

THE LNG INDUSTRY

GIIGNL ANNUAL REPORT
2016 EDITION



THE LNG INDUSTRY IN 2015

Editorial

Dear Colleagues,

Driven by new volumes from Australia and Indonesia, and despite production issues in several exporting countries, global LNG trade has grown by **2.5%** in 2015, with total quantities reaching an all-time high of **245.2 MT** over the year. Most of the growth was absorbed by the Middle-East and by Europe, where net imports recovered thanks in part to a 31% decrease in re-exports.

In a global context of lower energy prices and sluggish economic growth, the LNG industry is holding its breath for the impact of an export wave from the United States.

ABUNDANT SUPPLY, WAVERING DEMAND

While the USA are on track to challenge Qatar as the world's leading supplier of flexible LNG, with the first loadings from Chenière's Sabine Pass in February 2016, two new liquefaction plants were commissioned in the past year (Donggi-Senoro in Indonesia and GLNG in Australia). Australia became the second largest exporter ahead of Malaysia. In 2015, 14.4 MTPA of new production capacity have been added to the market and 42 MTPA are expected to come on stream in 2016. On the demand side, the mature markets of North East Asia look uncertain and experienced their first decline since the 2009 recession, mainly in South Korea and Japan. In China, traditionally considered as a key driver for LNG growth, LNG imports continued to increase despite a 25 year-low in GDP growth rate. Europe consumed 16% more volumes (net of re-exports) than in the previous year, while the Americas experienced an 8% decline in imports.

Increasingly, emerging markets are driving demand growth, as three countries started importing LNG last year namely Egypt, Jordan and Pakistan, rapidly ramping-up imports and alleviating an emerging supply overhang by absorbing a combined volume of 5.5 MTPA, mostly through spot and short-term agreements.

FROM GLOBALIZATION TO COMMODITIZATION?

Supported by the development of FSRUs (floating storage and regasification units) the capacity of which now amounts to 77 MTPA, (i.e the equivalent of Qatar's LNG production capacity) the globalization of LNG is growing at a steady pace: 34 countries are now importers, compared with 15 in 2005.

At the same time pricing levels and structures are evolving as well. Regionalized until recently, LNG prices have declined globally in recent months because of common drivers, such as the drop in oil prices, slow demand and the ample supply situation. As a result, the (temporary?) price convergence in the Atlantic and Pacific Basins has reduced arbitrage opportunities and curbed the enthusiasm for inter-basin trade. As a consequence, re-loadings dropped from 6.4 MTPA in 2014 to 4.4 MTPA last year.

The decline in spot and short-term volumes imported by Japan and South Korea was partly offset by deliveries to Egypt, Jordan and Pakistan. As a result, the share of spot and short-term LNG transactions remained stable compared to last year, around 28% of total trade. Based on data submitted by GIIGNL members who cover about 80% of worldwide LNG flows, the share of "true" spot trades – defined as trades of LNG cargoes delivered within 90 days from the date at which the transactions is concluded – was estimated at approximately 15% of all trades last year.

STAYING THE COURSE IN TURBULENT WATERS

In the near to medium term, the consequences of low prices on LNG trade seem difficult to predict, which brings considerable uncertainty along the value chain for the next five or so years. As a result, greenfield investment decisions expected in Africa and Canada have been deferred and only five FIDs have been taken in 2015 – four of which in the USA and one in Cameroon – for a total capacity of 19.3 MTPA. On the demand side, buyers are striving to reshape their strategies in order to mitigate risks, to optimize procurement costs and maximize flexibility.

In the longer-term, the future of LNG imports looks positive. A number of emerging economies are considering FSRU projects and all eyes are on China and India, expected to require large volumes over the next decade. FLNG solutions will make it possible to unlock reserves in otherwise stranded areas, and Iran could soon be in the limelight as an LNG exporter. LNG continues to be recognized as a clean, flexible and competitive solution to energy needs across all demand sectors and regions, in particular in promising markets of marine and road transportation.

We hope you will find GIIGNL's Annual Report helpful and remain committed to promote safe, reliable and efficient LNG activities for the benefit of our industry and society at large.

