	3	2019	DES
	Eni	Spain	Sonatrach	Algeria	0.18	1	2018	DES
	ENN	China	Total	Portfolio	0.25	3	2018	DES
	H-Energy	India	Petronas	Portfolio	0.36	3	2018	DES
	PetroChina	China	PNG LNG	Papua New Guinea	0.45	3	2018	DES
	PPT ETS	Multiple	PT Pertamina	Indonesia	0.8	3	2018	FOB
	PPT ETS	Multiple	PT Pertamina	USA	0.38	3	2018	FOB
	RWE	Multiple	Various	Portfolio	1.05		2018	DES/FOB
	RWE	Multiple	Woodside	Portfolio	0.3 - 0.6	Multi-year	2020	DES
	RWE	Multiple	Woodside	USA	0.3 - 0.6	Multi-year	2020	FOB
	Trafigura	Multiple	Freeport LNG	USA / Freeport LNG	1.5	3	2020	FOB
	Uniper	Multiple	Woodside	Portfolio	0.6	4	2019	DES
	Various	Multiple	RWE	Portfolio	1.35		2018	DES/FOB
CONTRACT MODIFICATION	BOTAS	Turkey	Sonatrach	Algeria	3.02 to 3.21	25 to 30	1994	DES
	CNOOC	China	Total	Portfolio	1.0 to 1.5	15 to 20	2010	DES
HEADS OF AGREEMENT	BP	Multiple	Tortue LNG	Mauritania & Senegal / Tortue LNG	2.4		2022	FOB
	CNOOC	China	NewAge	Congo	1.0	20	2021	
	CNOOC	China	Pacific Oil&Gas	Canada / Woodfibre LNG	0.75	13	2023	
	CNOOC	China	Petronas	Portfolio			2019	
	ENN	China	Mexico Pacific Ltd.	Mexico	1.0	15		
	ENN	China	NextDecade	USA	1.0	20	2023	FOB

Type	Buyer	Import country	Seller	Source	ACQ (MTPA)	Duration (years)	Start	Delivery Format
HEADS OF AGREEMENT	**ENN**	China	Venture Global	USA	1.0	20	2024	FOB
	ENN	China	Woodside	Portfolio	1.0	10	2025	DES
	JERA	Japan	ADNOC	UAE	0.5	3	2019	DES
	Mitsui	Japan	Sempra Energy	Mexico / Costa Azul	0.8	20	2023	
	Petrobangla	Bangladesh	AOT Energy	Portfolio	1.25	15		DES
	PGNiG	Multiple	Sempra LNG & Midstream	USA / Port Arthur LNG	2.0	20	2023	FOB
	PT Pertamina	Indonesia	Mozambique LNG2	Mozambique / Mozambique LNG	1.0	20	2018	DES
	Sumitomo	Multiple	Freeport LNG	USA / Freeport LNG Train 4	2.2	20	2023	FOB
	Toho Gas	Japan	Mitsubishi	Canada / LNG Canada	0.3	15	2024	DES
	Tokyo Gas	Japan	Mitsubishi	Canada / LNG Canada	0.6	13	2026	DES
	Tokyo Gas	Japan	Petronas	Malaysia / Malaysia LNG	0.5 0.9	up to 13	2018-2024 2025-2030	DES/FOB
	Tokyo Gas	Japan	Sempra Energy	Mexico / Costa Azul	0.8	20	2023	
	Total	Multiple	Sempra Energy	Mexico / Costa Azul	0.8	20	2023	FOB
	Vitol	Multiple	Petronas	Canada / LNG Canada or Portfolio	0.8	15	2024	DES/FOB
	Zhejiang Energy	China	ExxonMobil	Portfolio	1.0	20		
MEMORANDUMS OF UNDERSTANDING	**Axpo**	Europe	Pieridae Energy	Canada / Goldboro LNG	2.5	10	2023	
	Bangladesh Power Development Board (BPDB)	Bangladesh	PT Pertamina	Portfolio				
	CNOOC	China	Petronas	Portfolio				
	Tiekimas (LET) Lietuvos Energijos	Lithuania	Freeport LNG	USA / Freeport LNG			2019	
	Pakistan State Oil	Pakistan	PT Pertamina	Portfolio	1 - 1.5	10+5		DES
	Petrobangla	Bangladesh	PT Pertamina	Portfolio	1.0	10	2018	DES
	PT Pertamina	Multiple	Total	Portfolio	0.75	15	2018	DES
	Vitol	Multiple	Tellurian	USA / Driftwood LNG	1.5	15	2023	FOB

AVERAGE DURATION OF LONG & MEDIUM TERM CONTRACTS (YEARS)



Medium-term and long-term* contracts in force in 2018

Export Country	Loading Point	Seller	Buyer	ACQ (MTPA)	Duration	Delivery Format	Comments
ATLANTIC BASIN							
Algeria	Skikda-Bethioua	Sonatrach	Botaş	3.2	1994/2024	DES	
		Sonatrach	Cepsa Gas	0.77	2002/2022	DES	
		Sonatrach	DEPA	0.72	2000/2021	CIF	
		Sonatrach	Enel	0.15	1999/2022	DES	Delivery under the "GDF SUEZ / Enel" swap agreement
		Sonatrach	Total	1.5	1972/2020	DES	
		Sonatrach	Total	2.5	1972/2020	DES	
Cameroon	Kribi	SNH	Gazprom	1.2	2018/2026	FOB	
Egypt	Damietta	SEGAS	BP	1	2005/2025	FOB	No deliveries in 2016
		SEGAS	Union Fenosa gas	3	2005/2030	FOB	
	Idku	ELNG T1	Total	3.6	2005/2025	FOB	
		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	Botaş	0.91	1999/2021	DES	
		Nigeria LNG T1 & 2	Enel	2.45	1999/2022	DES	
		Nigeria LNG T1 & 2	Galp Energia	0.26	2000/2020	DES	
		Nigeria LNG T1 & 2	Naturgy Energy Group	1.17	1999/2021	DES	
		Nigeria LNG T1 & 2	Total	0.33	1999/2021	DES	
		Nigeria LNG T3	Galp Energia	0.73	2003/2023	DES	
		Nigeria LNG T3	Naturgy Energy Group	1.99	2002/2024	DES	
		Nigeria LNG T4 & 5	Endesa	0.75	2006/2026	DES	
		Nigeria LNG T4 & 5	ENI	1.15	2006/2026	DES	
		Nigeria LNG T4 & 5	Galp Energia	1.42	2006/2026	DES	
		Nigeria LNG T4 & 5	Iberdrola	0.38	2006/2026	DES	
		Nigeria LNG T4 & 5	Shell	2.3	2006/2026	DES	
		Nigeria LNG T4 & 5	Shell	1.13	2006/2026	DES	
		Nigeria LNG T4 & 5	Total	0.23	2006/2029	DES	
		Nigeria LNG T6	Shell	3.1	2008/2027	DES	
		Nigeria LNG T6	Total	0.9	2008/2029	DES	
Norway	Hammerfest	Equinor	Equinor	1.75	2007/2021	DES	
		Equinor	Iberdrola	1.13	2006/2025	DES	
		Neptune Energy	Total	0.5	2007/ depletion	FOB	
		Total	Total	0.7	2007/ depletion	FOB	
		-	RWE Supply & Trading	0.06-0.12	2010/ depletion	FOB	
Russia	Sabetta	Yamal LNG	CNPC	3	2018/2038	DES	
		Yamal LNG	Gazprom	2.9	2018/2038	FOB	
		Yamal LNG	Naturgy Energy Group	2.5	2018/2038	DES	
		Yamal LNG	Novatek	2.5	2018/2038	FOB	
		Yamal LNG	Total	4	2018/2032	FOB	
Trinidad & Tobago	Point Fortin	Atlantic LNG T1	ENGIE	1.6	1999/2018	FOB	
		Atlantic LNG T1	Naturgy Energy Group	1.06	1999/2018	FOB	
		Atlantic LNG T2 & 3	BP	0.85	2002/2021	FOB	
		Atlantic LNG T2 & 3	ENGIE	0.35	2002/2023	FOB	
		Atlantic LNG T2 & 3	Naturgas Energia	0.74	2003/2023	FOB	Naturgy/Naturgas swap Naturgy buys 0.74 MTPA on a FOB basis until 2023
		Atlantic LNG T2 & 3	Naturgy Energy Group	0.65	2003/2023	FOB	
		Atlantic LNG T2 & 3	Shell	1.7	2003/2023	FOB	
		Atlantic LNG T2 & 3	Shell	2	2006/2023	FOB	
		Atlantic LNG T4	BP	2.5	2006/2026	FOB	
		Atlantic LNG T4	Shell	1.5	2006/2026	FOB	
		Atlantic LNG T4	Shell	1	2014/2026	FOB	

**Duration above four years*

Export Country	Loading Point	Seller	Buyer	ACQ (MTPA)	Duration	Delivery Format	Comments
Trinidad & Tobago	Point Fortin	BP	AES	**0.75**	2003/2023	DES	Related to BP/ALNG T2 & 3 contract
		ENGIE	Ecoelectrica	**0.6**	2000/2020	DES	Related to ENGIE/ ALNG T1 contract
USA	Corpus Christi	Cheniere	PetroChina	**1.2**	2018/2043	N/A	Two SPAs with an aggregate volume of ~1.2 mtpa. A portion begins in 2018. the balance in 2023. Both continue through 2043. 2018 volumes supplied from Sabine Pass.
		Cheniere	Vitol	**0.7**	2018/2033	FOB	
	Cove Point	GAIL	GAIL	**1**	2018/2038	FOB	
		Pacific Summit Energy	Kansai Electric Group	**0.8**	2018/2037	FOB	
		ST Cove Point	Tokyo Gas Group	**1.4**	2018/2037	FOB	
		ST Cove Point	Pacific Summit Energy	**0.9**	2018/2037	FOB	
	Sabine Pass	Cheniere	Cheniere Marketing	**excess from Sabine Pass**	2016+	FOB	
		Cheniere	GAIL	**3.5**	2018/2038	FOB	
		Cheniere	KOGAS	**3.5**	2017/2037	FOB	
		Cheniere	Naturgy Energy Group	**3.5**	2017/2037	FOB	
		Cheniere	Shell	**5.5**	2016/2036	FOB	
MIDDLE EAST							
Oman	Qalhat	Oman LNG	BP	**1.13**	2018/2024	FOB	
		Oman LNG	Itochu	**0.77**	2006/2026	FOB	
		Oman LNG	KOGAS	**4.06**	2000/2024	FOB	
		Oman LNG	Osaka Gas	**0.66**	2000/2024	FOB	
		Qalhat LNG	Itochu Corp.	**0.77**	2006/2026	FOB	
		Qalhat LNG	Mitsubishi	**0.8**	2006/2020	FOB	
		Qalhat LNG	Osaka Gas	**0.8**	2009/2026	FOB	
		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	
		Qatargas I	JERA	**4**	1997/2021	DES	
		Qatargas I	JERA	**1**	2012/2021	DES	
		Qatargas I	Naturgy Energy Group	**0.75**	2005/2024	DES	
		Qatargas I	Naturgy Energy Group	**0.75**	2006/2025	FOB	
		Qatargas I	Shizuoka Gas	**0.2**	2016/2021	DES	Tripartite SPA (Qatar Liquefied Gas. JERA and Shizuoka Gas)
		Qatargas II T1	Pakistan State Oil	**3.75**	2016/2031	DES	
		Qatargas II T1/T2	Petrochina	**3.4**	2018/2040	DES	
		Qatargas II T2	Total	**1.85**	2009/2034	DES	
		Qatargas II T2	Total	**1.5**	2009/2034	DES	
		Qatargas II T2	Total	**1.85**	2009/2034	DES	
		Qatargas III	CNOOC	**2**	2011/2035	DES	
		Qatargas III	JERA	**0.7**	2013/2028	DES	Nominal quantity (ACQ) 2013/2017: 1 MTPA
		Qatargas III	Kansai Electric	**0.5**	2013/2027	DES	
		Qatargas III	PGNiG	**1.1**	2015/2034	DES	
		Qatargas III	PGNiG	**0.9**	2018/2034	DES	
		Qatargas III	PTT	**2**	2015/2029	DES	
		Qatargas III	RWE Supply & Trading	**1.1**	2016/2023	DES	
		Qatargas III	Tohoku Electric	**0.06-0.09**	2016/2030	DES	
		Qatargas IV	Centrica	**3**	2014/2023	DES	Extension of the previous 4 years and half contract Nominal quantity (ACQ) 2014/2018: 3 MTPA; 2019/2023: 2 MTPA
		Qatargas IV	Marubeni	**1**	2011/2031	DES	
		Qatargas IV	Petrochina	**3**	2011/2036	DES	
		Qatargas IV	Petronas	**1.14**	2014/2023	DES	Extension of the previous 5 years contract Nominal quantity (ACQ) 2014/2018: 1.14 MTPA; 2019/2023: 1.1 MTPA
		Qatargas IV	Uniper	**1.5**	2014/2018	DES	

Export Country	Loading Point	Seller	Buyer	ACQ (MTPA)	Duration	Delivery Format	Comments
Qatar	Ras Laffan	RasGas I	Endesa	0.74	2005/2025	DES	
		RasGas I	KOGAS	4.92	1999/2024	FOB	
		RasGas II T1	Petronet LNG	5	2004/2028	FOB	
		RasGas II T2	Edison	4.6	2009/2034	DES	
		RasGas II T3	CPC	3.08	2008/2032	FOB	
		RasGas II T3	EDF Trading	3.4	2007/2027	DES	Extended to 2027
		RasGas II T3	ENI	2.05	2007/2027	DES/FOB	Former Distrigas contract
		RasGas III T1	EDF Trading	Up to 2	2017/2021	DES	
		RasGas III T1	KOGAS	2.1	2007/2026	DES	
		RasGas III T1	Petronet LNG	2.5	2009/2029	FOB	
		RasGas III T2	CPC	1.5	2013/2032	DES	
		RasGas III T2	KOGAS	2	2012/2032	DES	
		RasGas III T2	Petrobangla	2.5	2018/2033	DES	
		RasGas III T2	Petronet LNG	1	2016/2028	FOB	
United Arab Emirates	Das Island	Adgas	JERA	4.7	1994/2019	DES	
Yemen	Balhaf	Yemen LNG T1 & 2	Total	2	2009/2029	DES	
		Yemen LNG T2	Total	2.55	2009/2029	FOB	
PACIFIC BASIN							
Australia	Withnell Bay	Woodside, Shell, BHP, BP Australia, Chevron, Japan Australia LNG (Mitsubishi & Mitsui)	Chugoku Electric	1.43	2009/2021	DES	
			GDLNG	3.3	2006/2031	FOB	
			JERA	0.5	2009/2019	DES	
			JERA	0.3	2009/2024	DES	
			JERA	0.6	2009/2029	DES	
			Kansai Electric	0.5-0.93	2009/2024	DES	
			Kansai Electric	0.2-0.44	2009/2024	DES	
			Kyushu Electric	0.7	2009/2023	FOB	
			Kyushu Electric	0.5	2006/2021	DES	
			Osaka Gas	1	2004/2033	FOB	
			Shizuoka Gas	0.13	2004/2029	FOB	
			Toho Gas, Tokyo Gas	1.37	2004/2029	FOB	
			Toho Gas	0.76	2009/2019	DES	
			Tohoku Electric	1	2010/2019	DES	
			Tokyo Gas	0.5	2009/2024	DES	
	Darwin	Conocophillips. ENI. Santos. Inpex. JERA. Tokyo Gas	JERA	2	2006/2022	FOB	
			Tokyo Gas	1	2006/2022	FOB	
		Ichthys LNG	CPC	1.8	2018/2033	DES	
		Ichthys LNG	INPEX	0.9	2018/2032	FOB	
		Ichthys LNG	JERA	0.1	2018/2032	FOB	Nominal quantity (ACQ) in MTPA 2018: 0.1; 2019: 0.2; 2020: 0.3; 2021: 0.5
		Ichthys LNG	Kansai Electric	0.8	2018/2032	FOB	
		Ichthys LNG	Kyushu Electric	0.3	2018/2032	FOB	
		Ichthys LNG	Tokyo Gas, JERA, Kansai Electric, Osaka Gas, Kyushu Electric	4	2018/2032	FOB	
		Ichthys LNG	Total	0.9	2018/2033	FOB	
	Pluto	Pluto LNG	Kansai Electric	1.75-2	2011/2025	FOB/DES	
		Pluto LNG	Tokyo Gas	1.5	2011/2025	FOB/DES	
	Curtis Island	QCLNG	CNOOC	3.6	2014/2034	DES	
		QCLNG	Shell	3.8	2014/2034	FOB	
		QCLNG	Tokyo Gas	1.2	2015/2035	DES	
		GLNG	KOGAS	3.5	2016/2036	FOB	
		GLNG	PETRONAS	3.5	2015/2035	FOB	
		APLNG	Kansai Electric	1	2016/2035	FOB	
		APLNG	Sinopec	7.6	2016/2036	FOB	
	Barrow Island	Chevron	GS Caltex	0.5	2016/2036	DES	
		Chevron	JERA	1.44 + 0.06	2015/2039	FOB/DES	
		Chevron	JX Nippon Oil & Energy Corporation	0.3	2015/2030	DES	
		Chevron	Kyushu Electric	0.3	2015/2029	DES	
		Chevron	Osaka Gas	1.375 + 0.1875	2014/2039	FOB	

Export Country	Loading Point	Seller	Buyer	ACQ (MTPA)	Duration	Delivery Format	Comments
Australia	Barrow Island	Chevron	SK Group	0.8	2017/2021	FOB	SK will receive 4.15 MTPA of LNG over a five-year period starting in 2017
		Chevron	Tokyo Gas	1.1 + 0.15	2014/2039	FOB	
		ExxonMobil	Petrochina	2.25	2016/2036	DES	
		ExxonMobil	Petronet LNG	1.4	2016/2036	DES	
		Shell	BP	0.5	2016/2036	FOB	
	Ashburton North	Chevron, Kufpec, Woodside	JERA	2.2	2017/2036	DES	Total ACQ (DES) 2017 / 2018:1.7 MTPA 2018 / 2027: 3.3 MTPA
		Chevron, Kufpec, Woodside	JERA	0.9	2017/2036	FOB	
		Chevron, Kufpec, Woodside	JERA	0.4	2017/2036	DES (Equity+Inc.)	
		Chevron, Kufpec, Woodside	JERA	0.4	2017/2036	FOB	Nominal quantity (ACQ) in MTPA 2018: 0.4; 2019: 0.7; 2020: 0.8; 2021-: 1
		Chevron, Kufpec, Woodside	Kyushu Electric	0.70 + 0.13	2017/2036	FOB	
		Chevron, Kufpec, Woodside	Tohoku Electric	0.92	2017/2036	DES	
		PE Wheatstone	JERA	0.7	2017/2036	DES	Nominal quantity (ACQ) 2017 / 2018:0.5 MTPA 2018 / 2027:0.7 MTPA
Brunei	Lumut	Brunei LNG	JERA, Osaka Gas, Tokyo Gas	2.2	2013/2023	DES	
		Brunei LNG	KOGAS	1	1997/2018	DES	
		Brunei LNG	Petronas	0.9	2013/2023	DES	
		Brunei LNG	Shell	0.8	2013/2023	FOB	
Indonesia	Bontang	Pertamina. ENI Muara bakau	ENI	1	2017/2027	FOB	Nominal quantity (ACQ) 2011/2015: 3 MTPA; 2016/2020: 2 MTPA
		Pertamina, ENI Muara bakau	Pertamina	1.4	2017/2024	FOB	
		Pertamina, IDD Bangka	Pertamina	0.2	2016/2021	FOB	
		Pertamina. Total E&P. INPEX	JERA, Kansai Electric, Kyushu Electric, Nippon Steel Corporation, Osaka Gas, Toho Gas	2	2011/2020	DES/ FOB	
		Pertamina. Total E&P. INPEX	Nusantara Regas	1.5	2011/2022	FOB	
	Donggi-Senoro	PT Donggi-Senoro LNG	JERA	1	2015/2027	DES	
		PT Donggi-Senoro LNG	KOGAS	0.7	2015/2027	FOB	
		PT Donggi-Senoro LNG	Kyushu Electric	0.3	2015/2028	DES	
	Tangguh	Tangguh PSC Contractor Parties	CNOOC	2.6	2009/2033	FOB	
		Tangguh PSC Contractor Parties	Kansai Electric	1	2014/2035	DES	
		Tangguh PSC Contractor Parties	PLN	1.5	2015/2033	DES	
		Tangguh PSC Contractor Parties	Posco	0.55	2005/2024	DES	
		Tangguh PSC Contractor Parties	Sempra LNG	3.7	2008/2029	DES	3.4 MTPA divertible
		Tangguh PSC Contractor Parties	SK E&S	0.6	2006/2026	DES	
		Tangguh PSC Contractor Parties	Tohoku Electric	0.12	2010/2024	DES	
Malaysia	Bintulu	Malaysia LNG Satu	Hiroshima Gas	0.1	2016/2026	FOB	
		Malaysia LNG Satu	JERA	2.1	2018/2020	DES/FOB	
		Malaysia LNG Satu	Saibu Gas	0.45	2014/2028	DES/FOB	
		Malaysia LNG Satu	Shikoku Electric	0.36	2010/2025	DES	
		Malaysia LNG Dua	CPC	2	1995/2020	DES	
		Malaysia LNG Dua	Gas Bureau. City of Sendai	0.15	1997/2018	DES	
		Malaysia LNG Dua	JERA	0.4	2011/2031	DES	
		Malaysia LNG Dua	JX Nippon Oil & Energy Corporation	0.38	2015/2025	DES	
		Malaysia LNG Dua	KOGAS	1	1995/2018	FOB	
		Malaysia LNG Dua	Shizuoka Gas	0.33	2016/2025	DES	
		Malaysia LNG Dua	Tohoku Electric	0.37	2016/2026	DES	
		Malaysia LNG Dua	Tokyo Gas	0.9	2015/2025	DES	
		Malaysia LNG Tiga	CNOOC	3	2009/2029	DES	
		Malaysia LNG Tiga	Japan Petroleum Exploration Co.	0.48	2002/2021	DES	

Export Country	Loading Point	Seller	Buyer	ACQ (MTPA)	Duration	Delivery Format	Comments
Malaysia	**Bintulu**	Malaysia LNG Tiga	KOGAS	**2**	2008/2028	DES	
		Malaysia LNG Tiga	Osaka Gas, Toho Gas, Tokyo Gas	**0.68**	2004/2024	DES/FOB	
		Malaysia LNG Tiga	Toho Gas	**0.52**	2007/2027	DES	
		Malaysia LNG Tiga	Tohoku Electric	**0.5**	2005/2025	DES	
		Malaysia LNG	Osaka Gas	**0.8**	2009/2023	DES	
		Malaysia LNG	Tokyo Gas	**0.5**	2018/2031	FOB/DES	Nominal quantity (ACQ) in MTPA 2018-2014: up to 0.5; 2015-2031: up to 0.9
Papua New Guinea	**Port Moresby**	PNG LNG	CPC	**1.2**	2014/2033	DES	
		PNG LNG	JERA	**1.5**	2014/2034	DES/FOB	
		PNG LNG	Osaka Gas	**1.5**	2014/2034	DES/FOB	
		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	
		Sakhalin Energy Investment	Gazprom Global LNG	**1**	2009/2028	DES	
		Sakhalin Energy Investment	Hiroshima Gas	**0.21**	2008/2028	FOB	
		Sakhalin Energy Investment	JERA	**1.5**	2009/2029	FOB	
		Sakhalin Energy Investment	JERA	**0.5**	2011/2026	DES	
		Sakhalin Energy Investment	KOGAS	**1.5**	2008/2028	FOB	
		Sakhalin Energy Investment	Kyushu Electric	**0.5**	2009/2031	DES	
		Sakhalin Energy Investment	Osaka Gas	**0.2**	2008/2031	FOB	
		Sakhalin Energy Investment	Saibu Gas	**0.065**	2014/2027	DES	
		Sakhalin Energy Investment	Shell	**1**	2009/2028	DES	
		Sakhalin Energy Investment	Toho Gas	**0.5**	2009/2033	DES	
		Sakhalin Energy Investment	Tohoku Electric	**0.42**	2010/2030	FOB	
		Sakhalin Energy Investment	Tokyo Gas	**1.1**	2007/2031	FOB	
PORTFOLIO CONTRACTS							
BP Portfolio		BP	CPC	**0.7**	2017/2022	DES	
		BP	JERA	**0.5**	2014/2028	DES	
		BP	Kansai Electric	**0.5**	2017/2031	DES	
		BP	Kansai Electric	**Up to 13 MTPA through 23 years**	2015/2038	DES	Total quantity of LNG during contract duration : approx 13 MTPA
		BP	Kuwait Petroleum Corporation	**0.5**	2014/2020	DES	
		BP	PTT	**1**	2017/2037	DES	
Centrica Portolio		Centrica	PGNiG	**Up to 9 cargoes**	2018/2023	DES	
Cheniere Portolio		Cheniere	OMV		2018/2024	DES	
		Cheniere	Total	**0.8**	2018/2023	FOB	
		Cheniere	Vitol	**0.7**	2018/2033	FOB	
Chevron Portfolio		Chevron	CPC	**1.12**	2017/2022	DES	
		Chevron	JOVO	**0.5**	2018/2023	DES	
		Chevron	Pertamina	**0.2**	2016/2022	FOB	
Eni Portfolio		ENI	Iberdrola	**0.5**	2002/2018	DES	
		ENI	Pakistan LNG Limited	**0.75**	2017/2032	DES	
		ENI	Uniper	**0.58**	2007/2022	DES	
Equinor Portfolio		Equinor	Litgas	**0.26**	2015/2025	DES	
Gail Portfolio		GAIL	Shell	**1**	2018/2037	FOB	LNG is sourced from Cove Point
Gazprom Portfolio		Gazprom	EGAS	**35 cargoes during 5 years**	2015/2020		
		Gazprom	GAIL	**2.5**	2018/2041		
Gunvor Portfolio		Gunvor	Pakistan LNG Limited	**12 cargoes per year**	2017/2022	DES	60 cargoes in total - New MT contract
Iberdrola Portfolio		Iberdrola	BP	**0.38**	2012/2021		
		Iberdrola	DONG	**0.72**	2011/2021	DES	
Jera Portfolio		JERA LNG Coordination	INPEX	*****	2013/2018	DES	*Total quantity of LNG during contract duration :17 cargoes
Jera Portfolio		JERA LNG Coordination	Shizuoka Gas	**0.26**	2014/2032	DES	