Yours sincerely,

Domenico Dispenza



CONTENTS

- 4** LNG Trade in 2015
- 6** Contracts concluded in 2015
- 8** Long-term and medium-term contracts in force in 2015
- 12** LNG Tankers
- 14** LNG Carrier Fleet

2015 IMPORTS/EXPORTS MATRIX

- 19** Liquefaction plants + tables
- 26** Regasification plants + tables
- 32** LNG Characteristics

KEY FIGURES 2015



245.2 million tons imported
or a **2.5%** increase vs. 2014

68.4 million tons traded on a spot
or short-term basis or **28%** of total trade

72% of global LNG demand in Asia

32% of global LNG volumes
supplied from Qatar

41% of global LNG volumes
supplied from Asia-Pacific

3 NEW IMPORTING COUNTRIES
7 NEW LNG REGASIFICATION TERMINALS

34
IMPORTING COUNTRIES

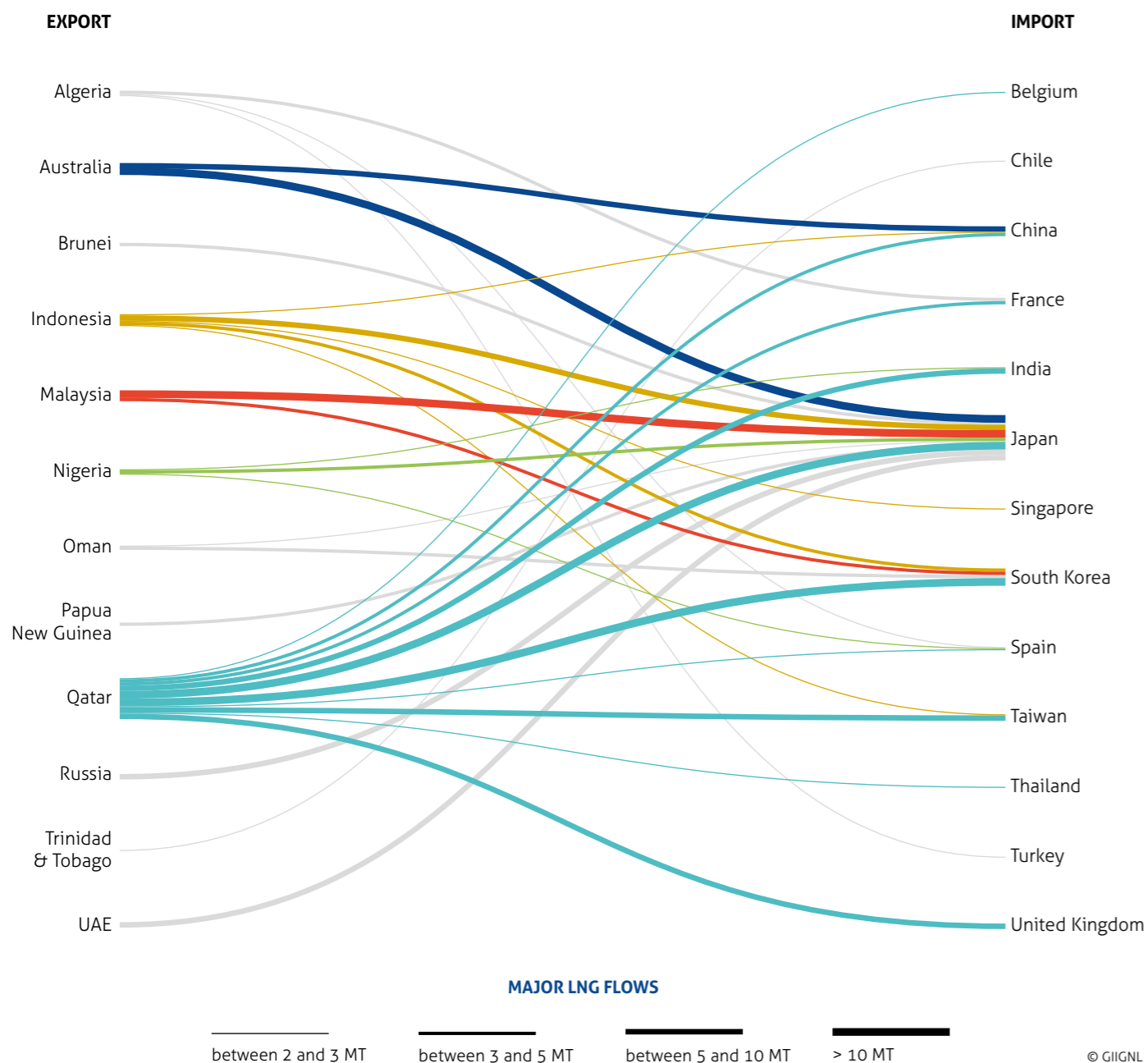
777 MTPA
TOTAL REGASIFICATION CAPACITY

19
EXPORTING COUNTRIES

308 MTPA
TOTAL NAMEPLATE LIQUEFACTION CAPACITY

LNG TRADE IN 2015

In 2015, global LNG imports increased by 2.5% (6 MT), reaching their highest level ever.