Export Country	Loading Point	Seller	Buyer	ACQ (MTPA)	Duration	Delivery Format	Comments
Kansai Portoflio		Kansai	Total	0.4	2018/2023	FOB	LNG is sourced from Cove Point
Kogas Portfolio		KOGAS	TOTAL	0.7	2017/2037	FOB	LNG is sourced from Sabine Pass
Kyushu Electric Portfolio		Kyushu Electric	Nippon Gas	0.05	2016/2031	DES	
Naturgy Portfolio		Naturgy Energy Group	BHP Billiton	0.50	2016/2021	DES	
		Naturgy Energy Group	Endesa	0.70	2016/2036	DES	
		Naturgy Energy Group	Repsol	0.70	2016/2036	FOB	
Novatek Portofolio		Novatek	Gunvor		2018/2038	FOB	
		Novatek	Shell	0.9	2018/2038	FOB	
		Novatek	Total	1	2018/2040	DES	
Osaka Gas Portfolio		Osaka Gas	Hiroshima Gas	0.05-0.13	2016/2031	DES	
		Osaka Gas	Nippon Gas	0.08	2006/2026	DES	
		Osaka Gas	Shizuoka Gas	0.3	2015/2034	DES	
Petronas Portfolio		Petronas LNG	JOVO	0.5	2016/2023	DES	
		Petronas LNG	PTT	1.2	2017/2031	DES	
		Petronas LNG	Toho Gas	0.42-0.54	2017/2027	DES	
Shell Portfolio		Shell	BBE	~0.8	2003/2023		
		Shell	CFE	~3.08	2011/2027	DES	
		Shell	CNOOC	5	2015/2035	DES	LNG is sourced from Australia and USA
		Shell	CPC	2	2016/2036	DES	
		Shell	DUSUP	1	2010/2025	DES	
		Shell	ENGIE	0.4	2014/2034	DES	
		Shell	GNL Chile	3	2009/2030	DES	
		Shell	GSPC	Up to 2.5	2015/2035	DES	
		Shell	JERA	*	2014/2034	DES	* Maximum 12 cargoes per year
		Shell	JERA	0.4	2014/2034	DES	ACQ: 0.2 - 0.4 MTPA
		Shell	JX Nippon Oil & Energy Corporation	0.2	2012/2029	DES	LNG is sourced from Nigeria, Russia and Australia
		Shell	KOGAS	3.64	2013/2038	DES	
		Shell	Kuwait Petroleum Corporation	2	2014/2019	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	SOCAR	0.3	2016/2026	DES	
Tokyo Gas Portfolio		Tokyo Gas	Hokkaido Gas	0.3-0.4	2012/2023	DES	
		Tokyo Gas	Saibu Gas	0.3	2014/2029	DES	
Total Portfolio		Total	AES (Dominican Republic)	0.7	2018/2030	DES	
		Total	AES (Panama)	0.4	2018/2028	DES	
		Total	CNOOC	1-1.5	2010/2029	DES	extension to 1.5 MTPA as from 2020
		Total	Engie Energia Chile	0.27	2012/2026	DES	
		Total	Engie Energia Chile	0.2	2018/2032	DES	
		Total	INPEX	0.2	2018/2032	DES	
		Total	Kansai Electric	0.4	2018/2032	DES	
		Total	KOGAS	2	2014/2031	DES	
		Total	Pavilion Gas	0.7	2018/2028	DES	
		Total	Tohoku Electric	0.27	2018/2039	DES	
Vitol Portfolio		Vitol	KOMIPO	0.4	2015/2024		
Woodside Porfolio		Woodside	RWE Supply & Trading	0.3-0.6	2017/2022	DES	

LNG shipping

The total LNG tanker fleet consisted of 563 vessels at the end of 2018

It included 33 FSRUs and 44 vessels of less than 50,000 cubic meters. Total cargo capacity at the end of 2018 stood at 83.1 million cubic meters. Total operational capacity (vessels known to be in service) amounted to 79.6 million cubic meters.

In 2018, the average spot charter rate for a 160,000 cubic meters LNG carrier stood at $88,692/day, compared to an average $46,058/day in 2017.

A total of 57 vessels were delivered in 2018 while 77 units were contracted, including 2 FSRUs and 10 vessels of less than 50,000 cubic meters, compared with 19 new orders placed in 2017. The LNG carrier orderbook consisted of 138 units at the end of 2018 (equating to 25% of the LNG carrier fleet) with 46 of these vessels scheduled for delivery in 2019.

LNG CARRIERS SCRAPPED IN 2018 / 5 ships were scrapped during the year:

Built	Vessel Name	IMO Number	Type	Capacity (m^3)	CCS*	Owner	Builder	Manager
1972	Bebatik	7121633	LNG Carrier	75 060	TZM	Brunei Shell Tankers	Ch. de l'Atlantique	STASCO (Shell)
1975	Belanak	7347768	LNG Carrier	75 000	TZM	Brunei Shell Tankers	Ch.De La Ciotat	STASCO (Shell)
1976	West Energy	7360124	LNG Carrier	122 000	GT	Sinokor Merchant	Ch. de l'Atlantique	Sinokor Ship Mngt
1977	East Energy	7360136	LNG Carrier	122 000	GT	Sinokor Merchant	Ch. de l'Atlantique	Sinokor Merchant
1981	Tenaga Lima	7428445	LNG Carrier	130 000	GT	MISC	C.N.I.M.	MISC

LNG CARRIERS LAID-UP, IDLE OR OTHERWISE OUT OF SERVICE AT THE END OF 2018 / 28 vessels were laid-up, idle or otherwise out of service at the end of the year. In addition, 3 vessels were idle, awaiting conversion:

Built	Vessel Name	IMO Number	Type	Capacity (m^3)	CCS*	Owner	Builder	Manager
1976	Gimi	7382732	LNG Carrier	126 277	KM	Golar LNG	Moss Rosenberg	Golar Management
1981	Fortune FSU	7428471	LNG Carrier	130 000	GT	Dalian Inteh Group	Ch. de France	Dalian Inteh Group
1981	Lucky FSU	7428469	LNG Carrier	130 000	GT	Dalian Inteh Group	Ch. de France	Dalian Inteh Group

LNG CARRIERS DELIVERED IN 2018 / 57 ships were delivered during the year, including 5 FSRUs and 4 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 171,753 cubic meters.

Built	Vessel Name	IMO Number	Type	Capacity (m^3)	CCS*	Owner	Builder	Manager
2018	Coral Energice	9783124	LNG Carrier	18 000	CTk	Anthony Veder	Neptun Werft	Anthony Veder
2018	Xinle 30	9693719	LNG Carrier	30 133	CTk	Lejin Shipping	Ningbo Xinle SB	Lejin Shipping
2018	Seri Cemara	9756389	LNG Carrier	150 200	KM	MISC	Hyundai HI (Ulsan)	EagleStar Shipmgmt
2018	Seri Camar	9714305	LNG Carrier	150 200	KM	MISC	Hyundai HI (Ulsan)	MISC
2018	Marvel Eagle	9759240	LNG Carrier	155 000	KM	Mitsui OSK Lines	Kawasaki HI Sakaide	Mitsui OSK Lines
2018	Oceanic Breeze	9698111	LNG Carrier	155 671	KM	K-Line	MHI Nagasaki	K-Line Ship Mgmt
2018	Pacific Mimosa	9743875	LNG Carrier	155 727	KM	Nippon Yusen Kaisha	MHI Nagasaki	NYK LNG Shipmngt.
2018	Diamond Gas Orchid	9779226	LNG Carrier	165 000	KM	Nippon Yusen Kaisha	MHI Nagasaki	NYK LNG Shipmngt.
2018	Diamond Gas Rose	9779238	LNG Carrier	165 000	KM	Nippon Yusen Kaisha	MHI Nagasaki	Nippon Yusen Kaisha
2018	Energy Liberty	9736092	LNG Carrier	165 000	IHI	Mitsui OSK Lines	JMU Tsu Shipyard	Mitsui OSK Lines
2018	Enshu Maru	9749609	LNG Carrier	165 257	KM	K-Line	Kawasaki HI Sakaide	K-Line
2018	Georgiy Brusilov	9768382	LNG Carrier	172 000	GT	Dynagas LNG	Daewoo (DSME)	Dynagas LNG
2018	Boris Davydov	9768394	LNG Carrier	172 000	GT	Dynagas LNG	Daewoo (DSME)	Dynagas LNG
2018	Vladimir Vize	9750658	LNG Carrier	172 410	GT	Arctic Blue LNG	Daewoo (DSME)	Arctic Blue LNG
2018	Rudolf Samoylovich	9750713	LNG Carrier	172 652	GT	Teekay Corp CLNG JV	Daewoo (DSME)	Teekay Corp CLNG JV

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** Cargo Containment System.*

Built	Vessel Name	IMO Number	Type	Capacity (m³)	CCS*	Owner	Builder	Manager
2018	Vladimir Rusanov	9750701	LNG Carrier	172 652	GT	Arctic Blue LNG	Daewoo (DSME)	MOL LNG Europe
2018	Flex Endeavour	9762261	LNG Carrier	173 400	GT	FLEX LNG	Daewoo (DSME)	B. Schulte (UK)
2018	Flex Enterprise	9762273	LNG Carrier	173 400	GT	FLEX LNG	Daewoo (DSME)	B. Schulte (UK)
2018	Magdala	9770921	LNG Carrier	173 545	GT	Teekay LNG Partners	Daewoo (DSME)	STASCO (Shell)
2018	Myrina	9770933	LNG Carrier	173 545	GT	Teekay LNG Partners	Daewoo (DSME)	STASCO (Shell)
2018	Megara	9770945	LNG Carrier	173 545	GT	Teekay LNG Partners	Daewoo (DSME)	STASCO (Shell)
2018	British Partner	9766530	LNG Carrier	173 644	GT	BP Shipping	Daewoo (DSME)	BP Shipping
2018	British Achiever	9766542	LNG Carrier	173 644	GT	BP Shipping	Daewoo (DSME)	BP Shipping
2018	British Contributor	9766554	LNG Carrier	173 644	GT	BP Shipping	Daewoo (DSME)	BP Shipping
2018	Flex Rainbow	9709037	LNG Carrier	174 000	TZM	FLEX LNG	Samsung HI	FLEX LNG
2018	GasLog Genoa	9744013	LNG Carrier	174 000	TZM	GasLog	Samsung HI	GasLog
2018	Pan Americas	9750232	LNG Carrier	174 000	GT	Teekay LNG Partners	Hudong Zhonghua	Teekay Shpg. (Gla)
2018	Pan Europe	9750244	LNG Carrier	174 000	GT	Teekay LNG Partners	Hudong Zhonghua	Teekay LNG Partners
2018	Kinisis	9785158	LNG Carrier	174 000	GT	Chandris (Hellas)	Daewoo (DSME)	K-Line Ship Mgmt
2018	Patris	9766889	LNG Carrier	174 000	GT	Chandris (Hellas)	Daewoo (DSME)	K Line LNG Shpg.
2018	GasLog Hongkong	9748904	LNG Carrier	174 000	GT	GasLog	Hyundai HI (Ulsan)	GasLog LNG Services
2018	GasLog Houston	9748899	LNG Carrier	174 000	GT	GasLog	Hyundai HI (Ulsan)	GasLog LNG Services
2018	Marvel Falcon	9760768	LNG Carrier	174 000	TZM	Nippon Yusen Kaisha	Samsung HI	NYK Shipmngt. Pte.
2018	Marvel Hawk	9760770	LNG Carrier	174 000	TZM	Nippon Yusen Kaisha	Samsung HI	Nippon Yusen Kaisha
2018	Flex Ranger	9709025	LNG Carrier	174 101	TZM	FLEX LNG	Samsung HI	B. Schulte (UK)
2018	SK Serenity	9761803	LNG Carrier	174 117	KOG	SK Shipping	Samsung HI	SK Shipping
2018	SK Spica	9761815	LNG Carrier	174 117	KOG	SK Shipping	Samsung HI	SK Shipping
2018	Sean Spirit	9781918	LNG Carrier	174 162	GT	Teekay LNG Partners	Hyundai Samho HI	Teekay Shpg. (Gla)
2018	BW Tulip	9758064	LNG Carrier	174 284	GT	BW Gas	Daewoo (DSME)	BW Fleet Mngt
2018	BW Lilac	9758076	LNG Carrier	174 284	GT	BW Gas	Daewoo (DSME)	BW Fleet Mngt
2018	CESI Wenzhou	9694751	LNG Carrier	174 323	GT	China Energy Shpg	Hudong Zhonghua	China Energy Mngt
2018	CESI Lianyungang	9672818	LNG Carrier	174 323	GT	China Energy Shpg	Hudong Zhonghua	China Energy Mngt
2018	Maran Gas Spetses	9767950	LNG Carrier	174 501	GT	Maran Gas Maritime	Daewoo (DSME)	Maran Gas Maritime
2018	LNG Sakura	9774135	LNG Carrier	177 582	KM	KEPCO	Kawasaki HI Sakaide	NYK LNG Shipmngt.
2018	Castillo de Caldelas	9742819	LNG Carrier	178 817	TZM	Elcano	Imabari SB Saijo	Elcano
2018	Castillo de Merida	9742807	LNG Carrier	178 817	TZM	Elcano	Imabari SB Saijo	Elcano
2018	LNG Juno	9774628	LNG Carrier	180 000	KM	Trans Pacific Spg 5	MHI Nagasaki	Mitsui OSK Lines
2018	SK Resolute	9693173	LNG Carrier	180 082	TZM	SK/Marubeni JV	Samsung HI	SK Shipmngt.
2018	LNG Schneeweisschen	9771913	LNG Carrier	180 125	GT	Mitsui OSK Lines	Daewoo (DSME)	MOL LNG Europe
2018	Pacific Breeze	9698123	LNG Carrier	183 352	KM	K-Line	Kawasaki HI Sakaide	K-Line
2018	Kairos	9819882	LNG Bunkering Vessel	7 500	CTk	Schulte Group	Hyundai Mipo	B. Schulte (Deutsch)
2018	Bunker Breeze	9824590	LNG & Oil Bunkering Vessel	4 864	CTk	Grupo Suardiaz	Ast. Zamakona	Grupo Suardiaz
2018	Karunia Dewata	9820881	FSRU	26 000		Jaya Samudra	PaxOcean Zhoushan	Jaya Samudra
2018	Hoegh Gannet	9822451	FSRU	170 000	GT	Hoegh LNG	Hyundai HI (Ulsan)	Hoegh LNG Fleet M.
2018	Golar Nanook	9785500	FSRU	170 000	TZM	Golar LNG	Samsung HI	Golar Management
2018	Hoegh Esperanza	9780354	FSRU	170 032	TZM	Hoegh LNG	Hyundai HI (Ulsan)	Höegh LNG Fleet M.
2018	Marshal Vasilevskiy	9778313	FSRU	174 100	TZM	Gazprom	Hyundai HI (Ulsan)	Gazprom

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* *Cargo Containment System.*

FSRU FLEET

The total FSRU fleet consisted of **33** units at the end of 2018. Total FSRU cargo capacity at the end of 2018 stood at around 5 million cubic meters. The orderbook comprised of 10 FSRUs and 3 of these vessels were scheduled for 2019 delivery.

FSRU FLEET AT THE END OF 2018

Built	Vessel Name	Storage Capacity (m³)	CCS*	Nominal Send-out Capacity (MTPA)	Owner	Builder	Location
1977	Nusantara Regas Satu	125 000	KM	3.0	Golar LNG	Jurong Shipyard	Indonesia
1977	Golar Freeze	125 000	KM	3.6	Golar LNG	Keppel Shipyard	Jamaica
1981	Golar Spirit	129 000	KM	1.8	Golar LNG	Keppel Shipyard	Laid up
2003	FSRU Toscana	137 000	KM	2.8	OLT Offshore	Drydocks World Dubai	Italy
2004	Golar Winter	138 000	GT	3.8	Golar LNG	Keppel Shipyard	Brazil
2005	Excellence	138 000	GT	3.8	Excelerate Energy	DSME	Bangladesh
2005	Excelsior	138 000	GT	3.5	Excelerate Energy	DSME	Israel
2006	Excelerate	138 000	GT	3.8	Excelerate Energy	DSME	LNGC
2008	Explorer	150 900	GT	6.0	Excelerate Energy	DSME	UAE
2009	Express	150 900	GT	4.8	Excelerate Energy	DSME	LNGC
2009	Exquisite	150 900	GT	4.8	Nakilat-Excelerate Energy	DSME	Pakistan
2009	Neptune	145 130	TZM	3.7	Höegh LNG	SHI	Turkey
2010	Expedient	150 900	GT	4.5	Excelerate Energy	DSME	Argentina
2010	Cape Ann	145 130	TZM	3.7	Höegh LNG	SHI	LNGC
2010	Exemplar	150 900	GT	4.8	Excelerate Energy	DSME	LNGC
2014	Experience	173 400	GT	6.0	Excelerate Energy	DSME	Brazil
2014	PGN FSRU Lampung	170 000	TZM	1.8	Höegh LNG	HHI	Indonesia
2014	Golar Eskimo	160 000	TZM	3.8	Golar LNG	SHI	Jordan
2014	Golar Igloo	170 000	TZM	5.8	Golar LNG	SHI	Kuwait
2014	Independence	170 000	TZM	2.9	Höegh LNG	HHI	Lithuania
2014	Höegh Gallant	170 000	TZM	2.8	Höegh LNG	HHI	LNGC
2015	BW Singapore	170 000	TZM	5.7	BW Gas	SHI	Egypt
2015	Golar Tundra	170 000	TZM	5.5	Golar LNG	SHI	LNGC
2016	Höegh Grace	170 000	TZM	3.0	Höegh LNG	HHI	Colombia
2017	Höegh Giant	170 000	TZM	3.7	Höegh LNG	HHI	LNGC
2017	BW Integrity	170 000	TZM	5.0	BW Gas	SHI	Pakistan
2017	Exmar FSRU	25 000	Other	4.6	Exmar Offshore	Wison Zhoushan	Repairs
2017	MOL FSRU Challenger	263 000	GT	4.1	MOL	DSME	Turkey
2018	Golar Nanook	170 000	TZM	5.5	Golar LNG	SHI	LNGC
2018	Höegh Esperanza	170 000	TZM	3.0	Höegh LNG	HHI	China
2018	Karunia Dewata	26 000	Other	0.4	JSK Group	PaxOcean Zhoushan	Indonesia
2018	Höegh Gannet	170 000	TZM	5.5	Höegh LNG	HHI	LNGC
2018	Marshal Vasilevskiy	174 000	TZM	2.0	Gazprom	HHI	Russia

FSRU ORDERBOOK AT THE END OF 2018

Built	Vessel Name	Storage Capacity (m³)	CCS*	Owner	Builder	Location
2019	BW Courage (ex Açu FSRU)	173 400	GT	BW Gas	DSME	Brazil
2019	Höegh Galleon	170 000	TZM	Höegh LNG	SHI	
2019	Turquoise (ex Turkey FSRU)	170 000	TZM	Kolin Construction	HHI	Turkey
2020	Vasant (ex Pipavav FSRU)	180 000	GT	Swan Energy	HHI	India
2020	N/B DSME 2477	173 400	GT	Maran Gas Maritime	DSME	
2020	N/B HHI	170 000	GT	BOTAS	HHI	
2021	N/B SHI	170 000	GT	PT Jawa Satu Regas	SHI	Indonesia
2021	N/B HZ	174 000	GT	Dynagas LNG	HZ	
2021	N/B HZ	174 000	GT	Dynagas LNG	HZ	

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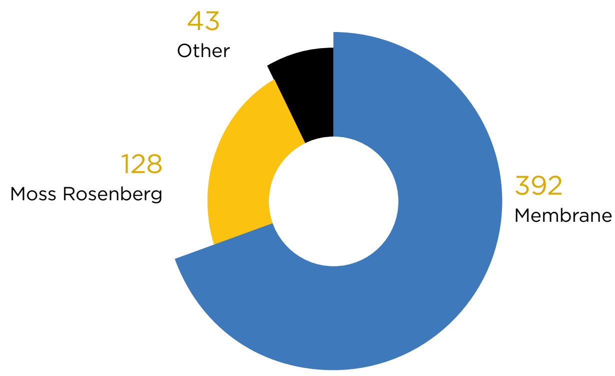
** Cargo Containment System.*

LNG FLEET STATISTICS

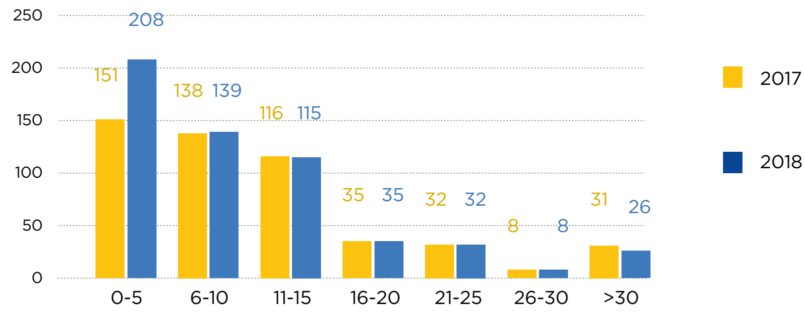
At the end of 2018. the fleet could be classified as follows :

CONTAINMENT SYSTEM

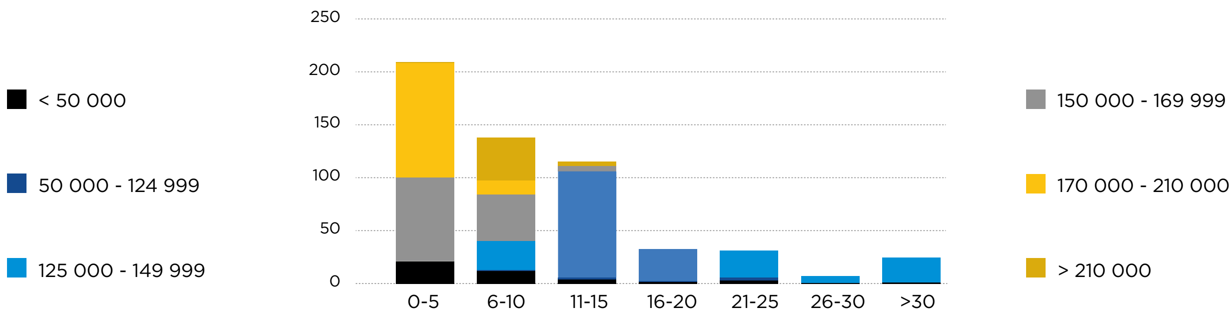


CARGO CAPACITY (m³)

AGE OF THE EXISTING LNG FLEET (YEARS)



CARGO CAPACITY (m³) AND AGE (YEARS)



LNG CARRIER FLEET

Built	Vessel Name	Capacity (m^3)	CCS*	Owner	Builder	Manager
1974	Seagas (ex Fjalir)	167	Other	Aga Gas AB	Fiskerstrand	Sirius Shpg.
1976	Gimi	126 277	KM	Golar LNG	Moss Rosenberg	Golar Mngt.
1977	LNG Aquarius	126 300	KM	Hanochem Shpg.	General Dynamics	MOL LNG Europe
1978	Bering Energy (ex LNG Leo)	126 400	KM	Sinokor Merchant	General Dynamics	Sinokor Merchant
1978	Gulf Energy (ex LNG Gemini)	126 300	KM	Sinokor Merchant	General Dynamics	Sinokor Merchant
1978	LNG Capricorn	126 300	KM	Nova Shpg & Log	General Dynamics	Nova Shpg & Log
1979	Coral Energy (ex LNG Virgo)	126 400	KM	Sinokor Merchant	General Dynamics	Sinokor Merchant
1979	GCL (ex LNG Libra)	126 400	KM	Golden Concord	General Dynamics	Thome Ship Mngt.
1979	LNG Taurus	126 300	KM	Nova Shpg & Log	General Dynamics	Nova Shpg & Log
1979	Ocean Quest (ex Matthew)	126 540	TZM	Hong Kong LNG	Newport News Shipbuilding	OSM Maritime
1980	Caribbean Energy (ex Gaea)	126 530	KM	Sinokor Merchant	General Dynamics	Sinokor Merchant
1980	Mourad Didouche	126 130	GT	Hyproc Shpg.	Ch. de l'Atlantique	Hyproc Shpg.
1980	South Energy (ex LNG Edo)	126 530	KM	Sinokor Merchant	General Dynamics	Sinokor Ship Mngt.
1981	Fortune FSU (ex Tenaga Tiga)	130 000	GT	Dalian Inteh Group	Ch. de France	Dalian Inteh Group
1981	Lucky FSU (ex Tenaga Dua)	130 000	GT	Dalian Inteh Group	Ch. de France	Dalian Inteh Group
1981	Pacific Energy (ex LNG Bonny)	135 293	GT	Sinokor Merchant	Kockums AB	Sinokor Ship Mngt.
1981	Ramdane Abane	126 130	GT	Hyproc Shpg.	Ch. de l'Atlantique	Hyproc Shpg.
1983	Adriatic Energy (ex Echigo Maru)	125 568	KM	Sinokor Merchant	MHI	Sinokor Merchant
1983	Baltic Energy (ex Wilpower)	125 929	KM	Sinokor Merchant	KHI	Sinokor Merchant
1983	North Energy (ex Wilenergy)	125 542	KM	Sinokor Merchant	MHI	Sinokor Ship Mngt.
1984	Atlantic Energy (ex LNG Finima)	133 000	GT	Sinokor Merchant	Kockums AB	Sinokor Ship Mngt.
1984	Mediterranean Energy (ex Wilgas)	125 877	KM	Sinokor Merchant	MHI	Sinokor Ship Mngt.
1984	Senshu Maru	125 835	KM	Mitsui OSK Lines	Mitsui Shipbuilding	MOL LNG Transport
1988	Kayoh Maru	1 517	IHI	Daiichi Tanker	Imamura Zosen	Daiichi Tanker
1989	Grace Energy (ex LNG Swift)	127 590	KM	Sinokor Merchant	MHI	Sinokor Ship Mngt.
1989	LNG Maleo (ex Northwest Swallow)	127 708	KM	Mitsui OSK Lines	Mitsui Shipbuilding	MOL LNG Transport
1989	Northwest Sanderling	127 525	KM	Aust. LNG Ship Optg.	MHI	STASCO (Shell)
1990	Ekaputra	137 012	KM	Humpuss Intermoda	MHI	Humpuss Trans.
1990	Northwest Snipe	127 747	KM	Aust. LNG Ship Optg.	Mitsui Shipbuilding	STASCO (Shell)
1991	Northwest Shearwater	127 500	KM	Aust. LNG Ship Optg.	KHI	STASCO (Shell)
1992	Northwest Seaeagle	127 452	KM	Aust. LNG Ship Optg.	Mitsui Shipbuilding	STASCO (Shell)
1993	Arctic Spirit (ex Arctic Sun)	89 880	IHI	Teekay LNG Partners	I.H.I.	Teekay Shpg. (Gla)
1993	LNG Flora	127 705	KM	Nippon Yusen Kaisha	KHI	NYK LNG Shipmngt.
1993	Lucia Ambition (ex Aman Bintulu)	18 928	TZM	MISC	NKK	MISC
1993	Northwest Sandpiper	127 500	KM	Aust. LNG Ship Optg.	Mitsui Shipbuilding	STASCO (Shell)
1993	Polar Spirit (ex Polar Eagle)	89 880	IHI	Teekay LNG Partners	I.H.I.	Teekay Shpg. (Gla)
1994	Al Khaznah	135 496	KM	National Gas Shpg.	Mitsui Shipbuilding	National Gas Shpg.
1994	Dwiputra	127 386	KM	Mitsui OSK Lines	MHI	Humolco Trans.
1994	Hyundai Utopia	125 182	KM	Hyundai LNG Shpg.	HHI	Hyundai LNG Shpg.
1994	LNG Vesta	127 547	KM	Mitsui OSK Lines	MHI	MOL LNG Transport
1994	Northwest Stormpetrel	127 606	KM	Aust. LNG Ship Optg.	MHI	STASCO (Shell)
1994	Puteri Intan	130 405	GT	MISC	Ch. de l'Atlantique	EagleStar Shipmngt.
1994	Shahamah	135 496	KM	National Gas Shpg.	KHI	National Gas Shpg.
1994	YK Sovereign	127 125	KM	SK Shpg.	HHI	SK Shpg.
1995	Ghasha	137 514	KM	National Gas Shpg.	Mitsui Shipbuilding	National Gas Shpg.
1995	HL Pyeong Taek (ex Hanjin Pyeong Taek)	130 600	GT	H-Line Shpg.	Hanjin HI	H-Line Shpg.
1995	Ish	137 540	KM	National Gas Shpg.	MHI	National Gas Shpg.
1995	Puteri Delima	130 405	GT	MISC	Ch. de l'Atlantique	EagleStar Shipmngt.
1995	Puteri Nilam	130 405	GT	MISC	Ch. de l'Atlantique	EagleStar Shipmngt.
1996	Al Khor	137 354	KM	Nippon Yusen Kaisha	MHI	NYK LNG Shipmngt.
1996	Al Zubarah	137 573	KM	Mitsui OSK Lines	Mitsui Shipbuilding	MOL LNG Transport
1996	Hyundai Greenpia	125 000	KM	Hyundai LNG Shpg.	HHI	Hyundai Ocean
1996	Mraweh	137 000	KM	National Gas Shpg.	Kvaerner Masa	National Gas Shpg.
1996	Mubaraz	137 000	KM	National Gas Shpg.	Kvaerner Masa	National Gas Shpg.
1996	Puteri Zamrud	130 405	GT	MISC	Ch. de l'Atlantique	EagleStar Shipmngt.
1996	Surya Aki	19 474	KM	Humpuss Intermoda	KHI	Mitsui OSK Lines
1997	Al Hamra	137 000	KM	National Gas Shpg.	Kvaerner Masa	National Gas Shpg.
1997	Al Rayyan	135 358	KM	K-Line	KHI	K-Line Ship Mngt.
1997	Al Wajbah	137 354	KM	Mitsui OSK Lines	MHI	MOL LNG Transport
1997	Aman Sendai	18 928	TZM	MISC	NKK	MISC
1997	LNG Portovenere (ex SNAM Portovenere)	65 000	GT	SNAM	Fincantieri Sestri	Exmar Shipmngt.
1997	Puteri Firus	130 405	GT	MISC	Ch. de l'Atlantique	EagleStar Shipmngt.
1997	Umm Al Ashtan	137 000	KM	National Gas Shpg.	Kvaerner Masa	National Gas Shpg.
1998	Al Wakrah	135 358	KM	Mitsui OSK Lines	KHI	MOL LNG Transport
1998	Aman Hakata	18 944	GT	MISC	NKK	MISC
1998	Broog	135 466	KM	Nippon Yusen Kaisha	Mitsui Shipbuilding	NYK LNG Shipmngt.
1998	LNG Lerici	65 000	GT	SNAM	Fincantieri Sestri	Exmar Shipmngt.
1998	Zekreet	135 420	KM	K-Line	Mitsui Shipbuilding	K-Line Ship Mngt.
1999	Al Bidda	135 279	KM	Mitsui OSK Lines	KHI	MOL LNG Transport
1999	Doha	137 354	KM	Nippon Yusen Kaisha	MHI	NYK LNG Shipmngt.
1999	Hanjin Muscat	138 200	GT	H-Line Shpg.	Hanjin HI	H-Line Shpg.
1999	Hyundai Technopia	135 000	KM	Hyundai LNG Shpg.	HHI	Hyundai Ocean
1999	SK Summit	138 000	GT	SK Shpg.	DSME	SK Shpg.
2000	Al Jasra	137 100	KM	Nippon Yusen Kaisha	MHI	NYK LNG Shipmngt.
2000	Golar Mazo	136 867	KM	Golar LNG Partners	MHI	Golar Mngt.
2000	HL Ras Laffan (ex Hanjin Ras Laffan)	138 214	GT	H-Line Shpg.	Hanjin HI	H-Line Shpg.
2000	HL Sur (ex Hanjin Sur)	138 333	GT	H-Line Shpg.	Hanjin HI	H-Line Shpg.
2000	Hyundai Aquapia	135 000	KM	Hyundai LNG Shpg.	HHI	Hyundai Ocean

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Built	Vessel Name	Capacity (m^3)	CCS*	Owner	Builder	Manager
2000	Hyundai Cosmopia	135 000	KM	Hyundai LNG Shpg.	HHI	Hyundai LNG Shpg.
2000	Hyundai Oceanpia	135 000	KM	Hyundai LNG Shpg.	HHI	Hyundai Ocean
2000	K. Acacia	138 017	GT	Korea Line	DSME	KLC SM
2000	K. Freesia	135 256	GT	Korea Line	DSME	KLC SM
2000	LNG Jamal	135 333	KM	Nippon Yusen Kaisha	MHI	NYK LNG Shipmngt.
2000	SK Splendor	138 375	TZM	SK Shpg.	SHI	SK Shpg.
2000	SK Stellar	138 375	TZM	SK Shpg.	SHI	SK Shpg.
2000	SK Supreme	138 200	TZM	SK Shpg.	SHI	SK Shpg.
2000	Triputra (ex Surya Satsuma)	23 096	TZM	Humpuss Intermoda	NKK	Humolco Trans.
2001	Sohar LNG (ex Lakshmi)	137 248	KM	Oman Shpg.	MHI	Oman Ship Mngt.
2002	Abadi	136 912	KM	Brunei Gas Carriers	MHI	STASCO (Shell)
2002	Excalibur	138 034	GT	Exmar	DSME	Exmar Shipmngt.
2002	Galea	136 967	KM	Shell Tank. (S'pore)	MHI	STASCO (Shell)
2002	Gallina	137 001	KM	Shell Tank. (S'pore)	MHI	STASCO (Shell)
2002	Hispania Spirit (ex Fernando Tapias)	140 500	GT	Teekay LNG Partners	DSME	Teekay Shpg. (Gla)
2002	LNG Rivers	137 231	KM	Bonny Gas Transport	HHI	Nigeria LNG
2002	LNG Sokoto	137 231	KM	Bonny Gas Transport	HHI	Nigeria LNG
2002	Puteri Delima Satu	137 100	GT	MISC	Mitsui Shipbuilding	EagleStar Shipmngt.
2002	Puteri Intan Satu	137 489	GT	MISC	MHI	EagleStar Shipmngt.
2002	Trader (ex British Trader)	138 000	TZM	Lloyds Ind. Leasing	SHI	K Line LNG Shpg.
2003	BW Boston (ex BW GDF Suez Boston)	138 059	GT	BW Gas	DSME	BW Fleet Mngt.
2003	BW Everett (ex BW GDF Suez Everett)	138 028	GT	BW Gas	DSME	BW Fleet Mngt.
2003	Castillo de Villalba	138 183	GT	Elcano	IZAR (Puerto Real)	Elcano
2003	Catalunya Spirit (ex Inigo Tapias)	138 000	GT	Teekay LNG Partners	IZAR (Sestao)	Teekay Shpg. (Gla)
2003	Energy Frontier	147 599	KM	Tokyo LNG Tanker Co.	KHI	Mitsui O.S.K. Lines
2003	Golar Arctic (ex Granatina)	140 648	GT	Golar LNG	DSME	Golar Mngt.
2003	LNG Bayelsa	137 500	KM	Bonny Gas Transport	HHI	Nigeria LNG
2003	Merchant (ex British Merchant)	138 283	TZM	Lloyds Ind. Leasing	SHI	WSM Malaysia
2003	Methane Princess	138 000	GT	Golar LNG Partners	DSME	Golar Mngt.
2003	Pacific Notus	137 006	KM	TEPCO	MHI	NYK LNG Shipmngt.
2003	Puteri Nilam Satu	137 585	GT	MISC	MHI	EagleStar Shipmngt.
2003	Shinju Maru No. 1	2 513	Other	NS United Tanker	Higaki Zosen	NS United Tanker
2003	Singapore Energy (ex British Innovator)	138 287	TZM	Sinokor Merchant	SHI	WSM Malaysia
2003	SK Sunrise	138 306	TZM	I.S. Carriers SA	SHI	Iino Marine Service
2004	Berge Arzew	138 088	GT	BW Gas	DSME	BW Fleet Mngt.
2004	Bilbao Knutsen	138 000	GT	Knutsen OAS Shpg.	IZAR (Sestao)	Knutsen OAS Shpg.
2004	Cadiz Knutsen	138 826	GT	Knutsen OAS Shpg.	IZAR (Puerto Real)	Knutsen OAS Shpg.
2004	Disha	136 026	GT	India LNG Transport	DSME	Shpg. Corp of India
2004	Dukhan	137 661	KM	Mitsui OSK Lines	Mitsui Shipbuilding	MOL LNG Europe
2004	Fuji LNG (ex Muscat LNG)	149 172	KM	Cardiff Marine	KHI	TMS Cardiff Gas
2004	Fuwairit	138 000	TZM	Mitsui OSK Lines	SHI	MOL LNG Europe
2004	Galicia Spirit	140 624	GT	Teekay LNG Partners	DSME	Teekay Shpg. (Gla)
2004	Gemmata	136 985	KM	STASCO (Shell)	MHI	STASCO (Shell)

Built	Vessel Name	Capacity (m^3)	CCS*	Owner	Builder	Manager
2004	Lalla Fatma N'Soumer	147 845	KM	Algeria Nippon Gas	KHI	Hyproc Shpg.
2004	LNG Akwa Ibom	141 038	KM	Bonny Gas Transport	HHI	Nigeria LNG
2004	LNG River Orashi	145 914	GT	BW Gas	DSME	BW Fleet Mngt.
2004	Madrid Spirit	138 000	GT	Teekay LNG Partners	IZAR (Puerto Real)	Teekay Shpg. (Gla)
2004	Methane Kari Elin	138 209	TZM	STASCO (Shell)	SHI	STASCO (Shell)
2004	Milaha Ras Laffan (ex Maersk Ras Laffan)	138 270	TZM	Qatar Shpg.	SHI	Pronav Ship Mngt.
2004	Northwest Swan	138 000	GT	Chevron	DSME	Chevron
2004	Pioneer Knutsen	1 100	Other	Knutsen OAS Shpg.	Veka SY Lemmer	Knutsen OAS Shpg.
2004	Puteri Firus Satu	137 617	GT	MISC	MHI	EagleStar Shipmngt.
2004	Puteri Zamrud Satu	137 100	GT	MISC	Mitsui Shipbuilding	EagleStar Shipmngt.
2004	Raahi	136 026	GT	India LNG Transport	DSME	Shpg. Corp of India
2005	Al Deebel	145 130	TZM	Mitsui OSK Lines	SHI	MOL LNG Europe
2005	Al Thakhira	145 130	TZM	K-Line	SHI	K Line LNG Shpg.
2005	Energy Advance	147 624	KM	Tokyo LNG Tanker Co.	KHI	Mitsui O.S.K. Lines
2005	Golar Viking (ex Salju)	140 208	TZM	Golar LNG	HHI	Golar Mngt.
2005	LNG Adamawa	142 656	KM	Bonny Gas Transport	HHI	Nigeria LNG
2005	LNG Cross River	141 000	KM	Bonny Gas Transport	HHI	Nigeria LNG
2005	LNG Enugu	145 914	GT	BW Gas	DSME	BW Fleet Mngt.
2005	LNG Oyo	145 842	GT	BW Gas	DSME	BW Fleet Mngt.
2005	LNG Pioneer	138 000	GT	Mitsui OSK Lines	DSME	MOL LNG Europe
2005	Lusail	145 000	TZM	Nippon Yusen Kaisha	SHI	NYK LNG Shipmngt.
2005	Maran Gas Asclepius (ex Rasgas Asclepius)	145 822	GT	Maran Nakilat	DSME	Maran Gas Maritime
2005	Nizwa LNG	147 684	KM	Oman Shpg.	KHI	Oman Ship Mngt.
2005	North Pioneer	2 512	Other	Japan Liquid Gas	Shin Kurushima	Iino Kaiun Kaisha
2005	Puteri Mutiara Satu	137 100	GT	MISC	Mitsui Shipbuilding	EagleStar Shipmngt.
2005	Salalah LNG	145 951	TZM	Oman Shpg.	SHI	Oman Ship Mngt.
2005	Seri Alam	145 572	TZM	MISC	SHI	MISC
2005	Umm Bab	145 000	GT	Maran Nakilat	DSME	Maran Gas Maritime
2006	Al Marrouna	149 539	GT	Teekay LNG Partners	DSME	Teekay Shpg. (Gla)
2006	Arctic Discoverer	142 612	KM	K-Line	Mitsui Shipbuilding	K Line LNG Shpg.
2006	Arctic Lady	147 208	KM	Hoegh LNG	MHI	Hoegh LNG
2006	Arctic Princess	147 835	KM	Hoegh LNG	MHI	Hoegh LNG
2006	Arctic Voyager	142 929	KM	K-Line	KHI	K Line LNG Shpg.
2006	Energy Progress	147 558	KM	Mitsui OSK Lines	KHI	MOL LNG Transport
2006	Global Energy (ex GDF Suez Global Energy)	74 130	CS1	Total	Aker Yards	Gazocean S.A.
2006	Golar Grand (ex Grandis)	145 879	GT	Golar LNG Partners	DSME	Golar Mngt.
2006	Golar Maria (ex Granosa)	145 700	GT	Golar LNG Partners	DSME	Golar Mngt.
2006	Iberica Knutsen	138 120	GT	Knutsen OAS Shpg.	DSME	Knutsen OAS Shpg.
2006	Ibra LNG	147 100	TZM	Oman Shpg.	SHI	Oman Ship Mngt.
2006	Ibri LNG	147 569	KM	Oman Shpg.	MHI	Oman Ship Mngt.
2006	LNG Benue	145 842	GT	BW Gas	DSME	BW Fleet Mngt.
2006	LNG Dream	145 000	KM	Osaka Gas	KHI	NYK LNG Shipmngt.
2006	LNG Lokoja	149 600	GT	BW Gas	DSME	BW Fleet Mngt.
2006	LNG River Niger	141 000	KM	Bonny Gas Transport	HHI	Nigeria LNG
2006	Methane Jane Elizabeth	145 000	TZM	GasLog Partners	SHI	GasLog LNG Services

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Built	Vessel Name	Capacity (m^3)	CCS*	Owner	Builder	Manager
2006	Methane Lydon Volney	145 000	TZM	GasLog	SHI	GasLog LNG Services
2006	Methane Rita Andrea	145 000	TZM	GasLog Partners	SHI	GasLog LNG Services
2006	Milaha Qatar (ex Maersk Qatar)	145 130	TZM	Qatar Shpg.	SHI	Pronav Ship Mngt.
2006	Pacific Eurus	136 942	KM	TEPCO	MHI	NYK LNG Shipmngt.
2006	Provalys	154 472	CS1	Total	Aker Yards	Gazocean S.A.
2006	Seri Amanah	145 000	TZM	MISC	SHI	EagleStar Shipmngt.
2006	Seri Anggun	145 731	TZM	MISC	SHI	MISC
2006	Seri Angkasa	145 000	TZM	MISC	SHI	MISC
2006	Simaisma	145 700	GT	Maran Nakilat	DSME	Maran Gas Maritime
2006	Stena Blue Sky (ex Bluesky)	145 819	GT	Stena Bulk	DSME	Northern Marine Mngt.
2007	Al Areesh	148 786	GT	Teekay LNG Partners	DSME	Teekay Shpg. (Gla)
2007	Al Daayen	148 853	GT	Teekay LNG Partners	DSME	Teekay Shpg. (Gla)
2007	Al Gattara	216 224	TZM	Qatar Gas (Nakilat)	HHI	Nakilat Shpg.
2007	Al Jassasiya	145 700	GT	Maran Nakilat	DSME	Maran Gas Maritime
2007	Al Ruwais	210 100	GT	Schulte Group	DSME	Pronav Ship Mngt.
2007	Al Safliya	210 134	GT	Schulte Group	DSME	Pronav Ship Mngt.
2007	British Emerald	154 983	TZM	BP Shpg.	HHI	BP Shpg.
2007	Cheikh El Mokrani	74 365	TZM	Hyproc Shpg.	Universal Shipbuilding	Hyproc Shpg.
2007	Clean Energy	149 700	TZM	Dynagas LNG	HHI	Dynagas LNG
2007	Ejnan	145 000	TZM	Nippon Yusen Kaisha	SHI	NYK LNG Shipmngt.
2007	Gaselys	154 472	CS1	Total	Aker Yards	Gazocean S.A.
2007	Grace Acacia	149 786	TZM	Nippon Yusen Kaisha	HHI	Gazocean S.A.
2007	Grace Barleria	149 700	TZM	Nippon Yusen Kaisha	HHI	NYK LNG Shipmngt.
2007	Grand Elena	145 580	KM	Sovcomflot	MHI	NYK LNG Shipmngt.
2007	LNG Borno	149 600	TZM	Nippon Yusen Kaisha	SHI	NYK LNG Shipmngt.
2007	LNG Kano	149 600	GT	BW Gas	DSME	BW Fleet Mngt.
2007	LNG Ogun	149 600	TZM	Nippon Yusen Kaisha	SHI	NYK LNG Shipmngt.
2007	LNG Ondo	148 300	GT	BW Gas	DSME	BW Fleet Mngt.
2007	Maran Gas Coronis	145 700	GT	Maran Nakilat	DSME	Maran Gas Maritime
2007	Methane Alison Victoria	145 127	TZM	GasLog Partners	SHI	GasLog LNG Services
2007	Methane Heather Sally	145 127	TZM	GasLog Partners	SHI	GasLog LNG Services
2007	Methane Nile Eagle	145 144	TZM	STASCO (Shell)	SHI	GasLog LNG Services
2007	Methane Shirley Elisabeth	145 127	TZM	GasLog Partners	SHI	GasLog LNG Services
2007	Neo Energy	149 700	TZM	Tsakos Energy Nav	HHI	Hyundai Ocean
2007	Ob River (ex Clean Power)	149 700	TZM	Dynagas LNG	HHI	Dynagas LNG
2007	Seri Ayu	145 894	TZM	MISC	SHI	MISC
2007	Seri Bakti	152 300	GT	MISC	MHI	EagleStar Shipmngt.
2007	Seri Begawan	152 300	GT	MISC	MHI	EagleStar Shipmngt.
2007	Sestao Knutsen	138 114	GT	Knutsen OAS Shpg.	CNN - La Naval	Knutsen OAS Shpg.
2007	Sun Arrows	19 100	KM	Maple LNG Transport	KHI	Mitsui OSK Lines
2007	Symphonic Breeze (ex Celestine River)	147 608	KM	K-Line	KHI	K Line LNG Shpg.
2007	Tembek	216 000	TZM	Qatar Gas (Nakilat)	SHI	Nakilat Shpg.
2008	Al Aamriya	210 168	GT	Nakilat. JC	DSME	MOL LNG Europe
2008	Al Ghariya	210 100	GT	Schulte Group	DSME	Pronav Ship Mngt.
2008	Al Gharrafa	216 224	TZM	Qatar Gas (Nakilat)	HHI	Nakilat Shpg.
2008	Al Ghuwairiya	263 249	GT	Qatar Gas (Nakilat)	DSME	Nakilat Shpg.
2008	Al Hamla	216 000	TZM	Qatar Gas (Nakilat)	SHI	Nakilat Shpg.
2008	Al Huwaila	217 000	TZM	Teekay LNG Partners	SHI	Teekay Shpg. (Gla)
2008	Al Kharsaah	217 000	TZM	Teekay LNG Partners	SHI	Teekay Shpg. (Gla)
2008	Al Khuwair	217 000	TZM	Teekay LNG Partners	SHI	Teekay Shpg. (Gla)
2008	Al Oraiq	210 100	GT	Nakilat. JC	DSME	K Line LNG Shpg.
2008	Al Sahla	216 200	TZM	Nakilat. JC	HHI	NYK LNG Shipmngt.
2008	Al Shamal	217 000	TZM	Teekay LNG Partners	SHI	Teekay Shpg. (Gla)
2008	Al Thumama	216 200	TZM	Nakilat. JC	HHI	NYK LNG Shipmngt.
2008	Al Utouriya	215 000	TZM	Nakilat. JC	HHI	NYK LNG Shipmngt.
2008	Alto Acrux	147 798	KM	TEPCO	MHI	NYK LNG Shipmngt.
2008	Amur River (ex Clean Force)	149 743	TZM	Dynagas LNG	HHI	Dynagas LNG
2008	Arwa Spirit (ex Maersk Arwa)	165 500	TZM	Malt LNG	SHI	Teekay Shpg. (Gla)
2008	British Diamond	155 046	TZM	BP Shpg.	HSHI	BP Shpg.
2008	British Ruby	155 000	TZM	BP Shpg.	HHI	BP Shpg.
2008	British Sapphire	155 000	TZM	BP Shpg.	HHI	BP Shpg.
2008	Bu Samra	267 335	TZM	Qatar Gas (Nakilat)	SHI	STASCO (Shell)
2008	Cheikh Bouamama	75 558	TZM	Hyproc Shpg.	Universal Shipbuilding	Hyproc Shpg.
2008	Dapeng Moon	147 210	GT	CLNG	HZ	CLNG
2008	Dapeng Sun	147 236	GT	CLNG	HZ	CLNG
2008	Duhail	210 100	GT	Schulte Group	DSME	Pronav Ship Mngt.
2008	Energy Navigator	147 558	KM	Tokyo LNG Tanker Co.	KHI	Mitsui OSK Lines
2008	Fraiha	210 100	GT	Nakilat. JC	DSME	MOL LNG Europe
2008	Grace Cosmos	149 700	TZM	Nippon Yusen Kaisha	HHI	Gazocean S.A.
2008	Grand Aniva	145 580	KM	Sovcomflot	MHI	SCF Mngt. Dubai
2008	Grand Mereya	145 964	KM	Mitsui OSK Lines	Mitsui Shipbuilding	MOL LNG Transport
2008	Hyundai Ecopia	149 700	TZM	Hyundai LNG Shpg.	HHI	Hyundai Ocean
2008	K. Jasmine	145 877	GT	Korea Line	DSME	KLC SM
2008	K. Mugungwha	151 812	GT	Korea Line	DSME	KLC SM
2008	Kakurei Maru	2 536	Other	Tsurumi Sunmarine	Higaki Zosen	Tsurumi Sunmarine
2008	LNG Barka	155 982	KM	Oman Shpg.	KHI	Nippon Yusen Kaisha
2008	LNG Ebisu	147 546	KM	KEPCO	KHI	MOL LNG Transport
2008	LNG Imo	148 300	GT	BW Gas	DSME	BW Fleet Mngt.
2008	LNG Kolt (ex STX Kolt)	153 595	TZM	Pan Ocean	Hanjin HI	POS SM
2008	Marib Spirit (ex Maersk Marib)	165 500	TZM	Malt LNG	SHI	Teekay Shpg. (Gla)
2008	Methane Spirit (ex Maersk Methane)	165 500	TZM	Malt LNG	SHI	Teekay Shpg. (Gla)
2008	Mozah	267 335	TZM	Qatar Gas (Nakilat)	SHI	Nakilat Shpg.
2008	Murwab	210 100	GT	Nakilat. JC	DSME	MOL LNG Europe
2008	Seri Balhaf	157 721	GT	MISC	MHI	MISC
2008	Seri Bijaksana	152 888	GT	MISC	MHI	MISC
2008	Shinju Maru No. 2	2 536	Other	NS United Tanker	Higaki Zosen	NS United Tanker
2008	Tangguh Batur	145 700	GT	Sovcomflot	DSME	NYK Shipmngt.
2008	Tangguh Foja	155 641	TZM	K-Line	SHI	K-Line Ship Mngt.
2008	Tangguh Hiri	154 971	TZM	Teekay LNG Partners	HHI	Teekay Shpg. (Gla)
2008	Tangguh Jaya	155 641	TZM	K-Line	SHI	K-Line Ship Mngt.