SUPPLY GROWTH LOWER THAN EXPECTED AND CONFINED TO THE PACIFIC BASIN

As in 2014, 19 countries produced LNG in 2015. Four new trains were commissioned (QCLNG Train 1 and 2 and GLNG Train 1 in Australia, Donggi-Senoro in Indonesia).

Boosted by additional volumes from Australia (+5.8 MT), Indonesia and Papua New Guinea which operated for the first year at full capacity (+3.8 MT), LNG supply from the Pacific Basin increased by more than 10 MT, attaining for the first time the 100 MT mark in 2015.

Contrasting with the situation in the Pacific Basin, supply from the Atlantic Basin declined by 1.1 MT, reaching 51.4 MT. Algeria's LNG output was down by 4.6% despite the recent capacity additions, supply from Trinidad decreased by 1.3 MT due to feedgas issues and Angola and Egypt did not produce any LNG during the year respectively due to technical problems and lack of feedgas.

Despite improved performance in Qatar (+2 MT), supply from the Middle East declined overall by 3.3 MT following issues in other countries, particularly in Yemen where production was stopped in April due to political uncertainty.

ASIAN DEMAND DOWN, OFFSET BY INCREASED IMPORTS FROM THE MIDDLE EAST, NORTH AFRICA AND EUROPE

By the end of the year, overall LNG demand in Asia was down by 1.7% (-3 MT), mainly due to lower imports in Japan (-4.2 MT) and in South Korea (-4.2 MT). These decreases can be attributed to a combination of factors including slow economic growth, energy conservation, mild weather conditions and growing fuel substitution. In China, LNG imports continued to grow by more than 5% (+1 MT) and reached 20 MT, while Indian imports remained in line with their 2014 level, around 14.6 MT.

The global share of Asian imports declined from 75% in 2014 to 72% last year.

LNG demand also decreased in Latin America, by 2.5 MT. In Brazil, imports were down by 0.6 MT mostly because of higher hydropower production. Mexico also purchased less LNG (-1.6 MT) because of increased pipeline imports from the United States.

The Middle East showed an opposite trend and was the main driver behind the demand growth in 2015. LNG imports into the region more than doubled, reaching almost 10 MT at year-end thanks to new importers Egypt and Jordan.

European net imports grew by 15.8% (5.1 MT), almost half of which (2.4 MT) can be attributed to a lower number of reloads from the region (3.6 MT in 2015 vs 6 MT in 2014). Higher deliveries from Qatar into the UK (+1.8 MT) also contributed to this increase. In all, total European imports in 2015 (37.6 MT) returned to slightly above their level of 2005 (36 MT).

SPOT AND SHORT-TERM IMPORTS STABLE DESPITE SUPPLY ADDITIONS

Despite the growth in LNG supply for the past year, the overall share of spot and short-term imports remained stable at around 28%, or 68.4 MT, as the market was affected by the interruption of Yemen production and the effects on arbitrage trade from declining location differentials. Argentina and Brazil who traditionally import from the spot and short-term market purchased less volumes than in the previous year and additional spot and short-term deliveries east of Suez into Egypt, Jordan, India and Pakistan (+7.1 MT) were not sufficient to offset the declines in Japan (-5.3 MT) and in South Korea (-2.8 MT). With a market characterized by price elasticity of demand, India recorded the sharpest increase in spot and short-term imports (+3 MT) as a result of declining prices.



Qatar remained the main supplier of spot and short-term quantities (20.3 MT), followed by Nigeria (12.7 MT) and Australia (6 MT).

It is noteworthy that the narrowing of regional price differentials translated into a 31% decrease in international re-exports, from 6.4 MT to 4.4 MT. India, Singapore and the UK joined the ranks of re-exporting countries and 10 countries re-exported cargoes in 2015, compared to 8 in 2014. On the importing side, Egypt, Jordan and Pakistan received re-exported cargoes for the first time. 21 countries received re-exports, compared to 19 in 2014.

The lower appetite for spot and short-term volumes in Asia (-4.9 MT) and Latin America (-1.7 MT) was partially offset by strong growth in spot and short-term deliveries to the Middle-East (+4.1 MT). In Europe, the increase in net spot and short-term imports into Europe (+0.9 MT) is mainly attributable to the drop in European re-exports.