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Built	Vessel Name	Capacity (m^3)	CCS*	Owner	Builder	Manager
2008	Tangguh Towuti	145 700	GT	Sovcomflot	DSME	NYK Shipmngt.
2008	Trinity Arrow	154 982	TZM	K-Line	Koyo Dock	K Line LNG Shpg.
2008	Umm Al Amad	210 100	GT	Nakilat. JC	DSME	K Line LNG Shpg.
2008	Umm Slal	267 335	TZM	Qatar Gas (Nakilat)	SHI	Nakilat Shpg.
2009	Al Dafna	267 335	TZM	Qatar Gas (Nakilat)	SHI	STASCO (Shell)
2009	Al Ghashamiya	217 000	TZM	Qatar Gas (Nakilat)	SHI	STASCO (Shell)
2009	Al Karaana	210 191	GT	Qatar Gas (Nakilat)	DSME	STASCO (Shell)
2009	Al Kharaitiyat	216 200	TZM	Qatar Gas (Nakilat)	HHI	STASCO (Shell)
2009	Al Khattiya	210 196	GT	Qatar Gas (Nakilat)	DSME	STASCO (Shell)
2009	Al Mafyar	267 335	TZM	Qatar Gas (Nakilat)	SHI	Nakilat Shpg.
2009	Al Mayeda	267 335	TZM	Qatar Gas (Nakilat)	SHI	STASCO (Shell)
2009	Al Nuaman	210 184	GT	Qatar Gas (Nakilat)	DSME	STASCO (Shell)
2009	Al Rekayyat	216 200	TZM	Qatar Gas (Nakilat)	HHI	STASCO (Shell)
2009	Al Sadd	210 100	GT	Qatar Gas (Nakilat)	DSME	STASCO (Shell)
2009	Al Samriya	261 700	GT	Qatar Gas (Nakilat)	DSME	STASCO (Shell)
2009	Al Sheehaniya	210 166	GT	Qatar Gas (Nakilat)	DSME	STASCO (Shell)
2009	Aseem	155 000	TZM	India LNG Transport	SHI	Shpg. Corp of India
2009	BW GDF Suez Brussels	162 400	GT	BW Gas	DSME	BW Fleet Mngt.
2009	BW Paris (ex BW GDF Suez Paris)	162 400	GT	BW Gas	DSME	BW Fleet Mngt.
2009	Coral Methane	7 500	Other	Anthony Veder	Remontowa Repair	Anthony Veder
2009	Cygnus Passage	147 200	KM	Cygnus LNG Shpg.	MHI	NYK LNG Shipmngt.
2009	Dapeng Star	147 210	GT	CLNG	HZ	CLNG
2009	Energy Confidence	153 000	KM	Tokyo LNG Tanker Co.	KHI	Nippon Yusen Kaisha
2009	Lijmiliya	261 700	GT	Qatar Gas (Nakilat)	DSME	STASCO (Shell)
2009	LNG Jupiter	153 659	KM	Nippon Yusen Kaisha	KHI	NYK LNG Shipmngt.
2009	Magellan Spirit (ex Maersk Magellan)	165 500	TZM	Malt LNG	SHI	Teekay Shpg. (Gla)
2009	Mekaines	267 335	TZM	Qatar Gas (Nakilat)	SHI	Nakilat Shpg.
2009	Mesaimeer	216 200	TZM	Qatar Gas (Nakilat)	HHI	Nakilat Shpg.
2009	Min Lu	147 210	GT	CLNG	HZ	CLNG
2009	Min Rong	147 000	GT	CLNG	HZ	CLNG
2009	Oizmendi (ex Monte Arucas)	600	Other	ITSAS Gas Bunker	Francisco Cardama	ITSAS Gas Bunker
2009	Onaiza	210 100	GT	Qatar Gas (Nakilat)	DSME	STASCO (Shell)
2009	Pacific Enlighten	147 200	KM	TEPCO	MHI	NYK LNG Shipmngt.
2009	Seri Balqis	157 611	GT	MISC	MHI	MISC
2009	Shagra	267 335	TZM	Qatar Gas (Nakilat)	SHI	STASCO (Shell)
2009	Taitar No. 1	147 362	KM	Nimic Ship Mngt.	MHI	Nimic Ship Mngt.
2009	Taitar No. 2	147 500	KM	Nimic Ship Mngt.	KHI	Nimic Ship Mngt.
2009	Tangguh Palung	155 642	TZM	K-Line	SHI	K-Line Ship Mngt.
2009	Tangguh Sago	154 971	TZM	Teekay LNG Partners	HSHI	Teekay Shpg. (Gla)
2009	Trinity Glory	154 999	TZM	K-Line	Koyo Dock	K Line LNG Shpg.
2009	Woodside Donaldson	165 936	TZM	Malt LNG	SHI	Teekay Shpg. (Gla)
2010	Aamira	267 335	TZM	Qatar Gas (Nakilat)	SHI	STASCO (Shell)
2010	Al Bahiya	210 185	GT	Qatar Gas (Nakilat)	DSME	STASCO (Shell)
2010	Barcelona Knutsen	173 400	GT	Knutsen OAS Shpg.	DSME	Knutsen OAS Shpg.
2010	Castillo de Santisteban	173 673	GT	Elcano	STX Shipbuilding	Elcano
2010	GasLog Chelsea (ex STX Frontier)	153 000	TZM	GasLog	Hanjin HI	GasLog LNG Services
2010	GasLog Savannah	155 000	TZM	GasLog	SHI	GasLog LNG Services
2010	GasLog Singapore	155 000	TZM	GasLog	SHI	GasLog LNG Services
2010	GDF Suez Point Fortin	154 914	TZM	Trinity LNG Carrier	Koyo Dock	MOL LNG Europe
2010	Gigira Laitebo (ex Abdelkader)	155 000	TZM	Mitsui OSK Lines	HHI	MOL LNG Europe
2010	Meridian Spirit (ex Maersk Meridian)	165 772	TZM	Malt LNG	SHI	Teekay Shpg. (Gla)
2010	Methane Becki Anne	170 678	TZM	GasLog	SHI	GasLog LNG Services
2010	Methane Julia Louise	170 000	TZM	Lepta Shpg.	SHI	GasLog LNG Services
2010	Methane Mickie Harper	170 000	TZM	STASCO (Shell)	SHI	STASCO (Shell)
2010	Methane Patricia Camila	170 000	TZM	STASCO (Shell)	SHI	STASCO (Shell)
2010	Norgas Creation	10 030	Other	Norgas Carriers	Taizhou Skaugen	OSM Tanker
2010	Norgas Innovation	10 030	Other	Norgas Carriers	Taizhou Skaugen	B. Schulte (Hellas)
2010	Rasheeda	267 335	TZM	Qatar Gas (Nakilat)	SHI	STASCO (Shell)
2010	Ribera Del Duero Knutsen	173 400	GT	Knutsen OAS Shpg.	DSME	Knutsen OAS Shpg.
2010	Sevilla Knutsen	173 400	GT	Knutsen OAS Shpg.	DSME	Knutsen OAS Shpg.
2010	Spirit of Hela (ex Ben Badis)	173 010	TZM	Mitsui OSK Lines	HSHI	MOL LNG Europe
2010	Taitar No. 3	147 366	KM	Nimic Ship Mngt.	MHI	Nimic Ship Mngt.
2010	Taitar No. 4	147 546	KM	Nimic Ship Mngt.	KHI	Nimic Ship Mngt.
2010	Valencia Knutsen	173 400	GT	Knutsen OAS Shpg.	DSME	Knutsen OAS Shpg.
2010	Zarga	267 335	TZM	Qatar Gas (Nakilat)	SHI	STASCO (Shell)
2011	Akebono Maru	3 556	Other	NS United Tanker	Higaki Zosen	NS United Tanker
2011	Amali	148 000	GT	Brunei Shell Tankers	DSME	STASCO (Shell)
2011	Arkat	147 228	GT	Brunei Gas Carriers	DSME	STASCO (Shell)
2011	Energy Horizon	177 441	KM	Tokyo LNG Tanker Co.	KHI	NYK LNG Shipmngt.
2011	Lobito	160 276	TZM	MiNT LNG	SHI	Teekay Shpg. (Gla)
2011	Malanje	160 276	TZM	MiNT LNG	SHI	Mitsui & Co
2011	Norgas Conception	10 030	Other	Norgas Carriers	Taizhou Skaugen	B. Schulte (Hellas)
2011	Norgas Invention	10 030	Other	Norgas Carriers	Taizhou Skaugen	OSM Tanker
2011	Sonangol Benguela	160 500	GT	Sonangol	DSME	Chevron Shpg.
2011	Sonangol Etosha	160 786	GT	Sonangol	DSME	Chevron Shpg.
2011	Sonangol Sambizanga	160 785	GT	Sonangol	DSME	Chevron Shpg.
2011	Soyo	160 276	TZM	MiNT LNG	SHI	Teekay Shpg. (Gla)
2011	Stena Clear Sky	173 593	GT	Stena Bulk	DSME	Northern Marine Mngt.
2011	Stena Crystal Sky	173 611	GT	Stena Bulk	DSME	Northern Marine Mngt.
2011	Unikum Spirit (ex Norgas Unikum)	12 000	Other	Teekay LNG Partners	AVIC Dingheng	OSM Tanker
2011	Vision Spirit (ex Bahrain Vision)	12 022	Other	Teekay LNG Partners	AVIC Dingheng	OSM Tanker
2012	Coral Energy	15 600	Other	Anthony Veder	Neptun Werft	Anthony Veder
2012	Cubal	160 276	TZM	MiNT LNG	SHI	NYK LNG Shipmngt.
2012	Shen Hai	147 210	GT	CLNG	HZ	CLNG
2013	Arctic Aurora	154 899	TZM	Dynagas LNG	HHI	Dynagas LNG
2013	Cool Voyager	160 372	TZM	Thenamaris	SHI	Thenamaris LNG
2013	Coral Anthelia	6 500	Other	Anthony Veder	AVIC Dingheng	Anthony Veder
2013	GasLog Santiago	155 000	TZM	GasLog	SHI	GasLog LNG Services

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Built	Vessel Name	Capacity (m³)	CCS*	Owner	Builder	Manager
2013	GasLog Seattle	155 000	TZM	GasLog	SHI	GasLog LNG Services
2013	GasLog Shanghai	155 000	TZM	GasLog	SHI	GasLog LNG Services
2013	GasLog Skagen	155 000	TZM	GasLog	SHI	GasLog LNG Services
2013	GasLog Sydney	155 000	TZM	GasLog	SHI	GasLog LNG Services
2013	Golar Celsius	160 000	TZM	Golar LNG	SHI	Golar Mngt.
2013	Golar Seal	160 000	TZM	Golar LNG	SHI	Golar Mngt.
2013	Grace Dahlia	177 630	KM	Nippon Yusen Kaisha	KHI	NYK LNG Shipmngt.
2013	Kakuyu Maru	2 538	Other	Tsurumi Sunmarine	KHI	Tsurumi Sunmarine
2013	Lena River	155 165	TZM	Dynagas LNG	HHI	Dynagas LNG
2013	Wilforce	156 007	GT	Teekay LNG Partners	DSME	Awilco LNG Technical
2013	Wilpride	156 007	GT	Teekay LNG Partners	DSME	Awilco LNG Technical
2013	Woodside Goode	159 662	GT	Maran Gas Maritime	DSME	Maran Gas Maritime
2013	Woodside Rogers	160 668	GT	Maran Gas Maritime	DSME	Maran Gas Maritime
2013	Yenisei River	155 000	TZM	Dynagas LNG	HHI	Dynagas LNG
2014	Adam LNG	161 870	TZM	Oman Shpg.	HHI	Oman Ship Mngt.
2014	Amani	154 800	TZM	Brunei Gas Carriers	HHI	STASCO (Shell)
2014	Asia Energy	160 000	TZM	Chevron	SHI	Chevron
2014	Asia Vision	160 000	TZM	Chevron	SHI	Chevron
2014	Clean Ocean	161 881	TZM	Dynagas LNG	HHI	Dynagas LNG
2014	Clean Planet	161 814	TZM	Dynagas LNG	HHI	Dynagas LNG
2014	Cool Runner	160 000	TZM	Thenamaris	SHI	Thenamaris LNG
2014	Corcovado LNG	160 106	GT	Cardiff Marine	DSME	TMS Cardiff Gas
2014	Esshu Maru	155 300	KM	Mitsubishi Corp.	MHI	MOL LNG Europe
2014	GasLog Saratoga	155 000	TZM	GasLog	SHI	GasLog LNG Services
2014	Golar Bear	160 000	TZM	Golar LNG	SHI	Golar LNG
2014	Golar Crystal	160 000	TZM	Oriental Fleet	SHI	Golar Mngt.
2014	Golar Frost	160 000	TZM	Golar LNG	SHI	Golar LNG
2014	Golar Glacier	162 000	TZM	Golar LNG	HSHI	Golar Mngt.
2014	Golar Penguin	160 000	TZM	Golar LNG	SHI	Golar Mngt.
2014	Kita LNG	160 118	GT	Cardiff Marine	DSME	TMS Cardiff Gas
2014	LNG Venus	155 873	KM	Mitsui OSK Lines	MHI	MOL LNG Transport
2014	Maran Gas Apollonia	161 870	TZM	Maran Nakilat	HSHI	Maran Gas Maritime
2014	Maran Gas Delphi	159 800	GT	Maran Nakilat	DSME	Maran Nakilat
2014	Maran Gas Efessos	159 800	GT	Maran Nakilat	DSME	Maran Gas Maritime
2014	Maran Gas Posidonia	161 870	TZM	Maran Nakilat	HSHI	Maran Nakilat
2014	Pacific Arcadia	147 200	KM	Nippon Yusen Kaisha	MHI	NYK LNG Shipmngt.
2014	Palu LNG	160 000	GT	Cardiff Marine	DSME	TMS Cardiff Gas
2014	Pskov	170 200	GT	Sovcomflot	STX Shipbuilding	SCF Mngt. Dubai
2014	Seishu Maru	155 300	KM	Mitsubishi Corp.	MHI	NYK LNG Shipmngt.
2014	Solaris	155 000	TZM	GasLog Partners	SHI	GasLog LNG Services
2014	Velikiy Novgorod	170 567	GT	Sovcomflot	STX Shipbuilding	SCF Mngt. Dubai
2014	Yari LNG	160 000	GT	Cardiff Marine	DSME	TMS Cardiff Gas
2015	Amadi	154 800	TZM	Brunei Gas Carriers	HHI	STASCO (Shell)
2015	Asia Endeavour	160 000	TZM	Chevron	SHI	Chevron
2015	Asia Excellence	160 000	TZM	Chevron	SHI	Chevron
2015	Beidou Star	172 000	GT	Mitsui OSK Lines	HZ	Mitsui OSK Lines
2015	BW Pavilion Leeara	161 870	TZM	BW Gas	HHI	BW Fleet Mngt.
2015	BW Pavilion Vanda	161 870	TZM	BW Gas	HHI	BW Fleet Mngt.

Built	Vessel Name	Capacity (m³)	CCS*	Owner	Builder	Manager
2015	Clean Horizon	161 870	TZM	Dynagas LNG	HHI	Dynagas LNG
2015	Cool Explorer	161 352	TZM	Thenamaris	SHI	Thenamaris LNG
2015	Energy Atlantic	159 924	GT	Alpha Tankers	STX Shipbuilding	B. Schulte (Hellas)
2015	GasLog Salem	155 000	TZM	GasLog	SHI	GasLog LNG Services
2015	Golar Ice	160 000	TZM	Golar LNG	SHI	Golar Mngt.
2015	Golar Kelvin	162 000	TZM	Golar LNG	HSHI	Golar Mngt.
2015	Golar Snow	160 000	TZM	Golar LNG	SHI	Golar Mngt.
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	Thome Ship Mngt.
2015	JS Ineos Insight	27 566	Other	Evergas AS	Sinopacific	Thome Ship Mngt.
2015	JS Ineos Intrepid	27 566	Other	Evergas AS	Sinopacific	Thome Ship Mngt.
2015	LNG Bonny II	176 809	TZM	Bonny Gas Transport	HHI	Nigeria LNG
2015	LNG Finima II	174 900	GT	Bonny Gas Transport	SHI	Bonny Gas Transport
2015	LNG Jurojin	155 300	KM	Mitsui OSK Lines	MHI	Mitsui OSK Lines
2015	LNG Port Harcourt II	174 900	GT	Bonny Gas Transport	SHI	Bonny Gas Transport
2015	Maran Gas Alexandria	161 870	TZM	Maran Gas Maritime	HSHI	Maran Gas Maritime
2015	Maran Gas Lindos	159 800	GT	Maran Gas Maritime	DSME	Maran Gas Maritime
2015	Maran Gas Mystras	159 800	GT	Maran Gas Maritime	DSME	Maran Gas Maritime
2015	Maran Gas Sparta	161 870	TZM	Maran Gas Maritime	HSHI	Maran Gas Maritime
2015	Maran Gas Troy	159 800	GT	Maran Gas Maritime	DSME	Maran Gas Maritime
2015	Papua	172 000	GT	Mitsui OSK Lines	HZ	MOL LNG Europe
2015	SCF Melampus	170 200	GT	Sovcomflot	STX Shipbuilding	SCF Mngt. Dubai
2015	SCF Mitre	170 200	GT	Sovcomflot	STX Shipbuilding	SCF Mngt. Dubai
2015	Southern Cross	172 000	GT	Mitsui OSK Lines	HZ	MOL LNG Europe
2016	CESI Gladstone	174 323	GT	China Energy Shpg.	HZ	China Energy Mngt.
2016	Christophe de Margerie	172 845	GT	Sovcomflot	DSME	Sovcomflot
2016	Clean Vision	162 000	TZM	Dynagas LNG	HHI	Dynagas LNG
2016	Creole Spirit	173 545	GT	Teekay LNG Partners	DSME	Teekay Bermuda
2016	Gaslog Geneva	174 000	TZM	GasLog Partners	SHI	GasLog Partners
2016	GasLog Gibraltar	174 000	TZM	GasLog Partners	SHI	GasLog Partners
2016	GasLog Glasgow	174 000	TZM	GasLog	SHI	GasLog
2016	GasLog Greece	174 000	TZM	GasLog	SHI	GasLog
2016	Hua Xiang 8	14 000	Other	Zhejiang Huaxiang	Fengshun Ship Hvy	Zhejiang Huaxiang
2016	JS Ineos Innovation	27 566	Other	Evergas	Sinopacific	Evergas
2016	JS Ineos Inspiration	27 566	Other	Evergas AS	Sinopacific	Thome Ship Mngt.
2016	Kumul	172 000	GT	Mitsui OSK Lines	HZ	Mitsui OSK Lines
2016	La Mancha Knutsen	176 300	TZM	Knutsen OAS Shpg.	HHI	Knutsen OAS Shpg.
2016	LNG Abalamabie	174 900	GT	Bonny Gas Transport	SHI	Bonny Gas Transport
2016	LNG Abuja II	174 900	GT	Bonny Gas Transport	SHI	Bonny Gas Transport
2016	LNG Fukurokuju	165 134	KM	Mitsui OSK Lines	KHI	Mitsui OSK Lines
2016	LNG Lagos II	176 809	TZM	Bonny Gas Transport	HHI	Nigeria LNG
2016	LNG Mars	155 693	KM	Mitsui OSK Lines	MHI	MOL LNG Transport
2016	LNG Saturn	155 300	KM	Mitsui OSK Lines	MHI	Mitsui OSK Lines
2016	Maran Gas Achilles	174 000	TZM	Maran Gas Maritime	HSHI	Maran Gas Maritime
2016	Maran Gas Agamemnon	174 000	TZM	Maran Gas Maritime	HSHI	Maran Gas Maritime
2016	Maran Gas Amphipolis	174 501	GT	Maran Gas Maritime	DSME	Maran Gas Maritime

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Built	Vessel Name	Capacity (m³)	CCS*	Owner	Builder	Manager
2016	Maran Gas Hector	174 000	TZM	Maran Gas Maritime	HSHI	Maran Gas Maritime
2016	Maran Gas Pericles	175 069	TZM	Maran Gas Maritime	HSHI	Maran Gas Maritime
2016	Maria Energy	174 000	TZM	Tsakos Energy Nav	HHI	Tsakos Energy Nav
2016	Oak Spirit	173 545	GT	Teekay LNG Partners	DSME	Teekay Bermuda
2016	Prachi	173 323	TZM	India LNG Transport	HHI	Shpg. Corp of India
2016	Rioja Knutsen	176 300	TZM	Knutsen OAS Shpg.	HHI	Knutsen OAS Shpg.
2016	Seri Camellia	150 200	KM	MISC	HHI	EagleStar Shipmngt.
2016	Tessala	171 800	TZM	ITOCHU Corp.	HHI	Hyproc Shpg.
2016	Woodside Chaney	174 000	TZM	Maran Gas Maritime	HSHI	Maran Gas Maritime
2016	Woodside Rees Withers	174 501	GT	Maran Gas Maritime	DSME	Maran Gas Maritime
2017	Asia Integrity	160 000	TZM	Chevron	SHI	Chevron
2017	Asia Venture	160 000	TZM	Chevron	SHI	Chevron
2017	Bishu Maru	165 287	KM	K-Line	KHI	K-Line
2017	Boris Vilkitsky	172 000	GT	Dynagas LNG	DSME	Dynagas LNG
2017	Cardissa	6 469	Other	Shell Western LNG	STX Shipbuilding	STASCO (Shell)
2017	CESI Beihai	174 323	GT	China Energy Shpg.	HZ	China Energy Mngt.
2017	CESI Qingdao	174 323	GT	China Energy Shpg.	HZ	China Energy Mngt.
2017	CESI Tianjin	174 323	GT	China Energy Shpg.	HZ	China Energy Mngt.
2017	Coralius	5 737	Other	Anthony Veder	Schps. Bodewes	Anthony Veder
2017	Eduard Toll	172 652	GT	Teekay Corp CLNG JV	DSME	Teekay Shpg. (Gla)
2017	Engie Zeebrugge	5 100	Other	Nippon Yusen Kaisha	Hanjin HI	NYK LNG Shipmngt.
2017	Fedor Litke	172 636	GT	Dynagas LNG	DSME	Dynagas LNG
2017	Hyundai Peacepia	174 000	GT	Hyundai LNG Shpg.	DSME	Hyundai Ocean
2017	Hyundai Princepia	174 000	GT	Hyundai LNG Shpg.	DSME	Hyundai Ocean
2017	JS Ineos Independence	27 566	Other	Evergas	Sinopacific	Evergas
2017	JS Ineos Intuition	27 500	Other	Evergas	Jiangsu New YZJ	Evergas
2017	JS Ineos Invention	27 500	Other	Evergas	Jiangsu New YZJ	Evergas
2017	Macoma	173 545	GT	Teekay LNG Partners	DSME	STASCO (Shell)
2017	Maran Gas Olympias	174 501	GT	Maran Gas Maritime	DSME	Maran Gas Maritime
2017	Maran Gas Roxana	174 501	GT	Maran Gas Maritime	DSME	Maran Gas Maritime
2017	Maran Gas Ulysses	175 069	TZM	Maran Gas Maritime	HSHI	Maran Gas Maritime
2017	Murex	173 545	GT	Teekay LNG Partners	DSME	STASCO (Shell)
2017	Ougarta	171 800	TZM	ITOCHU Corp.	HHI	Hyproc Shpg.
2017	Pan Asia	174 000	GT	Teekay LNG Partners	HZ	Teekay LNG Partners
2017	Seri Cempaka	150 200	KM	MISC	HHI	MISC
2017	Seri Cenderawasih	150 200	KM	MISC	HHI	EagleStar Shipmngt.
2017	SK Audace	180 000	TZM	SK/ Marubeni JV	SHI	SK Shipmngt.
2017	SM Eagle	174 263	GT	Korea Line	DSME	KLC SM
2017	SM Seahawk	174 263	GT	Korea Line	DSME	KLC SM
2017	Torben Spirit	173 545	GT	Teekay LNG Partners	DSME	Teekay Bermuda
2018	Boris Davydov	172 000	GT	Dynagas LNG	DSME	Dynagas LNG
2018	British Achiever	173 644	GT	BP Shpg.	DSME	BP Shpg.
2018	British Contributor	173 644	GT	BP Shpg.	DSME	BP Shpg.
2018	British Partner	173 644	GT	BP Shpg.	DSME	BP Shpg.
2018	Bunker Breeze	4 864	Other	Grupo Suardiaz	Ast. Zamakona	Grupo Suardiaz
2018	BW Lilac	174 284	GT	BW Gas	DSME	BW Fleet Mngt.

Built	Vessel Name	Capacity (m³)	CCS*	Owner	Builder	Manager
2018	BW Tulip	174 284	GT	BW Gas	DSME	BW Fleet Mngt.
2018	Castillo de Caldelas	178 817	TZM	Elcano	Imabari SB Saijo	Elcano
2018	Castillo de Merida	178 817	TZM	Elcano	Imabari SB Saijo	Elcano
2018	CESI Lianyungang	174 323	GT	China Energy Shpg.	HZ	China Energy Mngt.
2018	CESI Wenzhou	174 323	GT	China Energy Shpg.	HZ	China Energy Mngt.
2018	Coral Energice	18 000	Other	Anthony Veder	Neptun Werft	Anthony Veder
2018	Diamond Gas Orchid	165 000	KM	Nippon Yusen Kaisha	MHI	NYK LNG Shipmngt.
2018	Diamond Gas Rose	165 000	KM	Nippon Yusen Kaisha	MHI	Nippon Yusen Kaisha
2018	Energy Liberty	165 000	IHI	Mitsui OSK Lines	JMU Tsu Shipyard	Mitsui OSK Lines
2018	Enshu Maru	165 257	KM	K-Line	KHI	K-Line
2018	Flex Endeavour	173 400	GT	FLEX LNG	DSME	B. Schulte (UK)
2018	Flex Enterprise	173 400	GT	FLEX LNG	DSME	B. Schulte (UK)
2018	Flex Rainbow	174 000	TZM	FLEX LNG	SHI	FLEX LNG
2018	Flex Ranger	174 101	TZM	FLEX LNG	SHI	B. Schulte (UK)
2018	GasLog Genoa	174 000	TZM	GasLog	SHI	GasLog
2018	GasLog Hongkong	174 000	GT	GasLog	HHI	GasLog LNG Services
2018	GasLog Houston	174 000	GT	GasLog	HHI	GasLog LNG Services
2018	Georgiy Brusilov	172 000	GT	Dynagas LNG	DSME	Dynagas LNG
2018	Kairos	7 500	Other	Schulte Group	Hyundai Mipo	B. Schulte (Deutsch)
2018	Kinisis	174 000	GT	Chandris (Hellas)	DSME	K-Line Ship Mngt.
2018	LNG Juno	180 000	KM	Trans Pacific Spg 5	MHI	Mitsui OSK Lines
2018	LNG Sakura	177 582	KM	KEPCO	KHI	NYK LNG Shipmngt.
2018	LNG Schneeweisschen	180 125	GT	Mitsui OSK Lines	DSME	MOL LNG Europe
2018	Magdala	173 545	GT	Teekay LNG Partners	DSME	STASCO (Shell)
2018	Maran Gas Spetses	174 501	GT	Maran Gas Maritime	DSME	Maran Gas Maritime
2018	Marvel Eagle	155 000	KM	Mitsui OSK Lines	KHI	Mitsui OSK Lines
2018	Marvel Falcon	174 000	TZM	Nippon Yusen Kaisha	SHI	NYK Shipmngt.
2018	Marvel Hawk	174 000	TZM	Nippon Yusen Kaisha	SHI	Nippon Yusen Kaisha
2018	Megara	173 545	GT	Teekay LNG Partners	DSME	STASCO (Shell)
2018	Myrina	173 545	GT	Teekay LNG Partners	DSME	STASCO (Shell)
2018	Oceanic Breeze	155 671	KM	K-Line	MHI	K-Line Ship Mngt.
2018	Pacific Breeze	183 352	KM	K-Line	KHI	K-Line
2018	Pacific Mimosa	155 727	KM	Nippon Yusen Kaisha	MHI	NYK LNG Shipmngt.
2018	Pan Americas	174 000	GT	Teekay LNG Partners	HZ	Teekay Shpg. (Gla)
2018	Pan Europe	174 000	GT	Teekay LNG Partners	HZ	Teekay LNG Partners
2018	Patris	174 000	GT	Chandris (Hellas)	DSME	K Line LNG Shpg.
2018	Rudolf Samoylovich	172 652	GT	Teekay Corp CLNG JV	DSME	Teekay Corp CLNG JV
2018	Sean Spirit	174 162	GT	Teekay LNG Partners	HSHI	Teekay Shpg. (Gla)
2018	Seri Camar	150 200	KM	MISC	HHI	MISC
2018	Seri Cemara	150 200	KM	MISC	HHI	EagleStar Shipmngt.
2018	SK Resolute	180 082	TZM	SK/ Marubeni JV	SHI	SK Shipmngt.
2018	SK Serenity	174 117	KC1	SK Shpg.	SHI	SK Shpg.
2018	SK Spica	174 117	KC1	SK Shpg.	SHI	SK Shpg.
2018	Vladimir Rusanov	172 652	GT	Arctic Blue LNG	DSME	MOL LNG Europe
2018	Vladimir Vize	172 410	GT	Arctic Blue LNG	DSME	Arctic Blue LNG
2018	Xinle 30	30 133	Other	Lejin Shpg.	Ningbo Xinle SB	Lejin Shpg.

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LNG imports in 2018 (net of re-exports)

Country	10^6 m^3 liquid	10^6 T	Global Share (%)	Var. 2018/2017 (%)
Japan	182.24	82.46	26.3%	-1.3%
China	122.56	54.00	17.2%	38.4%
South Korea	98.98	43.95	14.0%	16.2%
India	50.02	22.42	7.1%	16.6%
Taiwan	37.50	16.81	5.4%	1.2%
Pakistan	15.33	6.86	2.2%	48.4%
Thailand	10.02	4.44	1.4%	12.3%
Indonesia	6.80	3.00	1.0%	13.5%
Singapore	5.84	2.56	0.8%	28.1%
Malaysia	3.23	1.40	0.4%	-22.2%
Bangladesh	1.50	0.67	0.2%	-
Asia (11)	534.02	238.56	76.0%	13.0%
Mexico	11.42	4.98	1.6%	4.2%
Chile	7.12	3.06	1.0%	-6.3%
Argentina	5.88	2.59	0.8%	-22.5%
Brazil	4.24	1.86	0.6%	14.8%
United States	3.84	1.65	0.5%	10.9%
Puerto Rico	2.65	1.13	0.4%	20.5%
Dom. Rep.	2.13	0.91	0.3%	4.7%
Canada	0.96	0.41	0.1%	43.1%
Colombia	0.59	0.25	0.1%	738.9%
Jamaica	0.46	0.20	0.1%	17.0%
Panama	0.36	0.16	0.0%	-
Americas (11)	39.64	17.22	5.5%	2.5%

Country	10^6 m^3 liquid	10^6 T	Global Share (%)	Var. 2018/2017 (%)
Spain	24.17	10.75	3.4%	-11.2%
Turkey	18.59	8.30	2.6%	13.2%
France	17.82	7.84	2.5%	6.7%
Italy	13.76	6.08	1.9%	1.8%
UK	11.20	4.95	1.6%	1.5%
Portugal	6.35	2.85	0.9%	5.3%
Netherlands	4.56	2.02	0.6%	162.1%
Poland	4.44	1.99	0.6%	56.6%
Belgium	4.30	1.90	0.6%	115.6%
Greece	2.06	0.92	0.3%	-27.9%
Lithuania	1.34	0.60	0.2%	-29.1%
Malta	0.65	0.28	0.1%	22.9%
Sweden	0.55	0.25	0.1%	-22.6%
Norway	0.26	0.12	0.0%	-
Finland	0.17	0.07	0.0%	49.2%
Europe (15)	110.22	48.91	15.6%	6.4%
Kuwait	7.58	3.39	1.1%	-3.4%
Jordan	5.66	2.49	0.8%	-24.8%
Egypt	4.32	1.93	0.6%	-68.8%
UAE	1.73	0.77	0.2%	-69.0%
Israel	1.28	0.55	0.2%	43.9%
Middle East & Africa (5)	20.58	9.12	2.9%	-42.5%
Total Net imports	704.45	313.80	100.0%	8.3%

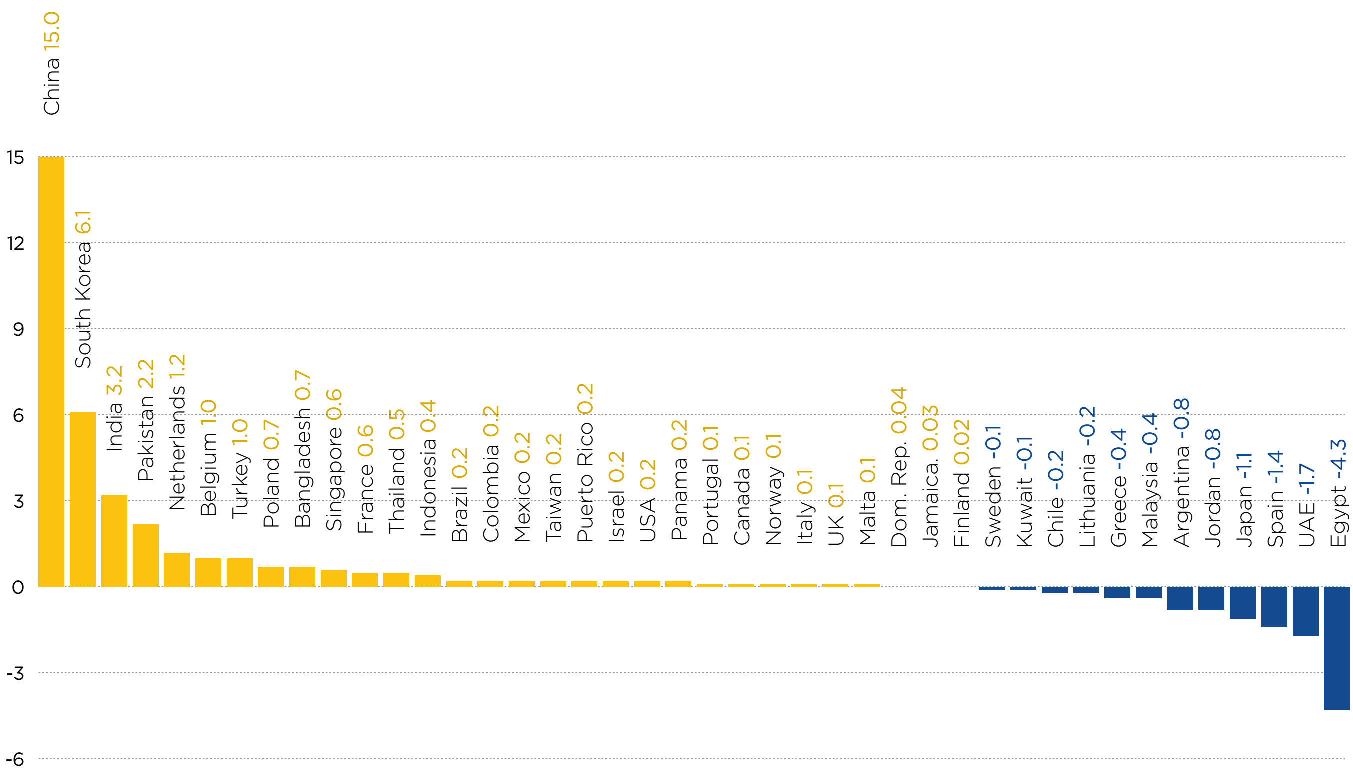
Source: GIIGNL, Kpler

Source of LNG imports in 2018

Country	10^6 m^3 liquid	10^6 T	Global Share (%)	Var. 2018/2017 (%)
Australia	150.85	66.66	21.2%	20.0%
Brunei	13.99	6.37	2.0%	-7.5%
Indonesia	41.21	18.21	5.8%	-2.7%
Malaysia	54.35	24.66	7.9%	-8.2%
Papua New Guinea	15.01	7.01	2.2%	-13.7%
Peru	7.84	3.52	1.1%	-5.4%
Russia (Sakhalin)	24.86	11.05	3.5%	-3.8%
Pacific Basin	324.53	137.48	43.8%	4.7%
Oman	21.88	10.01	3.2%	21.5%
Qatar	171.81	76.79	24.5%	-0.9%
UAE	11.96	5.54	1.8%	-0.9%
Middle East	205.65	92.34	29.4%	1.1%
Algeria	22.46	10.10	3.2%	-18.1%
Angola	8.99	3.98	1.3%	12.9%
Cameroon	1.35	0.61	0.2%	-
Egypt	3.31	1.44	0.5%	86.0%
Equatorial Guinea	7.93	3.45	1.1%	-10.1%
Nigeria	43.76	19.68	6.3%	-3.2%
Norway	11.53	5.17	1.6%	32.7%
Russia (Yamal)	16.43	7.28	2.3%	-
Trinidad and Tobago	27.19	11.63	3.7%	14.2%
USA	47.76	20.65	6.6%	68.7%
Atlantic Basin	174.27	83.99	26.8%	25.1%
Total	704.45	313.80	100.0%	8.3%

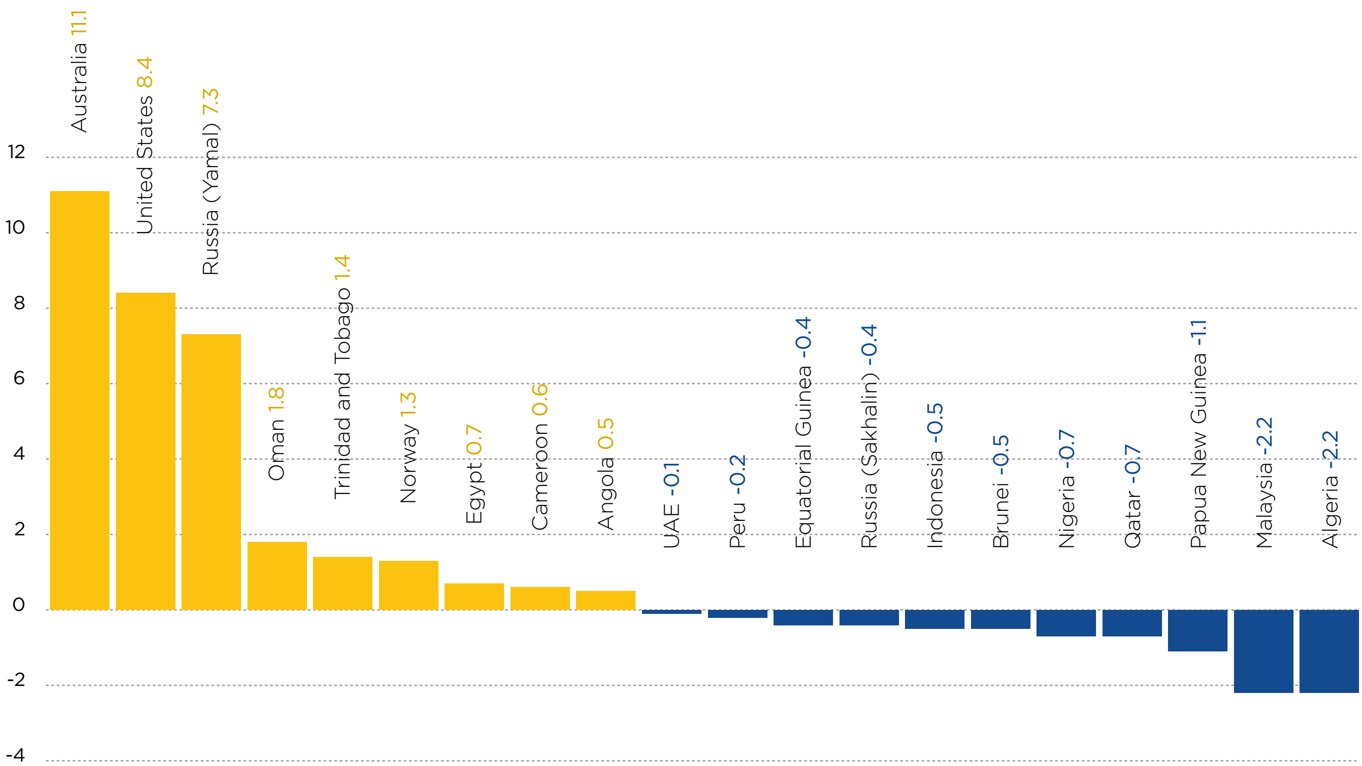
Source: GIIGNL, Kpler

LNG IMPORTS: 2018 VS. 2017 (MT)



Source: GIIGNL, Kpler

SOURCE OF LNG IMPORTS: 2018 VS. 2017 (MT)



Source: GIIGNL, Kpler

QUANTITIES (IN MT) RECEIVED IN 2018 BY THE IMPOR

Country	Algeria	Angola	Cameroon	Egypt	Equatorial Guinea	Nigeria	Norway	Trinidad & Tobago	USA	Oman
Japan	-	0.20	-	0.13	0.12	1.34	0.13	0.12	2.50	3.08
China	0.07	0.52	0.17	0.18	0.67	1.13	0.26	0.38	2.16	0.51
South Korea	-	0.27	-	0.22	0.06	0.47	0.13	0.18	4.57	4.27
India	0.22	1.68	0.26	0.17	0.81	2.86	0.07	0.35	1.00	1.16
Taiwan	-	0.06	0.06	-	-	0.18	0.06	0.23	0.25	0.31
Pakistan	0.13	0.06	-	-	0.31	0.88	0.13	0.06	0.25	0.13
Thailand	-	-	-	0.07	-	0.92	-	0.39	-	0.07
Indonesia	-	-	-	-	-	-	-	-	-	-
Singapore	-	0.13	-	-	0.27	-	-	0.05	-	-
Malaysia	-	-	-	-	-	-	-	-	-	-
Bangladesh	-	-	-	-	-	-	-	-	-	-
Asia (11)	0.42	2.93	0.49	0.77	2.25	7.78	0.77	1.75	10.73	9.54
Spain	1.11	0.07	0.06	-	-	3.06	0.43	1.57	0.20	-
Turkey	3.44	0.07	-	0.14	0.06	1.53	0.06	0.33	0.31	-
France	2.97	0.07	-	0.26	-	2.58	1.11	0.06	0.29	-
Italy	0.63	0.07	0.06	0.09	0.13	0.06	0.12	-	0.33	-
UK	0.16	-	-	0.12	0.06	0.06	0.10	0.42	0.87	-
Portugal	0.10	-	-	-	-	1.75	-	-	0.24	-
Netherlands	0.10	0.14	-	-	-	-	0.37	-	0.29	-
Poland	-	-	-	-	-	-	0.25	-	0.06	-
Belgium	-	0.06	-	-	-	-	0.07	-	-	-
Greece	0.79	-	-	-	-	-	-	-	0.07	-
Lithuania	-	-	-	-	-	-	0.60	-	-	-
Malta	-	-	-	-	0.04	0.02	0.02	0.12	0.04	-
Sweden	-	-	-	-	-	-	0.14	-	-	-
Norway	-	-	-	-	-	-	0.12	-	-	-
Finland	-	-	-	-	-	-	0.07	-	-	-
Europe (15)	9.29	0.47	0.12	0.61	0.29	9.07	3.47	2.49	2.70	-
Mexico	-	-	-	-	-	1.02	-	0.19	3.50	-
Chile	-	-	-	-	0.52	-	-	1.76	0.78	-
Argentina	0.06	-	-	-	0.06	0.36	-	0.39	0.53	-
Brazil	-	0.06	-	-	-	0.19	0.19	0.35	0.66	-
USA	-	-	-	-	-	0.06	-	1.40	-	-
Puerto Rico	-	-	-	-	-	-	-	1.13	-	-
Dom. Rep.	-	-	-	-	-	-	-	0.81	0.12	-
Canada	-	-	-	-	-	-	0.06	0.29	-	-
Colombia	-	-	-	-	-	-	-	0.15	0.10	-
Jamaica	-	-	-	-	-	-	0.01	0.13	0.06	-
Panama	-	-	-	-	-	-	-	-	0.09	-
Americas (11)	0.06	0.06	-	-	0.58	1.65	0.25	6.61	5.85	-
Kuwait	-	0.46	-	0.06	0.13	0.39	0.13	0.06	0.19	0.47
Jordan	0.07	-	-	-	0.13	0.61	0.13	0.23	0.87	-
Egypt	-	-	-	-	0.06	0.12	0.42	0.06	0.13	-
UAE	0.26	0.07	-	-	-	0.06	-	-	0.07	-
Israel	-	-	-	-	-	-	-	0.43	0.12	-
Middle East & Africa (5)	0.33	0.53	-	0.06	0.32	1.18	0.68	0.78	1.37	0.47
Global Net imports	10.10	3.98	0.61	1.44	3.45	19.68	5.17	11.63	20.65	10.01

Source: GIIGNL, Kpler

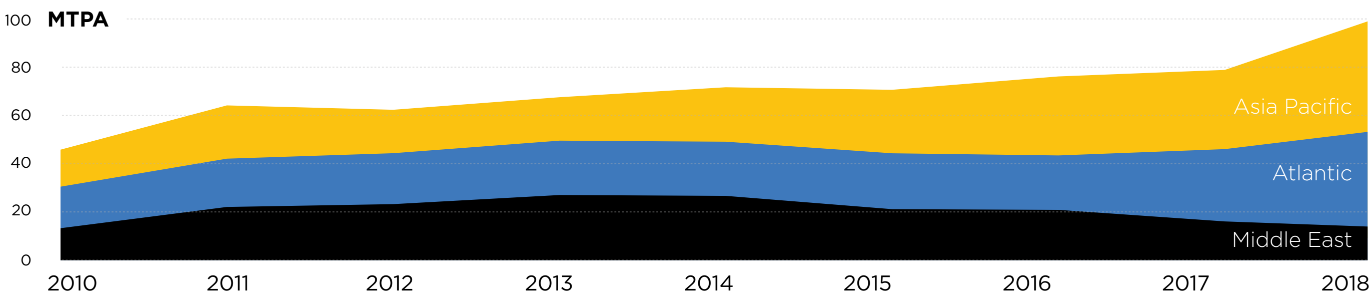
TING COUNTRIES FROM THE EXPORTING COUNTRIES

Qatar	UAE	Australia	Brunei	Indonesia	Malaysia	Papua New Guinea	Peru	Russia	Re-exports Received	Re-exports Loaded	2018 Net imports
10.03	4.98	28.45	4.20	5.09	11.29	3.14	0.56	6.82	0.42	-0.15	82.46
9.29	-	23.14	0.21	4.89	5.99	2.49	0.06	1.15	0.74	-	54.00
14.15	-	7.90	0.77	3.52	3.67	0.08	0.97	2.05	0.68	-	43.95
11.13	0.31	1.46	-	-	0.26	-	-	0.41	0.33	-0.07	22.42
4.83	0.06	2.56	0.74	1.14	2.74	1.15	0.06	2.30	0.07	-	16.81
4.28	0.13	0.07	-	0.13	0.06	-	-	0.06	0.19	-	6.86
2.02	0.06	0.07	0.06	0.19	0.53	-	-	0.06	-	-	4.44
-	-	-	-	3.00	-	-	-	-	-	-	3.00
0.37	-	2.01	-	0.13	-	0.08	-	-	0.07	-0.56	2.56
-	-	0.88	0.39	-	0.13	-	-	-	-	-	1.40
0.67	-	-	-	-	-	-	-	-	-	-	0.67
56.78	5.54	66.54	6.37	18.09	24.66	6.93	1.65	12.86	2.50	-0.78	238.56
2.47	-	-	-	-	-	-	1.27	0.64	0.11	-0.26	10.75
2.16	-	-	-	-	-	-	-	-	0.20	-	8.30
0.79	-	-	-	-	-	-	0.21	1.09	0.03	-1.61	7.84
4.58	-	-	-	-	-	-	-	-	-	-	6.08
2.14	-	-	-	-	-	-	0.06	1.15	0.07	-0.25	4.95
0.70	-	-	-	-	-	-	-	-	0.06	-	2.85
0.28	-	-	-	-	-	-	0.23	1.14	-	-0.53	2.02
1.68	-	-	-	-	-	-	-	-	-	-	1.99
1.55	-	-	-	-	-	-	-	0.40	0.07	-0.26	1.90
0.06	-	-	-	-	-	-	-	-	-	-	0.92
-	-	-	-	-	-	-	-	-	-	-0.00	0.60
-	-	-	-	-	-	-	0.04	-	-	-	0.28
-	-	-	-	-	-	-	-	-	0.11	-	0.25
-	-	-	-	-	-	-	-	-	-	-	0.12
-	-	-	-	-	-	-	-	-	0.01	-0.01	0.07
16.42	-	-	-	-	-	-	1.81	4.43	0.66	-2.92	48.91
-	-	-	-	0.13	-	0.07	0.06	-	-	-	4.98
-	-	-	-	-	-	-	-	-	-	-	3.06
1.11	-	-	-	-	-	-	-	0.04	0.04	-	2.59
0.07	-	-	-	-	-	-	-	0.34	0.08	-0.07	1.86
-	-	-	-	-	-	-	-	0.06	0.13	-	1.65
-	-	-	-	-	-	-	-	-	-	-	1.13
-	-	-	-	-	-	-	-	-	-	-0.02	0.91
-	-	-	-	-	-	-	-	0.06	-	-	0.41
-	-	-	-	-	-	-	-	-	-	-	0.25
-	-	-	-	-	-	-	-	-	-	-	0.20
-	-	-	-	-	-	-	-	0.07	-	-	0.16
1.18	-	-	-	0.13	-	0.07	0.06	0.57	0.24	-0.09	17.22
1.35	-	-	-	-	-	-	-	0.07	0.06	-	3.39
0.13	-	-	-	-	-	-	-	0.27	0.06	-	2.49
0.94	-	-	-	-	-	-	-	0.13	0.07	-	1.93
-	-	0.12	-	-	-	-	-	-	0.19	-	0.77
-	-	-	-	-	-	-	-	-	-	-	0.55
2.42	-	0.12	-	-	-	-	-	0.46	0.38	-	9.12
76.79	5.54	66.66	6.37	18.21	24.66	7.01	3.52	18.33	3.78	-3.78	313.80

SPOT AND SHORT-TERM QUANTITIES (IN 10^3T) RECEI THE EXPORTING COUNTRIES

Country	Algeria	Angola	Cameroon	Egypt	Equatorial Guinea	Nigeria	Norway	Trinidad & Tobago	USA	Oman
China	66	517	174	57	65	477	193	251	1 713	513
Japan	-	204	-	134	58	743	134	-	930	681
South Korea	-	265	-	220	63	404	127	182	1 826	196
India	224	1 681	192	167	502	2 484	66	348	671	1 164
Taiwan	-	61	55	-	-	184	59	226	254	313
Pakistan	126	63	-	-	185	876	126	59	245	130
Indonesia	-	-	-	-	-	-	-	-	-	-
Thailand	-	-	-	-	-	263	-	-	-	-
Singapore	-	135	-	-	69	-	-	54	-	-
Malaysia	-	-	-	-	-	-	-	-	-	-
Bangladesh	-	-	-	-	-	-	-	-	-	-
Asia (11)	415	2 925	421	579	941	5 432	705	1 119	5 639	2 996
Spain	262	67	57	-	-	725	-	390	-	-
Netherlands	96	140	-	-	-	-	-	-	290	-
UK	165	-	-	-	-	59	-	-	606	-
Turkey	60	68	-	71	-	263	-	224	254	-
Italy	-	68	61	93	128	63	121	-	330	-
Portugal	99	-	-	-	-	250	-	-	110	-
Poland	-	-	-	-	-	-	248	-	60	-
Malta	-	-	-	-	44	21	17	116	42	-
Sweden	-	-	-	-	-	-	106	-	-	-
Belgium	-	62	-	-	-	-	73	-	-	-
Greece	-	-	-	-	-	-	-	-	71	-
Finland	-	-	-	-	-	-	68	-	-	-
France	34	67	-	-	-	298	123	-	228	-
Lithuania	-	-	-	-	-	-	6	-	-	-
Norway	-	-	-	-	-	-	0	-	-	-
Europe (15)	715	472	118	165	172	1 677	763	730	1 991	-
Mexico	-	-	-	-	-	1 025	-	-	3 008	-
Argentina	61	-	-	-	59	365	-	389	529	-
Brazil	-	56	-	-	-	194	187	351	661	-
USA	-	-	-	-	-	61	-	595	-	-
Chile	-	-	-	-	-	-	-	57	462	-
Colombia	-	-	-	-	-	-	-	154	98	-
Dom. Rep.	-	-	-	-	-	-	-	145	124	-
Canada	-	-	-	-	-	-	62	111	-	-
Puerto Rico	-	-	-	-	-	-	-	224	-	-
Jamaica	-	-	-	-	-	-	6	134	59	-
Panama	-	-	-	-	-	-	-	-	90	-
Americas (11)	61	56	-	-	59	1 645	255	2 161	5 031	-
Egypt	-	-	-	-	59	124	424	56	125	-
Kuwait	-	462	-	63	134	256	131	-	189	269
Jordan	74	-	-	-	129	605	126	111	200	-
UAE	259	-	-	-	-	60	-	-	66	-
Israel	-	-	-	-	-	-	-	428	119	-
Middle East & Africa (5)	333	462	-	63	322	1 046	681	596	700	269
Global Net imports	1 524	3 916	539	806	1 493	9 800	2 404	4 606	13 361	3 265

SPOT & SHORT TERM FLOWS BY EXPORTING REGIONS

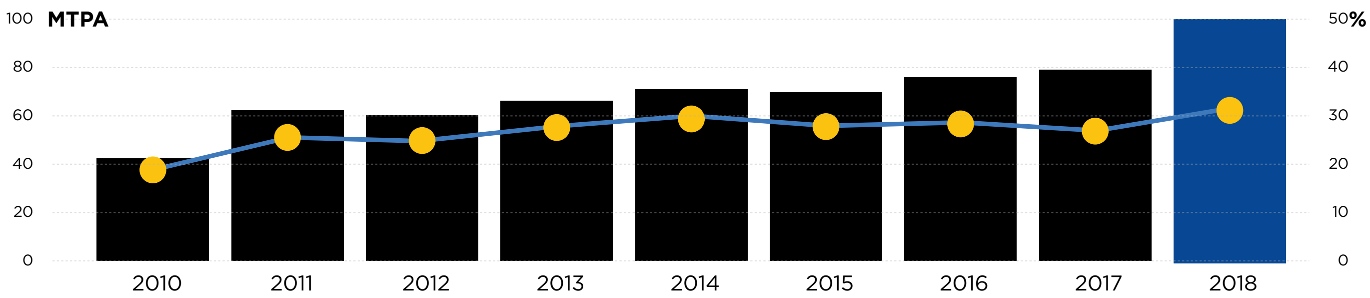


VED IN 2018 BY THE IMPORTING COUNTRIES FROM

Qatar	UAE	Australia	Brunei	Indonesia	Malaysia	Papua New Guinea	Peru	Russia	Re-exports Received	Re-exports Loaded	2018 Net imports
927	-	6 625	208	1 908	1 961	531	-	790	738	-	17 714
1 160	59	4 370	194	1 340	2 311	653	341	1 087	419	-150	14 666
3 243	-	3 152	193	1 101	1 950	-	305	702	684	-	14 611
2 249	313	579	-	-	264	-	-	410	328	-66	11 575
421	61	1 632	437	881	2 607	293	-	1 662	66	-	9 213
313	130	67	-	-	64	-	-	61	192	-	2 635
-	-	-	-	878	-	-	-	-	-	-	878
-	62	65	-	193	-	-	-	63	-	-	647
-	-	289	-	127	-	77	-	-	71	-564	258
-	-	71	-	-	-	-	-	-	-	-	71
51	-	-	-	-	-	-	-	-	-	-	51
8 363	624	16 851	1 031	6 428	9 157	1 554	646	4 774	2 498	-779	72 319
238	-	-	-	-	-	-	576	213	113	-255	2 386
275	-	-	-	-	-	-	232	1 138	-	-527	1 644
67	-	-	-	-	-	-	-	729	71	-255	1 442
185	-	-	-	-	-	-	-	-	196	-	1 321
-	-	-	-	-	-	-	-	-	-	-	865
60	-	-	-	-	-	-	-	-	61	-	579
-	-	-	-	-	-	-	-	-	-	-	308
-	-	-	-	-	-	-	43	-	-	-	283
-	-	-	-	-	-	-	-	-	110	-	216
124	-	-	-	-	-	-	-	124	67	-256	194
63	-	-	-	-	-	-	-	-	-	-	134
-	-	-	-	-	-	-	-	-	15	-8	75
154	-	-	-	-	-	-	-	727	29	-1 613	46
-	-	-	-	-	-	-	-	-	-	-2	5
-	-	-	-	-	-	-	-	-	-	-	0
1 166	-	-	-	-	-	-	851	2 931	661	-2 916	9 496
-	-	-	-	-	-	73	-	-	-	-	4 106
1 112	-	-	-	-	-	-	-	39	41	-	2 595
66	-	-	-	-	-	-	-	335	75	-67	1 859
-	-	-	-	-	-	-	-	65	127	-	848
-	-	-	-	-	-	-	-	-	-	-	520
-	-	-	-	-	-	-	-	-	-	-	252
-	-	-	-	-	-	-	-	-	-	-22	247
-	-	-	-	-	-	-	-	63	-	-	235
-	-	-	-	-	-	-	-	-	-	-	224
-	-	-	-	-	-	-	-	-	-	-	199
-	-	-	-	-	-	-	-	66	-	-	156
1 178	-	-	-	-	-	73	-	567	244	-89	11 241
939	-	-	-	-	-	-	-	132	67	-	1 927
-	-	-	-	-	-	-	-	67	63	-	1 634
-	-	-	-	-	-	-	-	194	61	-	1 499
-	-	58	-	-	-	-	-	-	191	-	635
-	-	-	-	-	-	-	-	-	-	-	547
939	-	58	-	-	-	-	-	392	382	-	6 242
11 646	624	16 909	1 031	6 428	9 157	1 626	1 497	8 664	3 784	-3 784	99 298

Source: GIIGNL, Kpler

SHARE OF SPOT & SHORT TERM VS. TOTAL LNG TRADE



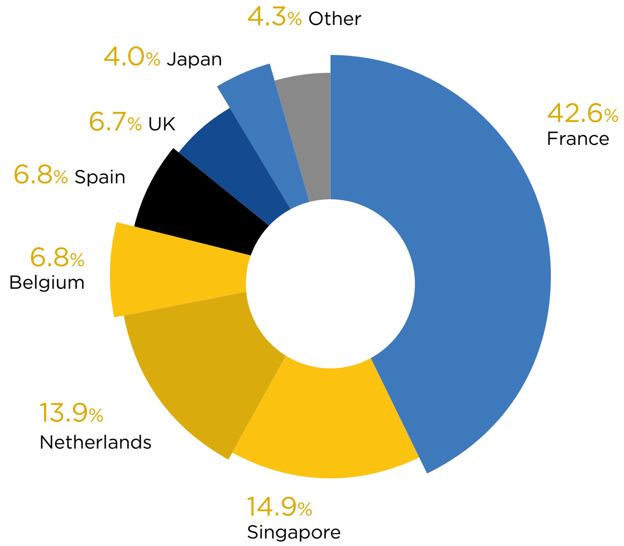
INTERNATIONAL RE-EXPORTS

(Based on cargoes received in 2018)

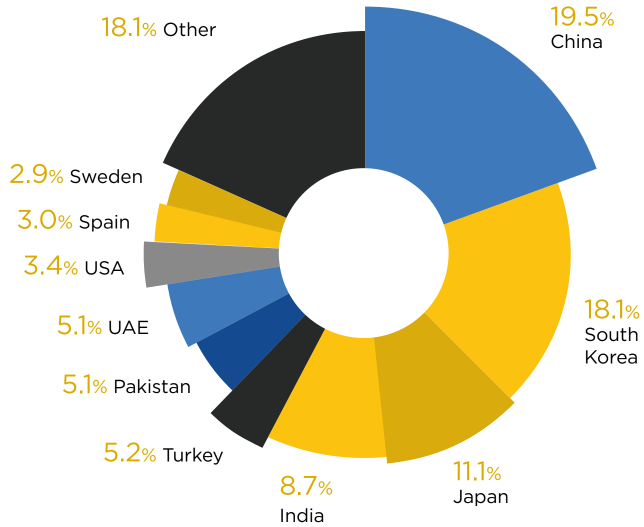
Re-Exporting Country	Import Country	Re-exported Volumes (MT)	Total (MT)
Belgium	Brazil	0.08	0.26
	Portugal	0.06	
	South Korea	0.005	
	Spain	0.06	
	Sweden	0.06	
Finland	Sweden	0.01	0.01
France	Belgium	0.06	1.61
	China	0.20	
	Egypt	0.07	
	France	0.03	
	India	0.13	
	Japan	0.26	
	Kuwait	0.06	
	Pakistan	0.06	
	Singapore	0.07	
	South Korea	0.32	
	Spain	0.03	
	Turkey	0.13	
	UAE	0.06	
	UK	0.07	
	USA	0.06	
Lithuania	Belgium	0.002	0.002
Netherlands	Belgium	0.003	0.53
	China	0.07	
	Finland	0.01	
	India	0.20	
	Jordan	0.06	
	Pakistan	0.06	
	Sweden	0.05	
	UAE	0.07	
Spain	Argentina	0.04	0.26
	China	0.01	
	South Korea	0.07	
	Turkey	0.07	
	UAE	0.07	
UK	China	0.07	0.25
	Pakistan	0.07	
	South Korea	0.06	
	USA	0.07	
Europe			2.92
India	Taiwan	0.07	0.07
Japan	China	0.09	0.15
	South Korea	0.06	
Singapore	China	0.30	0.56
	Japan	0.16	
	South Korea	0.11	
Asia			0.78
Brazil	South Korea	0.07	0.07
Dom. Rep.	Spain	0.02	0.02
Americas			0.09
World			3.78

Source: GIIGNL, Kpler

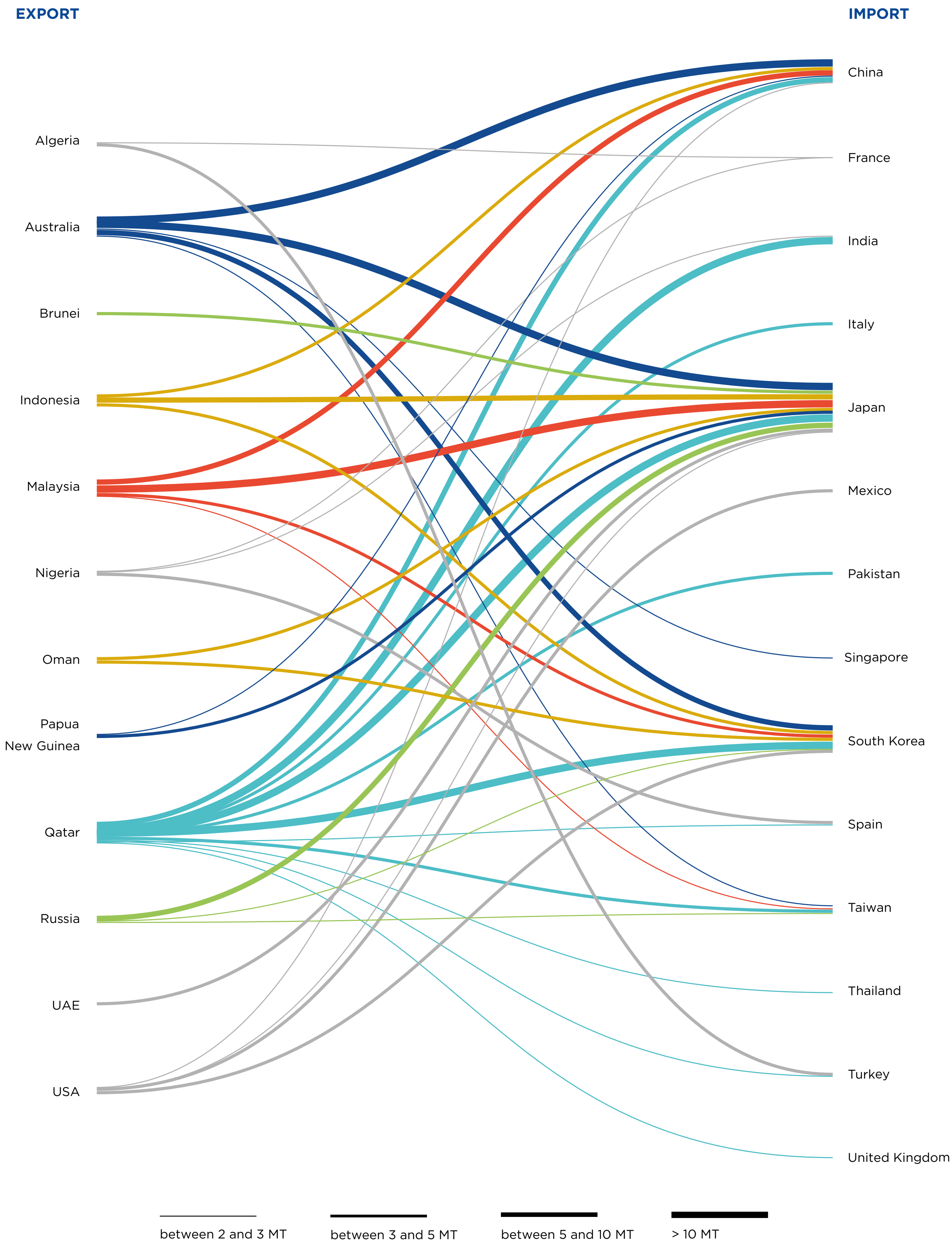
RE-EXPORTS LOADED BY RELOADING COUNTRY IN 2018 (3.8 MT)



RE-EXPORTS RECEIVED BY RECEIVING COUNTRY IN 2018 (3.8 MT)



MAJOR LNG FLOWS IN 2018



Liquefaction plants

In 2018, global liquefaction capacity increased by 41 MTPA to reach a total nameplate capacity of around 406 MTPA at year-end.

The year was marked by the first LNG exports from Cameroon with the Kribi facility (2.4 MTPA), the world's first floating liquefaction unit (FLNG) converted from an LNG carrier.

The capacity increase was also driven by new Australian capacity (Ichthys LNG Train 1 & 2 and Wheatstone LNG Train 2), new US capacity (Corpus Christi LNG Train 1, Cove Point LNG and Sabine Pass Train 5) and new Russian capacity (Yamal LNG Train 2 & 3).

3 FIDs were taken during the year : Corpus Christi Train 3 (4.5 MTPA) in the US, LNG Canada (14 MTPA) in Canada, and phase 1 of the Greater Tortue Ahmeyim FLNG project (2.5 MTPA).

At the end of the year, approximately 66 MTPA of new liquefaction capacity was under construction, 53 MTPA of which was located in North America.

In 2019, around 25 MTPA of new liquefaction capacity is expected to come online, 21 MTPA of which is located in the United States.

Argentina

In December 2018, YPF awarded a long-term contract to produce and export the first LNG from Argentina. Barge-based floating liquefaction unit Caribbean FLNG will be redeployed as **Tango FLNG** to the Port of Bahía Blanca in the second quarter of 2019. The project marks the entry of Argentina to the LNG exporting nations, with an initial plan to export 0.5 MTPA sourced from Vaca Muerta shale gas in the Neuquén Basin in Argentina.

Australia

Ichthys LNG Train 1 & 2 (8.9 MTPA), and Wheatstone LNG Train 2 (4.45 MTPA) started their commercial operations in 2018.

Gas production from Train 1 of **Ichthys LNG** project (2 trains, 8.9 MTPA) started in mid-2018 and the first cargo was exported in October. Total has agreed to divest a 4 percent stake in the project to Inpex for $1.6 billion. Train 2 of the project commenced its commercial operations in December 2018.

Wheatstone LNG project (2 trains, 8.9 MTPA) loaded the first cargo from Train 2 in June 2018. Production from the two trains has ramped up to reach plateau.

In December 2018, **Prelude FLNG** facility (3.6 MTPA) entered the initial phase of production. The first commercial cargo from the facility was expected to be sent in the 2nd quarter of 2019 with a gradual ramp-up.

Cameroon

The first cargoes from the Kribi FLNG (2.4 MPTA) were exported in May 2018. The shareholders of the **Kribi FLNG** project are Perenco, Société Nationale des Hydrocar-bures and Golar LNG. Gazprom Marketing & Trading has committed to buy 1.2 MTPA of LNG from the project over eight years as the sole off-taker.

Canada

In October 2018, **LNG Canada** announced that its joint venture participants (Shell, PETRONAS, PetroChina, Mitsubishi and KOGAS) have taken a positive FID on its first two trains with 14 MTPA of capacity. The participants will supply feed gas and offtake LNG in proportion to their equity stakes. The project would initially export LNG from two 7 MTPA trains and may be expanded to four trains totalling 28 MTPA. The first cargoes from the project is expected to be delivered in 2024.

In December 2018, Pieridae Energy, the developer of **Goldboro LNG** project (approximately 10 MTPA) announced the acquisition of Ikkuma Resources, a gas producer based in Alberta. FID for Goldboro LNG is targeted to be taken during the 1st half of 2019.

In October, **Woodfibre LNG** signed Heads of Agreement (HoA) with CNOOC to deliver 0.75 MTPA of LNG for 13 years starting in 2023. In 2016, it had signed an HoA with Guangzhou Gas Group for a potential 1 MTPA of LNG for 25 years. FID for Woodfibre LNG is expected to be taken in 2019.

Egypt

In September, the International Center for Settlement of International Disputes (ICSID) which forms part of the World

Bank has decided on the claim initiated in 2014 and has ruled against the Arab Republic of Egypt for the unilateral interruption of gas supply to the liquefaction facilities of Union Fenosa Gas in Damietta. This can give momentum for restart of the **Damietta LNG** plant, but it could take some time for an agreement to be reached.

Equatorial Guinea

In January 2019, the Ministry of Mines and Hydrocarbons of Equatorial Guinea issued a notice informing Ophir Energy, which has led the **Fortuna FLNG** project, of its decision that the license for Block R holding the Fortuna gas discovery expired as of December 31, 2018 and would not be extended.

Indonesia

In 2016, BP and the **Tangguh LNG** project partners made an FID to expand the facility. The construction for the expansion is in progress, adding a third train of 3.8 MTPA capacity to the existing facility, taking its capacity to 11.4 MTPA. The project also includes two offshore platforms, 13 new production wells, an expanded LNG loading facility, and supporting infrastructure.

Regarding the **Sengkang LNG** project, a 20-year extension to the Sengkang gas field PSC has been granted to Energy World Co., the developer of the project, by SKK Migas, Indonesia's energy regulator in November 2018.

Malaysia

In January 2019, PETRONAS awarded an EPC contract for the relocation of **PFLNG Satu** from the Kanowit to the Kebabangan field. This was due to two factors, a gas leak at the onshore Sabah-Sarawak gas pipeline in January 2018 impacting MLNG's output, and lower gas output from the current Kanowit field.

In March 2018, PETRONAS announced the **Rotan FLNG** (PFLNG Dua) was 84% complete, and the company was targeting the pre-commissioning for mid-2019.

Mauritania / Senegal

In December 2018, BP and partners including Kosmos Energy, Petrosen and SMHPM (the Senegalese and Mauritanian NOCs) took an FID for Phase 1 of the **Greater Tortue Ahmeyim LNG** development. This project will produce 2.5 MTPA of LNG using Golar's FLNG vessel, Gimi. BP has agreed to purchase the entire output of LNG from Phase 1 of the project.

Mexico

In June 2018, TechnipFMC and Kiewit partnership have been selected as the EPC contractor for the **Energía Costa Azul LNG** project. In November 2018, Sempra LNG & Midstream and IENOVA signed three non-binding HOAs with Total, Mitsui and Tokyo Gas for the export capacity of Phase 1 (2.5 MTPA) of the project. The company is targeting an FID on Phase 1 by the end of 2019.

Mozambique

In September 2018, Eni announced that the start of construction of its **Coral South FLNG** facility. Production of around 3.4 MTPA of LNG is expected to start in 2022. In 2015, BP agreed to offtake the entire volume of LNG from the project, including any upside production.

In June 2018, Anadarko, the developer of **Mozambique LNG** (2 trains, 12.9 MTPA) signed an HOA with Tokyo Gas and Centrica for the supply of 2.6 MTPA of LNG. FID is expected in the first half of 2019.

Oman

In October 2018, the CEO of Oman LNG commented that the company began a de-bottlenecking program for all three trains at its **Qalhat LNG** plant with additional gas production from the Khazzan field. The de-bottlenecking is expected to add 1.2 MTPA of capacity by 2021.

Papua New Guinea

In February 2018, the **PNG LNG** plant was affected by the earthquake which hit the country and the facility was closed until mid-April. The production from Train 1 restarted in mid-April and from Train 2 at the end of April.

Qatar

In September 2018, Qatar Petroleum increased its target for total liquefaction capacity after expansion from 100 MTPA to 110 MTPA through plans to add a fourth new liquefaction train.

Russia

Train 2 (5.5 MTPA) and Train 3 (5.5 MTPA) of **Yamal LNG** project started-up in July and in December respectively. Total output capacity of the facility reached 16.5 MTPA with three trains and Train 4 is expected to be commissioned in 2019 with a capacity of 1 MTPA.

In December, Novatek signed an engineering and construction contract with a joint-venture of Saipem and Renaissance for the **Arctic-2 LNG** project for three LNG liquefaction trains with a 6.6 MTPA each on gravity-based structures. Total acquired a working interest of 10% in Arctic LNG 2 in May. FID on the project is expected in 2019.

USA

As of January 2019, Trains 1 through 5 (4.5 MTPA respectively) at **Sabine Pass LNG** were operational. Petronas agreed to purchase 1.1 MTPA of LNG over 20 years from Train 6 which was still under commercialization in December 2018.

In November, **Corpus Christi LNG** Train 1 (4.5 MTPA) started production. In January 2019, the United States FERC approved the application of Cheniere for the start of commissioning of Train 2 (4.5 MTPA) and the commercial operations of Train 2 are expected to start in the second quarter of 2019. In May 2018, Cheniere made an FID on Train 3 (4.5 MTPA), which will increase the facility's total nominal liquefaction capacity to 13.5 MTPA.

Cove Point LNG facility (5.25 MTPA) started its commercial service in April 2018.

In September, the **Freeport LNG** liquefaction project received a partial cargo to be kept in tank until the commissioning process starts. Trains 1 through 3 are scheduled to commence operations sequentially between Q3 2019 and Q2 2020.

In November, Sempra Energy announced that **Cameron LNG** had initiated the commissioning process for Train 1 of the project. Three liquefaction trains are included in Phase 1 of the project, which will deliver around 13.5 MTPA of LNG. Cameron LNG is now expected to commence commercial operations in 2019.

In October, Kinder Morgan announced that the start-up of the **Elba Island** LNG export project was postponed, The first train of the project was expected to start-up in the first half of 2019.

Developed by Qatar Petroleum and ExxonMobil, **Golden Pass LNG** will have a design capacity of 15.6 MTPA. FID was taken in February 2019.

As of January 2019. it was targeted that the commercial operations of Venture Global's **Calcasieu Pass** LNG facility would start in 2022. Venture Global signed sales and purchases agreements with BP, Edison, Galp, PGNiG, Repsol and Shell, for a total of 8 MTPA of LNG in 2018.

On October 2018, LNG Limited, the developer of the **Magnolia LNG** export project announced that it would push back the FID for the project to the first half of 2019. In December, the company extended the validity period of its current EPC contract with the KBR-led JV. The proposed capacity of the project is 8.8 MTPA.

In June 2018, Bechtel was selected as the EPC contractor for the proposed **Port Arthur LNG** liquefaction project. PGNiG signed a preliminary agreement relating to the terms of a potential 20-year contract for the sales and purchase of 2 MTPA of LNG. The proposed Port Arthur liquefaction project consists of two liquefaction trains for a total capacity of 11 MTPA.

LIQUEFACTION PLANTS AT THE END OF 2018

Country	Name	Liquefaction: Number of trains	Liquefaction: Nominal capacity in MTPA	Storage: Number of tanks	Storage: Total capacity in 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
Cameroon	Kribi (FLNG)	1	2.4	1	125 000	Golar LNG 89%, Keppel Corporation 10%, Black & Veatch 1%	Golar LNG	Gazprom	2018
Egypt	Damietta (stopped)	1	5.0	2	300 000	SEGAS (Union Fenosa Gas 80%, EGPC 10%, EGAS 10%)	SEGAS SERVICES	BP, Union Fenosa Gas	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, Iberdrola, 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, Iberdrola, RWE Supply & Trading, Total	2007
Russia	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 & Tobago	Atlantic LNG T1	1	3.3	1	102 000	Shell 46%, BP 34%, CIC 10%, NGC Trinidad 10%	Atlantic LNG	ENGIE, Naturgy	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	Sabine Pass T1	1	4.5	5	800 000	Sabine Pass Liquefaction	Cheniere	Centrica, Cheniere Marketing, GAIL, KOGAS, Naturgy, Shell, Total	2016
	Sabine Pass T2	1	4.5						2016
	Sabine Pass T3	1	4.5						2017
	Sabine Pass T4	1	4.5						2017
	Sabine Pass T5	1	4.5						2018
	Corpus Christi T1	1	4.5	2	320 000	Corpus Christi Liquefaction	Cheniere	Cheniere Marketing, PetroChina, Vitol	2018
	Cove Point	1	5.25	7	700 000	Dominion Resources	Dominion Resources	Gail, Kansai Electric, Tokyo Gas	2018
ATLANTIC BASIN TOTAL			139.3		4 957 800				
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%, Partex 2%, Itochu 0.9%	Oman LNG	BP, Itochu, KOGAS, Osaka Gas	2000
	Qalhat	1	3.7			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%, Partex 0.7%		Mitsubishi, Osaka Gas, Union Fenosa Gas	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

Country	Name	Liquefaction		Storage		Owner(s)	Operator	MT - LT Buyer(s)	Start-up date
		Number of trains	Nominal capacity in MTPA	Number of tanks	Total capacity in liq m^3				
	Qatargas II T2	1	7.8			Qatar Petroleum 65%, ExxonMobil 18.3%, Total 16.7%	Qatargas Operating Company	CNOOC, ExxonMobil, Petrochina, Total	2009
	Qatargas III	1	7.8	8	1 160 000	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, Marubeni, Petronas, Shell, Uniper	2011
	Rasgas I T1 - T2	2	6.6			Qatar Petroleum 63%, ExxonMobil 25%, KORAS 5%, Itochu 4%, LNG Japan 3%	Qatargas Operating Company	Endesa, ENI, KOGAS	T1: 1999 T2: 2000
Qatar	Rasgas II T1	1	4.7				Qatargas Operating Company	Petronet	2004
	Rasgas II T2	1	4.7	6	840 000		Qatargas Operating Company	Edison	2005
	Rasgas II T3	1	4.7			Qatar Petroleum 70%, ExxonMobil 30%	Qatargas Operating Company	CPC, EDF Trading, ENI	2007
	Rasgas III T1	1	7.8				Qatargas Operating Company	EDF Trading, KOGAS, Petronet	2009
	Rasgas III T2	1	7.8				Qatargas Operating Company	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	JERA	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			100.8		2 820 000				
PACIFIC BASIN									
	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, CNOOC, JERA, Kansai Electric, Kyushu Electric, Osaka Gas, Shizuoka Gas, Toho Gas, Tohoku Electric, Tokyo Gas	T1: 1989 T2: 1989 T3: 1992 T4: 2004 T5: 2008
	Darwin	1	3.7	1	188 000	ConocoPhillips 56.9%, Santos 11.5%, Inpex 11.4%, Eni 11%, JERA 6.1%, Tokyo Gas 3.1%	ConocoPhillips	JERA, Tokyo Gas	2006
	Pluto	1	4.3	2	240 000	Woodside 90%, Kansai Electric 5%, Tokyo Gas 5%	Woodside	Kansai Electric, Tokyo Gas	2012
	QCLNG T1	1	4.3	2	280 000	Shell 50%, CNOOC 50%	Shell	CNOOC, Shell	2015
	QCLNG T2	1	4.3			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
Australia	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					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, GS Caltex, JERA, JXTG Nippon Oil & Energy, 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, Kyushu Electric, Tohoku Electric	T1: 2017 T2: 2018
	Ichthys T1 - T2	2	8.9	1	165 000	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
Brunei	Brunei T1 - T5	5	7.2	3	195 000	Brunei Government 50%, Shell 25%, Mitsubishi 25%	Brunei LNG	JERA, KOGAS, Osaka Gas, Petronas, Shell, Tokyo Gas	1973

Country	Name	Liquefaction		Storage		Owner(s)	Operator	MT - LT Buyer(s)	Start-up date
		Number of trains	Nominal capacity in MTPA	Number of tanks	Total capacity in liq m^3				
Indonesia	Bontang	4	11.5	6	630 000	Government of Indonesia	PT Badak NGL (Pertamina 55%, Huffco 30%, JILCO 15%)	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 & Energy 12.2%; Mitsubishi 9.9%; INPEX 7.8%; KG Berau 6.3%; Sojitz 3.7%; Sumitomo 3.7%; Mitsui 2.3%)	Tangguh LNG	CNOOC, Kansai Electric, PLN, Posco, Sempra LNG, SK E&S, Tohoku Electric	2009
	Donggi-Senoro	1	2	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	Hiroshima Gas, JERA, Saibu Gas, Shikoku Electric, Tokyo Gas	1983
	MLNG 2 Dua	3	9.6			Petronas 80%, Mitsubishi 10% Sarawak state government 10%	Petronas	CPC, JERA, JXTG Nippon Oil & Energy, Osaka Gas, Sendai City Gas, Shizuoka Gas, Tohoku Electric, Tokyo Gas	1995
	MLNG 3 Tiga	2	7.7			Petronas 60%, Sarawak state government 25%, JXTG Nippon Oil & Energy 10%, Diamond Gas 5%	Petronas	CNOOC, JAPEX, KOGAS, Osaka Gas, Toho Gas, Tohoku Electric, Tokyo Gas	2003
	MLNG T9	1	3.6			Petronas 70%, JXTG Nippon Oil & Energy 10%, PTT 10%, Sarawak state government 10%	Petronas	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	6.9	2	320 000	PNG LNG (Exxon Mobil 33.2%, Oil Search 29%, Kumul Petroleum 16.6%, Santos 13.5%, JXTG Nippon Oil & Energy 3.7%, MRDC 2.8%, Marubeni 1%, Petromin PNG 0.2%)	PNG LNG	BP, CNPC, CPC, JERA, Osaka Gas, Sinopec	2014
Peru	Peru	1	4.5	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
USA	Kenai (mothballed)	1	1.5	3	108 000	Andeavor	Andeavor		1969
PACIFIC BASIN TOTAL			165.6		5 078 000				
TOTAL			405.6		12 855 800				

Regasification terminals

In 2018, global active regasification capacity reached 868 MTPA at year-end.

At year-end, 42 countries were LNG importers. **Bangladesh** and **Panama** joined the ranks of importers for the first time during the year.

Ten new terminals were commissioned, adding a combined 22.3 **MTPA** of new regasification capacity. Two of these terminals are based on floating solutions (in Bangladesh and Turkey).

Three expansions were also completed in Greece, Japan and Thailand.

At the end of the year, 8 new floating terminals and 14 new onshore terminals were reported to be under construction. Total regasification capacity under construction at year end reached 95 MTPA.

Australia

In January 2019, Höegh LNG signed a time charter agreement with AGL Energy to provide an FSRU for the **Crib Point** LNG import project in Victoria State. The project will have a regasification capacity of 2.6 MTPA and is targeting start-up in 2021 - 2022.

Argentina

Excelerate's FSRU *Exemplar* departed **Bahia Blanca** in October. Argentina will reduce its imports as domestic production of gas sourced from the Vaca Muerta shale gas in the Neuquén Basin rises.

Bahrain

The construction of the **Bahrain** LNG import terminal was completed in September and Teekay LNG Partners delivered the *Bahrain Spirit* FSU with a storage capacity of 174,000 m³ to the charterer in October. The terminal will have a regasification capacity of 6.1 MTPA and commercial operations are expected to start-up in 2019.

Bangladesh

Bangladesh's first LNG import terminal located offshore **Moheshkhali** Island began its operations in August. The terminal uses Excelerate's FSRU *Excellence* with a regasification capacity of 3.75 MTPA and a storage capacity of 138,000 m³.

A second terminal is under construction by Summit Power and Mitsubishi, offshore **Moheshkhali** Island. The commercial operations are expected to start-up in the first half of 2019. Excelerate's FSRU *Excelerate* which was previously moored in Abu Dhabi will be utilized for the project, with a regasification capacity of 3.75 MTPA.

Belgium

Fluxys is building a fifth LNG storage tank with a capacity of 180,000 m³ and additional process installations at the **Zeebrugge** LNG terminal. These facilities will support the transshipment of cargoes from Yamal LNG. The construction is expected to be completed by mid-2019. Fluxys also invested in 2018 in a second truck loading station, doubling the capacity from 4000 to 8000 truck loadings per year as from January 2019.

Brazil

UTE GNA I, a Brazilian joint venture, executed a 23-year charter agreement with BW for a 173,400 m³ FSRU *BW Courage* with a regasification capacity of 4.2 MTPA and a storage capacity of, which is expected to arrive in **Açu** in mid-2020. The JV is owned by BP (18.7 %), Siemens (37.7 %) and Prumo Logisitica (43.6 %).

In April 2018 Golar Power, developing the Porto de Sergipe I Gas-to-Power project, executed a 26-year charter agreement with Golar LNG for *Golar Nanook,* a 170,000 m³ FSRU. Commencement of commercial operations of the 1,500 MW Sergipe power station is scheduled for the beginning of 2020.

Chile

Höegh LNG backed out of the **Penco-Lirquen** LNG import project because approvals for the initiative were to be delayed again. The company was due to provide an FSRU to the project for 20 years.

China

Four new regasification terminals started operating in 2018:

- Sinopec's **Tianjin** LNG import terminal received its first cargo from Australia in February 2018. The terminal has the capacity to handle 3 MTPA of LNG.
- In August, the first commissioning arrived at ENN's **Zhoushan** LNG Terminal, which has a send-out capacity of 3 MTPA.
- **Diefu** LNG import terminal operated by CNOOC received the first cargo from Qatar in August. The terminal has a nameplate capacity of 4 MTPA.
- **Shenzhen Gas** started up a small-scale LNG import terminal in Guangdong province.

Replacing FSRU Cape Ann, FSRU *Höegh Esperanza* arrived at the **Tianjin** LNG terminal and commenced operations in November. The vessel will be utilized in FSRU mode for a minimum period each year, with the balance of the year in LNG carrier mode and/or FSRU mode.

CNOOC took FID on the **Tianjin** LNG phase 2 project in May which includes six LNG storage tanks with a capacity of 220,000 m³ each and 12 regasification units. The terminal will have the capacity to handle 7.25 MTPA of LNG when completed. Operations are scheduled to start in 2022.

In June, CNOOC began construction works on the phase 2 of the **Ningbo** LNG import terminal. The regasification capacity of the terminal will be increased to 6 MTPA from the current 3 MTPA with this expansion. The company will build three LNG storage tanks with a capacity of 160,000 m^3 each. The expansion project is expected to be completed in 2020.

CNOOC also launched the construction of a 3 MTPA LNG terminal in **Binhai**, north of the city of Yancheng in Jiangsu province. The project is expected to be completed by 2020-2021 and will include a wharf for berthing 100,000-ton vessels. a gas pipeline network between Jiangsu and Anhui provinces and 220,000 m^3 storage tank.

In November, PetroChina started construction works on the phase 3 of the **Rudong** LNG import terminal. The project includes the construction of two 200,000 m^3 LNG storage tanks, bringing total capacity to 1.08 million m^3. The expansion is expected to be completed in 2021.

Sinopec and Zhejiang Energy are developing a 3 MTPA LNG terminal in **Wenzhou**, Zhejiang province. The project includes four 200,000 m^3 storage tanks, a berth to dock tankers of 30,000 m^3 to 266,000 m^3, as well as a 26-km pipeline. The first phase of the terminal is expected to start-up operations at the end of 2021.

Colombia

In November 2018, the Colombian government announced a plan to launch a tender for an FSRU to be located in the Bay of **Buenaventura**, on the Pacific coast. The FSRU would become the second import terminal in Colombia and would commence operations at the end of 2023. The selection of the winner is expected in mid-2019.

Croatia

In February 2019, LNG Croatia, the state-owned company took FID for the construction of the country's first LNG import terminal on the Island of **Krk**. Golar Power was selected as the top bidder to provide an FSRU for the terminal. The *Golar Viking* LNG carrier will be converted into an FSRU. It has a storage capacity of 140,000 m^3 and the regasification capacity will be 1.9 MTPA. Commercial operations are expected to start-up in early 2021.

Cyprus

In October 2018, the Government of Cyprus launched a tender for the construction of the country's first LNG import terminal in **Vasilikos** Bay. The tender is for the procurement of an FSRU of at least 125,000 m^3 storage capacity and the construction of onshore and offshore infrastructure. The government is targeting start-up by November 30, 2020.

Egypt

The FSRU *Höegh Gallant* left Ain Sokhna terminal in Egypt. Egypt halted importing LNG from October 2018 as domestic gas production from the recently discovered gas fields in the West Nile Delta and Zohr ramps-up.

El Salvador

Wärtsilä commenced site work for a new 378 MW LNG-to-power project developed by Energía del Pacifico at the port of **Acajutla** in El Salvador. A dedicated floating LNG import terminal will be built at the same location and LNG will be supplied by Shell under a long-term supply contract signed in 2017.

Finland

Wärtsilä commenced the construction work for the small-scale **Hamina** LNG terminal at the port of Hamina. The terminal will have a storage capacity of 30,000 m^3 and a truck-loading area for LNG. The terminal is planned to be fully operational in 2020.

France

EDF and Total divested their respective stakes of 65% and 10% of the **Dunkerque** LNG terminal in July 2018. The shareholder structure of Dunkerque LNG is now as follows: Fluxys and its consortium partners, AXA Investment Managers and Crédit Agricole Assurances (60.76%) and a consortium of Korean investors led by IPM Group (39.24%). The terminal has performed its first LNG reloading operations in January 2018. Works for increasing the LNG reloading rate from 4,400 to 8,800 m^3/h have been completed in 2018.

A new truck loading facility is under construction at **Fos Cavaou.** It should be able to accommodate 40 truck loadings per day from 2019. The terminal also offers a new LNG bunker-vessel loading service. The facility for this service, which will enable the terminal to accommodate smaller vessels of less than 20,000 m^3 of capacity, is under construction with targeted completion in 2019.

The LNG truck loading capacity at **Fos Tonkin** has been increased in 2018, from 12 to 20 trucks per day.

Germany

In September, RWE signed an HoA with **German LNG**, the joint venture of Gasunie, Oiltanking, and Vopak for a significant part of the regasification capacity of an LNG import terminal being developed in **Brunsbüttel** in Northern Germany. The terminal will include a tank of 240,000 m^3. a jetty for vessels and barges of up to 265,000 m^3 and a regasification capacity of 3.6 MTPA. FID is envisaged for late 2019 and commercial operations are expected to start-up by the end of 2022.

In August 2018, Uniper started the project development for an FSRU-based LNG import terminal in **Wilhelmshaven**. Uniper and MOL have reached an agreement to continue and intensify their efforts to implement an FSRU in December. The FSRU will have a planned send-out capacity of 7.2 MTPA and a storage capacity of 263,000 m^3. The facility is targeted to be in operation in the second half of 2022.

A third project led by Dow Chemical is being developed in Stade, west of Hamburg.

Ghana

In September, Tema LNG Terminal signed an agreement with China Harbor Engineering for the construction of an LNG import terminal in **Tema**. The terminal is being constructed on the back of a 12-year of 1.7 MTPA SPA signed between Ghana National Petroleum Corporation (GNPC) and Rosneft in May 2018. The terminal will use a 28,000 m^3 capacity FRU barge designed by TGE Marine.

Gibraltar

In November, Shell completed the construction of the first LNG import terminal in **Gibraltar**. The terminal has five storage tanks with a total capacity of 5,000 m^3 and a jetty for small-scale LNG carriers. The first LNG cargo of around 7,000 m^3 arrived at the port in January 2019 to supply the adjacent power plant.

Greece

The expansion at **Revithoussa** LNG terminal was completed in November 2018. The project included the construction of a third tank of 95,000 m^3 bringing the total storage capacity to 225,000 m^3, the upgrade of marine facilities and the installation of additional equipment to increase the regasification rate by 40%. A truck loading station could be completed by mid-2020 and a bunkering jetty by 2022. In December, a consortium of Enagas, Fluxys and Snam purchased 66% of DESFA, the terminal owner.

FID on the **Alexandroupolis** LNG terminal being developed by DEPA and Gastrade was pushed back to 2019.

Hong Kong

In October CLP Power received an environmental permit for the construction and operation of **Hong Kong** offshore LNG import terminal. MOL signed a preliminary agreement to supply an FSRU in June and the MOL FSRU *Challenger* currently operating in Turkey is expected to be chartered for 13 years. The vessel has a regasification capacity of 4.1 MTPA and a storage capacity of 263,000 m^3. FID is expected to be made in 2019.

India

In January 2019, Shell announced that it had completed the acquisition of a 26% equity interest in the **Hazira** LNG from Total. This brings Shell's equity interest in the venture to 100%.

Petronet's Dahej terminal is currently being expanded from 15 MMTPA to 17.5 MTPA. GSPC LNG has set-up an LNG import terminal with a send-out capacity of 5 MTPA and expandable to 10 MTPA at **Mundra**, in the state of Gujarat. The terminal includes berthing and unloading facilities for ship ranging from 70,000 to 265,000 m³, two storage tanks with a net capacity of 160,000 m³ each and a truck-loading facility. It is expected that the terminal will be commissioned in the 1st half of 2019.

In **Ennore**, the commissioning cargo was received in February in 2019 and the commercial operations are targeted to start-up in the 1st half of 2019. Ennore is the first LNG terminal on the eastern coast of India.

H-Energy, a unit of Hiranandani group, is developing an FSRU-based LNG import terminal at **Jaigarh** Port in Maharashtra. The terminal, with a regasification capacity of 4 MTPA, is scheduled to start commercial operations in the 2nd half of 2019.

Indonesia

PT Perta Arun Gas, a subsidiary of Pertamina, plans to expand the **Arun** LNG regasification terminal. Pertamina obtained a permit from the Directorate General of Customs and Excise to operate a bonded logistics center for an LNG Hub in Arun.

MOL signed agreements for the construction of a 2.4 MTPA FSRU for the **Jawa 1** gas-fired power plant project, through PT Jawa Satu Regas, a joint company of Pertamina, Marubeni and Sojitz. The terminal could start-up in 2021.

Ireland

In August **Shannon** LNG made an agreement with New Fortress Energy to develop an LNG import terminal project located on the Shannon Estuary in County Kerry. The project has acquired all the necessary planning and permitting approvals for its development.

Italy

Edison will construct together with PIR (Petrolifera Italo Rumena) an LNG depot at the port of **Ravenna**. The deposit, which will start to operate in 2021, will have a storage capacity of 20,000 cubic meters of LNG and will handle more than 1 million cubic meters of LNG a year, making LNG available in Italy to fuel at least 12,000 trucks and up to 48 ferries a year.

Jamaica

In December 2018, *Golar Freeze* FSRU arrived at the LNG import terminal in **Old Harbor Bay**. It will be operated under a 15-year charter contract with US company New Fortress Energy. With a regasification capacity of 3.6 MTPA, the terminal will supply natural gas to the power plant at Old Harbor and an alumina refinery in Clarendon.

Japan

Two new LNG import terminals began operations in 2018:

- In April 2018, **Soma** LNG import terminal in Fukushima Prefecture received the first commercial cargo from Sakhalin, Russia. It comprises an LNG storage tank with a capacity of 230,000 m³, two berths and regasification facilities with a capacity of 0.7 MTPA. The additional construction works for Fukushima Gas Power are scheduled to be completed in 2020, which includes building a second LNG storage tank with a capacity of 230,000 m³ and additional vaporization equipment.
- In July 2018, the first commercial cargo from Malaysia was delivered to Hokuriku Electric Power's **Toyama Shinko** LNG import terminal, which consists of an 180,000 m³ LNG storage tank and regasification facilities with a capacity of 0.4 MTPA.

Expansion works are progressing at the **Ishikari** LNG import terminal operated by Hokkaido Gas. Under this project, a 230,000 m³ LNG storage tank and 3 additional vaporisers came into operation in 2018 taking the total to 7 and the send-out capacity to 6.2 MTPA. The fourth storage tank is under construction.

Tokyo Gas installed two additional vaporizers at the **Hitachi** LNG Terminal in Ibaraki Prefecture. The total send-out capacity was expanded to 3.8 MTPA with a total of 5 vaporizers. A second storage tank with a capacity of 230,000 m³ is under construction and is expected to be completed in 2020.

In February 2018, Tokyo Gas and four Japanese partners announced that they would construct an LNG regasification terminal and a gas-fired power plant at the site of Sumitomo Chemical's plant in **Niihama** (Ehime prefecture) in western Japan. The other partners are Sumitomo Chemical, Sumitomo Joint Electric Power, Shikoku Electric Power and Shikoku Gas. The terminal will have a 230,000 m³ storage tank and is expected to start commercial operations in early 2022.

Kuwait

In **Mina Al Ahmadi** , KPC has extended the charter on the Golar Igloo FSRU to the end of 2019. It is expected that a replacement vessel will be chartered in the near term.

The project of an onshore LNG import terminal in **Al-Zour** is expected to be operational in 2022 with a regasification capacity of 23 MTPA and eight storage tanks with a capacity of 225,000 m³ each.

Malaysia

Petronas completed its first LNG bunkering operation at the **Pengerang** terminal in Johor Port in November. The company supplied the 7,500 m³ LNG bunkering vessel *Kairos*.

Mexico

In August, New Fortress Energy was awarded 25-year contract from the Baja California Sur Port Authority (APIBCS) for the development, construction and operation of an LNG import terminal at the port of **Pichilingue**. The terminal is expected to be in operation in 2020.

Myanmar

In early 2018, the Ministry of Electricity and Energy approved three large LNG-to-power projects which could require FSRUs:

- Gunvor, Zhefu and Supreme plan to build a 1,4 GW power plant at **Mee Laung Gyaing** near Yangon.
- Thailand's TTLC plans to construct a 356 MW plant at **Ahlone** nearby in Yangon.
- Total and Siemens are developing a 1.2 GW project in **Kanbauk**.

Netherlands

Gate terminal will invest to increase the ship loading flow rate at the jetties for large ships from the current 2,300 m³/h to 4,000 m³/h to lower port time for vessels. The service will be operational after the summer of 2019.

Pakistan

Vopak announced in November that it will acquire in total 44% in Elengy Terminal Pakistan Ltd. (ETPL) in separate transactions with International Finance Corporation and Engro Corporation. ETPL owns an LNG import terminal located in **Port Qasim**. Deal closing is anticipated to take place in the first quarter of 2019.

Panama

Panama's first LNG import terminal, **Costa Norte** LNG received its first commissioning cargo in June. The terminal consists of an 180,000 m³ storage tank, a jetty designed to receive LNG vessels in the range of 30,000 to 180,000 m³ and regasification facilities with a capacity of 1.5 MTPA. It also includes a truck loading facility with two stations that could be expanded with an additional two slots to serve the local and regional market for industries, transportation and small-scale power generation. AES has 50.1% in the LNG-to-power project that includes a 380MW combined-cycle gas turbine and the remaining 49.9% belong to Inversiones Bahia.

Philippines

LNG import terminal developed by EWC and associated with 650 MW gas-fired power plant at **Pagbilao** is still reported to be under construction. The project, which consists of a 130,000 m³ storage tank and a jetty, and regasification facilities with a capacity of 3 MTPA, is located about 90 kilometers southeast of Manila. The terminal is now expected to be ready and operational by 2020.

Tanglawan Philippines LNG is developing an onshore LNG import terminal in **Batangas**. The project includes the construction of an LNG terminal with a regasification capacity of 5 MTPA and 2,000 MW gas-fired power plant. It received a notice to proceed from the Department of Energy in January 2019.

Poland

Polskie LNG, the operator of an LNG import terminal in **Świnoujście**, launched the expansion program of its LNG terminal. The program involves the regasification capacity increase from 5 to 7.5 bcm/y through setting up of new SCV vaporizers and the construction of a second jetty, the third storage tank with the capacity of 180,000 m³ and a system to reload LNG into rail tankers and ISO containers. In June 2018, the company received the building permit for the expansion.

Russia

In January 2019, Gazprom announced that an offshore gas receiving terminal and an FSRU were put into operation in the Russian enclave of **Kaliningrad**. The 174,000 m³ FSRU *Marshal Vasilevskiy* has a regasification capacity of 2.7 MTPA.

Singapore

SLNG completed the construction of its fourth storage tank with a capacity of 260,000 m³ in March 2018. which brought total storage capacity at the terminal to 800,000 m³. The company commenced the modifications to the terminal's secondary jetty and they are scheduled to be completed in Q2 2019. When completed, the terminal will be able to receive small LNG vessels ranging between 2,000 m³ and 10,000 m³.

South Korea

KOGAS is constructing an LNG import terminal in Aewol on **Jeju** Island. The terminal will have two storage tanks with a capacity of 45,000 m³ each and regasification facilities with 1 MTPA capacity. The commercial operations are expected to start-up in the second half of 2019.

Spain

Enagás is planning to redesign the jetty at its **Huelva** LNG terminal. The revamped mooring set-up will enable the loading of small-scale gas carriers, including LNG bunker vessels, and the direct loading of bunker tanks on LNG-fueled vessels. The tariffs charged for third-party access to regasification, truck loading and unloading of LNG carrier services have been revised starting in 2019. New tariffs for loading small ships and for multi-loading services were introduced in 2018.

Sudan

Sunagas and Sudan Ports Authority signed the lease agreement for Sudan's first LNG import terminal in July. Sunagas announced the start of a bidding process for the LNG supply to Sudan **Red sea** LNG terminal, firstly by inviting LNG suppliers to participate in the expression of Interest (EOI) to supply the terminal, to be situated in Port Sudan.

Taiwan

Taichung LNG terminal expansion project will be completed and commence operations in 2019. The expansion includes three new storage tanks with a capacity of 160,000 m³ each, related regasification facilities, pipelines and additional equipment.

The 3rd LNG import terminal located at **Datan Borough Taoyuan** in northern Taiwan is under construction by CPC and operations are expected to start in 2023.

Thailand

PTT completed the **Map Ta Phut** LNG import terminal expansion projects, bringing total regasification capacity to 11.5 MTPA and adding reloading facilities.

PTT is also constructing the new **Nong Fab** LNG import terminal in Rayong. The terminalis expected to have a regasification capacity of 7.5 MTPA. The company awarded an EPC contract to a Joint venture of Saipem and CTCI in June. PTT announced that the terminal would be complete in 2022.

Turkey

The fourth LNG import terminal of the country commenced its operations at a port in the **Dörtyol** district in the Hatay province in February 2018. Botas chartered the 263,000 m³ *MOL FSRU Challenger* for 3 years, which has a regasification capacity of 4.1 MTPA.

United States

Exelon Corporation purchased the **Everett** LNG import terminal from Engie in March 2018. The transaction was closed in October.

Vietnam

PetroVietnam Gas completed the feasibility study and FEED for the **Thi Vai** LNG import terminal in the southern province of Ba Ria-Vung Tau. The terminal has a design capacity of 1 to 3 MTPA.

REGASIFICATION TERMINALS AT THE END OF 2018

Country	Site	Storage		Send-out		Owner	Operator	Third-Party Access	Additional Services offered	Start-up date
		Number of tanks	Total capacity in liq m³	Number of vaporizers	Nominal capacity in MTPA					
AMERICAS										
Argentina	Bahia Blanca (OFFSHORE) No vessel chartered									2008
	GNL Escobar (OFFSHORE) *Excelerate Expedient (FSRU)*		151 000	6	4.5	Owner: Excelerate Energy Charterer: UTE Escobar (50% Enarsa, 50% YPF)	YPF	No		2011
Brazil	Bahia (OFFSHORE) *Golar Winter (FSRU)*		137 000		3.8	Owner: Golar Charterer: Petrobras	Petrobras	No		2013
	Guanabara Bay (OFFSHORE) No vessel chartered									2009
	Pecem (OFFSHORE) *Excelerate Experience (FSRU)*		173 400	6	6.0	Owner: Excelerate Energy Charterer: Petrobras	Excelerate Energy	No	Reloading	2009
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%), Codelco (37%)	GNLM	Yes	Transshipment, Truck loading	2010
	Quintero	3	334 000	4	4.0	Terminal Bahía Quintero SpA S.A. [Enagas Chile 51.9%, Omers 48.1%] (10.4%), ENAP (20%), Terminal de Valparaiso S.A. [Enagas Chile 100%] (40%), Omers Infraestructure Chile Holdings (29.6%)	GNL Quintero	Yes	Truck loading	2009
Colombia	Cartagena (OFFSHORE) *Höegh Grace (FSRU)*		170 000	4	3.0	Owner : Höegh LNG Charterer : Sociedad Portuaria El Cayao (SPEC)	Höegh LNG	No	Reloading, Transshipment	2016
Dominican Rep.	Andres	1	160 000	3	1.7	AES	AES	No	Reloading, Truck loading	2003
Jamaica	Montego Bay (OFFSHORE) *Golar Freeze (FSRU)*		125 856		3.6	Owner: Golar Charterer: Jamaica Public Service Company	Golar			2016
	Port Esquivel (OFFSHORE) *Golar Arctic (FSU)*		140 600		1.2	Owner: Golar Charterer: New Fortress Energy	Golar		Reloading	2015
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	Penuelas	1	160 000	2	1.5	Naturgy (47.5%), ENGIE (35%), Mitsui (15%), GE (2.5%)	Eco Electrica			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	Dominion	Dominion			1978
	Elba Island	5	535 000	11	12.0	Southern LNG (Kinder Morgan)	Southern LNG	Yes		1978
	Everett	2	155 000	4	5.1	Exelon	Exelon	Yes	Truck loading	1971
	Freeport LNG	2	320 000	7	13.2	Freeport LNG Development, L.P.	Freeport LNG Development	Yes	Reloading	2008
	Golden Pass	5	775 000	8	15.7	QP (70%), Exxon (17.6%), Conoco Philips (12.4%)	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	Trunkline LNG	Trunkline LNG	Yes		1982
	Northeast Gateway (OFFSHORE) 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			7 979 856		188.1					
ASIA										
Bangladesh	Moheshkhali (OFFSHORE) *Excelerate Excellence (FSRU)*		138 000		3.8	Owner: Excelerate Energy Charterer: Petrobangla	Excelerate Energy			2018
China	Beihai. Guangxi	3	480 000		2.9	Sinopec	Sinopec		Truck loading	2016

Country	Site	Storage		Send-out		Owner	Operator	Third-Party Access	Additional Services offered	Start-up date
		Number of tanks	Total capacity in liq m³	Number of vaporizers	Nominal capacity in MTPA					
China	Dalian. Liaoning	4	640 000	3	5.7	Petrochina (75%), Dalian Port Company Limited (20%), Dalian Construction Investment (5%)	Petrochina	Yes	Reloading, Truck loading	2011
	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	No	Truck loading	2006
	Dongguan. Guangdong	2	160 000	4	1.5	Jovo Group	Jovo		Truck loading	2013
	Fujian	4	640 000		5.1	Fujian LNG (CNOOC 60%, Fujian Inv. & Dev.Co. 40%)	CNOOC	No	Truck loading	2008
	Hainan	2	480 000		3.0	CNOOC (65%), other companies	CNOOC	No	Reloading	2014
	Qidong. Jiangsu	2	100 000		0.6	Guanghui Energy	Xinjiang Guanghui Petroleum		Truck loading	2017
	Qingdao. Shandong	4	640 000		4.6	Sinopec (50%), China Huaneng (50%)	Sinopec	No	Truck loading	2014
	Rudong. Jiangsu	4	680 000	3	6.2	Petrochina (55%), Pacific Oil & Gas (35%), Jiangsu Guoxin Investment Group (10%)	Petrochina	Yes	Truck loading	2011
	Pudong. Shanghai	3	320 000	3	0.5	Shanghai LNG (CNOOC 45%, Shenergy Group Ltd 55%)	Shenergy Group	No		2008
	Shanghai LNG	3	495 000		3.0	Shanghai LNG (CNOOC 45%, Shenergy Group Ltd 55%)	CNOOC	No		2009
	Diefu. Shenzhen	4	640 000		4.0	CNOOC (70%), Shenzhen Energy Group (30%)	CNOOC			2018
	Shenzhen Gas	1	80 000		0.8	Shenzhen Gas	Shenzhen Gas		Truck loading	2018
	Caofeidian. Tangshan	4	640 000		6.4	Petrochina (51%), Beijng Entreprises (29%), Hebei Natural Gas (20%)	Petrochina	Yes	Truck loading	2013
	Tianjin (OFFSHORE) *Höegh Esperanza (FSRU)*	2	230 000		3.0	Owner: Höegh LNG (100%) Charterer: CNOOC Gas & Power Trading and Marketing	Höegh LNG	No	Truck loading	2013. 2017 (Cape Ann) 2018
	Tianjin LNG	4	640 000		3.0	Sinopec (98%), Tianjin Nangang Industrial Zone Developemnt Co., Ltd. (2%)	Sinopec		Truck loading	2018
	Yuedong. Guangdong	3	480 000		2.0	CNOOC	CNOOC	No	Truck loading	2017
	Ningbo. Zhejiang	3	480 000		3.0	CNOOC (51%), Zhejiang Energy (29%), Ningbo Electric (20%)	CNOOC	No	Truck loading	2012
	Zhoushan. Zhejiang	2	320 000		3.0	ENN Energy	ENN Energy		Truck loading	2018
	Zhuhai. Guangdong	3	480 000		3.5	CNOOC	CNOOC		Reloading, Truck loading	2013
India	Dabhol	2	320 000	6	1.8	Ratnagiri Gas & Power Ltd (GAIL, NTPC)	Gail	No		2013
	Dahej	6	932 000	19	13.8	Petronet LNG	Petronet LNG	Yes	Truck loading	2004. expansion in July 2009 and 2016
	Hazira	2	320 000	5	4.9	Hazira LNG Private Ltd (Shell 100%)	Hazira LNG Private Ltd	No		2005
	Kochi	2	368 000	6	4.6	Petronet LNG	Petronet LNG	Yes	Reloading, Truck loading	2013
Indonesia	Arun Regas	2	220 000		3.0	PT Perta Arun Gas (Pertamina 70%, Government of Aceh 30%)	PT Perta Arun Gas	Yes		2015
	Benoa (OFFSHORE) FRU+FSU				0.3	JSK Group (50%), PT Pelindo III (50%)	PT Pelindo Energi Logistik (PEL)			2016
	Lampung LNG (OFFSHORE) *PGN FSRU Lampung (FSRU)*		170 000	3	1.8	Owner: Höegh LNG Charterer: PGN (subsidiary of Pertamina)	Höegh LNG	No		2014
	Nusantara (OFFSHORE) *Nusantara Regas Satu (FSRU)*		125 016	6	3.0	Owner: Golar LNG Charterer: PT Nusantara Regas	PT Nusantara Regas (Pertamina & PGN)	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 / Chubu Electric	Toho Gas	Yes	Truck loading	1978
	Chita-Midorihama Works	3	620 000	8	7.7	Toho Gas	Toho Gas	Yes	Truck loading	2001
	Futtsu	10	1 110 000	13	19.1	TEPCO Fuel & Power	TEPCO Fuel & Power	Yes	Truck loading	1985
	Hachinohe	2	280 000	5	1.0	JXTG Nippon Oil & Energy	JX Nippon LNG Service	Yes	Reloading, Truck loading	2015
	Hatsukaichi	2	170 000	4	0.8	Hiroshima Gas	Hiroshima Gas	No	Truck loading	1996

Country	Site	Storage		Send-out		Owner	Operator	Third-Party Access	Additional Services offered	Start-up date
		Number of tanks	Total capacity in liq m³	Number of vaporizers	Nominal capacity in MTPA					
Japan	Hibiki	2	360 000	5	2.4	Hibiki LNG (Saibu Gas 90%, Kyushu Electric 10%)	Hibiki LNG	Yes	Cool-down, Gas test, Truck loading	2014
	Higashi-Ohgishima	9	540 000	9	13.2	TEPCO Fuel & Power	TEPCO Fuel & Power	Yes		1984
	Himeji	8	740 000	7	5.9	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	3	1.7	Tokyo Gas	Tokyo Gas	Yes	Reloading, Truck loading	2016
	Ishikari	3	610 000	4	2.7	Hokkaido Gas / Hokkaido Electric	Hokkaido Gas	Yes (N° 1&2 Tanks) No (N° 3 Tank)	Reloading, Truck loading	2012
	Joetsu	3	540 000	8	2.4	Chubu Electric	Chubu Electric	No	Truck loading	2011
	Kagoshima	2	86 000	3	0.2	Nippon Gas	Nippon Gas	No	Truck loading	1996
	Kawagoe	6	840 000	7	4.9	Chubu Electric	Chubu Electric	Yes	Truck loading	1997
	Mizushima	2	320 000	6	4.3	Mizushima LNG	Mizushima LNG	Yes	Truck loading	2006
	Nagasaki	1	35 000	3	0.1	Saibu Gas	Saibu Gas	Yes	Truck loading	2003
	Naoetsu	2	360 000	4	1.5	INPEX Corporation	INPEX Corporation	Yes		2013
	Negishi	14	1 180 000	14	11.1	Tokyo Gas / TEPCO Fuel & Power	Tokyo Gas	Yes	Reloading, Truck loading	1969
	Niigata	8	720 000	14	8.5	Nihonkai LNG	Nihonkai LNG	Yes		1984
	Ohgishima	4	850 000	12	9.9	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	5	2.2	Osaka Gas	Osaka Gas	Yes	Truck loading	1972
	Senboku II	17	1 510 000	15	11.5	Osaka Gas	Osaka Gas	Yes	Truck loading	1977
	Shin-Minato	1	80 000	3	0.3	Gas Bureau, City of Sendai	Gas Bureau. City of Sendai	No	Truck loading	1997
	Shin-Sendai	2	320 000	3	0.8	Tohoku Electric	Tohoku Electric	No		2015
	Sodegaura	33	2 540 000	36	29.7	Tokyo Gas / TEPCO Fuel & Power	Tokyo Gas	Yes	Reloading, Truck loading	1973
	Sodeshi	3	337 200	8	2.9	Shimizu LNG (Shizuoka Gas 65%, JXTG Nippon Oil & Energy Corporation 35%)	Shimizu LNG	Yes	Reloading, Truck loading	1996
	Soma	1	230 000		1.3	Japex	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		0.4	Hokuriku Electric	Hokuriku Electric	No	Truck loading	2018
	Yanai	6	480 000	5	2.3	The Chugoku Electric	The Chugoku Electric	No	Truck loading	1990
	Yokkaichi LNG Center	4	320 000	8	6.4	Chubu Electric	Chubu Electric	Yes		1987
	Yokkaichi Works	2	160 000	6	2.1	Toho Gas	Toho Gas	Yes	Truck loading	1991
Malaysia	Melaka (OFFSHORE) *Tenaga Empat (FSU)* and *Tenaga Satu (FSU)*		260 000	3	3.8	Petronas	Petronas Gas	No		2013
	Pengerang	2	400 000		3.5	Petronas Gas (65%), Dialog Group (25%) and Johor State (10%)	Petronas Gas			2017
Pakistan	Port Qasim Karachi (OFFSHORE) *Excelerate Exquisite (FSRU)*		150 900	6	4.8	Owner: Excelerate Energy Charterer: ETPL (Engro (51%), Vopak (29%), IFC (20%))	Excelerate Energy	No		2015
	Port Qasim GasPort (OFFSHORE) *BW Integrity (FSRU)*		170 000		5.0	Owner: BW Charterer: Pakistan GasPort	Pakistan GasPort Consortium			2017
Singapore	Jurong	4	800 000	5	11.0	SLNG	SLNG	Yes but sale of regasified LNG limited to licensed LNG importers	Cool-down, Reloading, Storage, Transshipment, Truck loading	2013

Country	Site	Storage		Send-out		Owner	Operator	Third-Party Access	Additional Services offered	Start-up date
		Number of tanks	Total capacity in liq m^3	Number of vaporizers	Nominal capacity in MTPA					
South Korea	Boryeong	3	600 000		3.0	GS Energy (50%), SK E&S (50%)	Boryeong LNG		Reloading	2016
	Gwangyang	4	530 000	2	2.3	POSCO	Posco	No	Reloading	2005
	Incheon	20	2 880 000	43	41.7	KOGAS	KOGAS	No		1996
	Pyeong-taek	23	3 360 000	39	38.1	KOGAS	KOGAS	No	Truck loading	1986
	Samcheok	12	2 610 000	8	10.9	KOGAS	KOGAS	No		2014
	Tong-yeong	17	2 620 000	20	24.9	KOGAS	KOGAS	No	Truck loading	2002
Taiwan	Taichung	3	480 000	8	4.0	CPC	CPC	No		2009
	Yung-An	6	690 000	18	7.7	CPC	CPC	No		1990
Thailand	Map Ta Phut	4	640 000	9	10.7	PTT	PTT LNG	Yes		2011
ASIA TOTAL			47 212 116		481.6					
EUROPE										
Belgium	Zeebrugge	4	386 000	12	6.6	Fluxys LNG	Fluxys LNG	Yes	Bunkering, Cool-down, Reloading, Transshipment, Truck loading	1987
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 (Fluxys (30.39%), AXA Investment Managers (15.19%), Crédit Agricole Assurances (15.19%), Korean investors consortium led by IPM Group in cooperation with Samsung Asset Management (39.24%)	Dunkerque LNG	Yes	Reloading, Truck loading	2016
	Fos Cavaou	3	330 000	4	6.1	Fosmax LNG (Elengy 72.5%, Total 27.5%)	Fosmax LNG	Yes	Bunkering, Cool-down, Reloading, Transshipment, Truck loading	2010
	Fos Tonkin	1	80 000	4	2.2	Elengy	Elengy	Yes	Bunkering, Cool-down, Reloading, Truck loading	1972
	Montoir-de-Bretagne	3	360 000	11	7.4	Elengy	Elengy	Yes	Bunkering, Cool-down, Reloading, Transshipment, Truck loading	1980
Greece	Revithoussa	3	225 000	6	5.1	DESFA S.A.	DESFA S.A.	Yes		2000
Italy	Toscana (OFFSHORE) *FSRU Toscana (FSRU)*	4	137 500	3	2.8	OLT (Uniper 48.24%, IREN Group 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 (OFFSHORE) (Gravity-Based Structure)	2	250 000	5	5.6	Adriatic LNG ExxonMobil (70.7%), Qatar Petroleum (22%), SNAM (7.3%)	Adriatic LNG (ExxonMobil. Qatar Petroleum. SNAM)	Yes		2009
Lithuania	Klaipeda (OFFSHORE) *Höegh Independence (FSRU)*		170 000	4	2.9	Owner: Höegh LNG Charterer: Klaipedos Nafta	Höegh LNG	Yes	Bunkering, Reloading, Truck loading,	2014
Malta	Delimara (OFFSHORE) *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		6 500	2	0.0	Gasnor	Gasnor			2007
Poland	Świnoujście	2	320 000	5	3.7	Polskie LNG	Polskie LNG	Yes	Truck loading	2016
Portugal	Sines	3	390 000	7	5.6	Ren Atlântico	Ren Atlântico	Yes	Cool-down, Reloading, Truck loading	2004

Country	Site	Storage		Send-out		Owner	Operator	Third-Party Access	Additional Services offered	Start-up date
		Number of tanks	Total capacity in liq m^3	Number of vaporizers	Nominal capacity in MTPA					
Spain	Barcelona	6	760 000	13	12.6	Enagas	Enagas	Yes	Bunkering, Cool-down, Reloading, Transshipment, Truck loading	1968
Spain	Bilbao	3	450 000	4	6.5	Enagas (50%), EVE (50%)	Bahia de Bizkaia Gas. SL (BBG)	Yes	Bunkering, Cool-down, Reloading, Truck loading	2003
Spain	Cartagena	5	587 000	9	8.7	Enagas	Enagas	Yes	Bunkering, Cool-down, Reloading, Transshipment, Truck loading	1989
Spain	El Musel (mothballed)	2	300 000	4	5.1	Enagas	Enagas	Yes	Reloading, Truck loading	Construction completed in 2013
Spain	Huelva	5	619 500	9	8.7	Enagas	Enagas	Yes	Cool-down, Reloading, Transshipment, Truck loading	1988
Spain	Mugardos	2	300 000	3	2.6	Tojeiro Group (51%), Xunta Galicia (24%), Sojitz (15%), Sonatrach (10%)	Reganosa	Yes	Bunkering, Cool-down, Reloading, Truck loading	2007
Spain	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
Sweden	Nynashamn	1	20 000		0.4	AGA Gas	AGA Gas		Bunkering, Truck loading	2011
Turkey	Izmir Aliaga	2	280 000	5	4.4	Egegaz	Egegaz	No	Truck loading	2006
Turkey	Etki (OFFSHORE) *Höegh Neptune (FSRU)*		145 130	3	3.7	Owner: Höegh LNG (50%), MOL (48.5%), Tokyo LNG Tanker Co. Ltd. (1.5%) Charterer: Total - relet to Kolin/ Kalyon for 3+ years	Höegh LNG	Yes		2016
Turkey	Dörtyol (OFFSHORE) *MOL FSRU Challenger (FSRU)*		263 000		4.1	Owner: MOL Charterer: Botas (for 3 years)	MOL			2018
Turkey	Marmara Ereglisi	3	255 000	7	4.6	Botas	Botas	No	Truck loading	1994
UK	Dragon	2	320 000	6	5.6	Shell (50%). Petronas (50%)	Dragon LNG	Yes		2009
UK	Grain	8	1 000 000	14	14.3	National Grid	Grain LNG	Yes	Cool-down, Reloading, Transshipment, Truck loading	2005
UK	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
UK	Teesside GasPort (OFFSHORE) Awaiting recommissioning				0.0	Trafigura				2007
EUROPE TOTAL			10 809 030		173.2					
MIDDLE EAST										
Egypt	Sumed (OFFSHORE) *BW Singapore*		170 000	4	5.7	Owner: BW Charterer: Egas	BW	No		2015
Israel	Hadera (OFFSHORE) *Excelerate Excelsior (FSRU)*		138 000	6	3.5	Owner: Excelerate Energy Charterer: INGL	Excelerate Energy	No		2013
Jordan	Aqaba (OFFSHORE) *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 (OFFSHORE) *Golar Igloo (FSRU)*		170 000		5.8	Owner: Golar Charterer: KPC (Kuwait National Petroleum Company)	Golar	No		2014
UAE	Jebel Ali (OFFSHORE) *Excelerate Explorer (FSRU)*		150 900	6	6.0	Owner: Excelerate Energy Charterer: DUSUP (Dubai Supply Authority)	Excelerate Energy	No		2010
UAE	Ruwais. Abu Dhabi (OFFSHORE) No vessel chartered				0.0					2016
MIDDLE EAST TOTAL			788 900		24.9					
WORLD TOTAL			66 789 902		868					

World LNG Maps


Snohvit
Yamal
Tornio Manga
Mosjøen
Pori
Nynashämn
Frederikstad
Lysekil
Gothenburg
Teesside
Klaipeda
EUROPE
Świnoujscie
Dragon LNG
South Hook LNG
Gate
Zeebrugge
Isle of Grain
Dunkerque
Montoir
Panigaglia
Fos Cavaou
Fos Tonkin
Rovigo
Bilbao
Mugardos
OLT LNG
Toscana
Barcelona
Marmara Ereglisi
Sagunto
Aliaga
Sines
Revithoussa
Skikda
Etki
Huelva
Cartagena
Dörtyol
Arzew
Delimara
MIDDLE
EAST
Idku
Hadera
Damietta
Ain Sokhna
Mina Al Ahmadi
Aqaba
Jordan LNG
Ras Laffan
Das Island
Jebel Ali
Qalhat
Ruwais
AFRICA
Balhaf
NLNG
EG LNG
Cameroon FLNG
Angola LNG

ONSHORE LIQUEFACTION PLANTS

FLOATING LIQUEFACTION PLANTS (FLNG)

ONSHORE REGASIFICATION TERMINALS

FLOATING REGASIFICATION TERMINALS (FSRU/FRU)


Sakhalin II
JAPAN
Ishikari
Hachinohe
Niigata
Shin-Sendai
Shin-Minato
Soma
Hitachi
Toyama Shinko
Joetsu
Naoetsu
Higashi-Ohgishima
Sodegaura
Futtsu
Negishi
Kawagoe
Ohgishima
Sodeshi
Sakai
Himeji
Hatsukaichi
Tobata
Hibiki
Chita
Yokkaichi
Senboku
Yanai
Oita
Sakaide
Mizushima
Nagasaki
Kagoshima
CHINA
Dalian
Tangshan
Tianjin
Tianjin Sinopec
Qingdao
Rudong
Qidong
Shanghai
Pudong
Zhoushan
Zhejiang
Fujian
Dongguan
Yuedong
Zhuhai
Beihai
Shenzhen Diefu
Guangdong
Hainan
Haikou
PNG LNG
APLNG
GLNG
QCLNG

Retail LNG in 2018

SMALL-SCALE LNG CARGOES LOADED FROM RECEIVING TERMINALS IN 2018

Country	10^3 T
Belgium	83.5
Indonesia	71.4
Japan	413.5
Netherlands	124.0
Spain	0.9

TRUCK LOADING OF LNG FROM RECEIVING TERMINALS IN 2018

Country	10^3 T
AMERICAS	
Chile	250.8
Dom. Rep.	104.1
USA	82.6
ASIA	
China	14 040.0
India	46.5
Indonesia	2.9
Japan	1 430.3
South Korea	181.3
EUROPE	
Belgium	25.8
France	112.2
Lithuania	0.1
Netherlands	53.4
Poland	30.8
Portugal	116.3
Spain	718.5
Turkey	459.0
UK	26.4

About GIIGNL

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

The association constitutes a forum for exchange of experience among its members with a view to enhance safety. reliability and efficiency of LNG imports.

GIIGNL is governed by an **Executive Committee** which is composed of **12 Members** who are elected by the General Assembly for 2-year terms.

The Executive Committee elects a **Bureau** composed of the **President** and of 3 regional Vice-Presidents to assist him.

Each year. the Executive Committee convenes in the Spring and the whole membership holds its General Assembly in the Fall.

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 near Paris (Neuilly-sur-Seine).

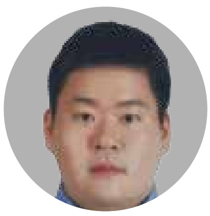
Fukuoka General Assembly hosted by Tokyo Gas (November 2018)

GIIGNL Staff

GENERAL DELEGATE

V. Demoury

LNG ADVISOR



S.H Hwang

GIIGNL OFFICERS

GIIGNL Bureau

PRESIDENT

J.M. Dauger

VP FOR AMERICAS

S. Hill
(SHELL)

VP FOR ASIA

M. Hirose
(TOKYO GAS)

VP FOR EUROPE

A. Della Zoppa
(ENI)

GIIGNL Executive Committee

AMERICAS

E. Bensaude
(CHENIERE)

A. Bacigalupo
(GNL QUINTERO)

J. Bird
(SEMPRA LNG & MIDSTREAM)

A. Collins
(SHELL)

ASIA

S. Nakamura
(JERA)

HJ. Go
(KOGAS)

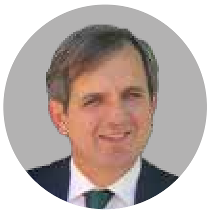
H. Ozaki
(OSAKA GAS)

S. Tanazawa
(TOKYO GAS)

EUROPE

E. Neviaski
(ENGIE)

C. Signoretto
(ENI)



JM. Fernandez
(NATURGY)

P. Olivier
(TOTAL)

GIIGNL Study Groups

COMMERCIAL STUDY GROUP CHAIR

M. Ramnarine

TECHNICAL STUDY GROUP CHAIR

P.E. Decroës

81 MEMBER COMPANIES

GIIGNL member companies represent LNG importers from around the world.

Founded in 1971. at the outset of the LNG industry, its membership has grown to 81 companies worldwide, comprising nearly all companies active in LNG imports or in the operation of LNG terminals.

GIIGNL members are coming from **26 countries** headquartered in the main three regions: Americas, 10 members, Asia, 38, Europe, 33.

FULL MEMBERS

BP Global LNG
Centrica LNG Company
Cheniere Energy, Inc.
CNOOC Gas & Power Trading & Marketing Ltd.
CPC Corporation
DEPA
Dominion Cove Point LNG
Dubai Supply Authority
Dunkerque LNG SAS
Edison S.p.A.
EDP - Energias De Portugal SA
Elengy S.A.
Enagas
Enel Trade SpA
ENGIE
Eni S.p.A.
Equinor ASA
Excelerate Energy L.P.
Fluxys LNG SA
Freeport LNG Development, L.P.
Gail (India) Limited
Gate Terminal B.V.
GNL Italia S.p.A.
GNL Quintero S.A.
Guangdong Dapeng LNG Company, Ltd.
Hazira LNG Private Ltd.
Hiroshima Gas Co., Ltd.
Höegh LNG
Hokkaido Gas Co., Ltd.
Iberdrola Generación España. S.A.U.
Itochu Corporation
JERA. Co., Inc.
JXTG Nippon Oil & Energy Corporation
Korea Gas Corporation
Kyushu Electric Power Co., Inc.
LNG Japan Corporation
Marubeni Corporation
Mitsubishi Corporation
Mitsui & Co., Ltd.
Mitsui O.S.K Lines, Ltd.
National Grid Grain LNG, Ltd.
Naturgy Energy Group S.A
Nippon Gas Co., Ltd.
N.V. Nederlandse Gasunie
Osaka Gas Co., Ltd.
Pavilion Energy
Petronet LNG Limited
PTT Public Company Limited
Ren Atlântico, SA
Saibu Gas Co., Ltd.
Sempra LNG & Midstream
Shell Energy North America, L.P.
Shikoku Electric Power Co., Inc.
Shizuoka Gas Co., Ltd.
Singapore LNG Corporation
SK E&S Co., Ltd.
Southern LNG Company. L.L.C.
South Hook LNG Terminal Company, Ltd.
Sumitomo Corporation
The Chugoku Electric Power Co., Inc.
The Kansai Electric Power Co., Inc.
Toho Gas Co., Ltd.
Tohoku Electric Power Co., Inc.
Tokyo Gas Co., Ltd.
Total S.A.
Trafigura
Uniper Global Commodities SE
Vopak LNG Holding B.V.

ASSOCIATE MEMBERS

EDF Trading Limited
ENN LNG Trading Company Limited
Gazprom Marketing & Trading Limited
GSPC LNG Limited
INPEX Corporation
MET International AG
Ørsted
Polskie LNG S.A.
PT Pertamina (Persero)
Repsol Energy Canada, Ltd.
RWE Supply & Trading Gmbh
Sonatrach Gas Marketing UK Limited
YPF S.A.

GIIGNL

INTERNATIONAL GROUP OF LIQUEFIED NATURAL GAS IMPORTERS

GROUPE INTERNATIONAL DES IMPORTATEURS DE GAZ NATUREL LIQUÉFIÉ

8, rue de l'Hôtel de Ville - 92200 Neuilly-sur-Seine - France
E-mail: central-office@giignl.org - Website: www.giignl.org
Tel: + 33 1 56 65 51 60

More information on

https://giignl.org

https://twitter.com/GIIGNL

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