CONTRACTS CONCLUDED IN 2015

Origin	Export country/exporter	Buyer	Import country	ACQ (MTPA)	Duration (years)	Comments	Start	Delivery format
LONG & MEDIUM TERM SALES (>4 YEARS)	AUSTRALIA / Chevron / Gorgon	SK Energy	SOUTH KOREA	0.8	5		2017	
	CAMEROON / Cameroon FLNG	Gazprom Marketing & Trading Singapore	Gazprom Marketing & Trading Portfolio	1.2	8		2H 2017	FOB
	INDONESIA / ENI PSC (Qty A)	PT Pertamina (Persero)	INDONESIA	0.7	7		Q3 2017	FOB
	INDONESIA / ENI PSC (Qty B)	PT Pertamina (Persero)	INDONESIA	0.7	7		Q3 2017	FOB
	MALAYSIA / Malaysia LNG	Hiroshima Gas	JAPAN	0.1	10		2016	FOB
	MALAYSIA / Malaysia LNG	Hokuriku Electric Power Co	JAPAN	0.38	10		2018	DES
	Portfolio / BP	Huadian Corporation	CHINA	Up to 1	20		2016	N/A
	Portfolio / BP	Kansai Electric	JAPAN	Up to 0.565	23		2015	DES
	Portfolio / Cheniere	ENGIE		0.8	5		2019	DES
	Portfolio / Cheniere	Central El Campesino	CHILE	0.6	20		2020	DES
	Portfolio / Chubu	Tohoku Electric	JAPAN	0.3	20		2023	DES
	Portfolio / Gazprom Marketing & Trading	Pavilion Gas Pte Ltd	ASIA		10			DES
	Portfolio / Kansai Electric	Hokkaido Electric	JAPAN	Approximately 0.2 MT/year	10		2018	DES
	Portfolio / Kyushu Electric	Nippon Gas	JAPAN	0.05	15		2016	DES
	Portfolio / Mitsubishi	Indian Oil	INDIA	0.7	20		2019	FOB
	Portfolio / Shell		MALTA	0.3	10		8/14/2016	DES
	Portfolio / Shell	NEPCO	JORDAN	1.1	5	Option to extend for 6 months	7/10/2015	DES
	QATAR / RasGas	Petronet LNG Ltd	INDIA	1	12		January 2016	CFR
	RUSSIA / Gazprom	EGAS	EGYPT	35 cargoes during 5 years	5		2015	
	RUSSIA / Novatek	ENGIE		1	23		2018	FOB, at Montoir-de-Bretagne transshipment point
RUSSIA / Novatek	Shell		0.9	23		January 2019	FOB, at Montoir-de-Bretagne transshipment point	
RUSSIA / Yamal LNG*	Gazprom Marketing & Trading Singapore	ASIA, primarily INDIA	2.9	For over 20 years			FOB, at Zeebrugge transshipment point	
USA / Sabine Pass / Gail	Shell		0.5	5		2016	FOB	
USA / Cameron / ENGIE	Tohoku Electric	JAPAN	0.27	20		2018	DES	
SHORT TERM CONTRACTS (≤4 YEARS)	MALAYSIA LNG	Chugoku Electric	JAPAN	0.24	3	Option to extend for 3 years	2015	DES
	MALAYSIA LNG	Chugoku Electric	JAPAN	0.24	3	Option to extend for 3 years	2015	DES
	Portfolio / Petronas LNG Limited	GAIL	INDIA	0.18	1		April 2015	DES
	Portfolio / BP	EGAS	EGYPT	Total 16 cargoes	2		2015	
	Portfolio / Cheniere	EDFT	FRANCE	Up to 26 cargoes total	2	Option to extend for 3 years	2016	
	Portfolio / ENGIE	Chubu Electric	JAPAN	Total 20 cargoes	2		2015	DES
	Portfolio / Gas Natural Fenosa	GAIL	INDIA	0.74	1		January 2016	
	Portfolio / Gas Natural Fenosa	EGAS	EGYPT	0.8 total	1	Option to extend for 2 months	November 2015	
	Portfolio / Nobel Group	EGAS	EGYPT	Total 7 cargoes	2		2015	
	Portfolio / Rosneft	EGAS	EGYPT	Total 24 cargoes	2		2015	
	Portfolio / Shell	Botas	TURKEY	0.44	2	Option to extend for 6 months	October 2016	DES
	Portfolio / Shell	NEPCO	JORDAN	1.14	2		January 2016	DES
	Portfolio / Trafigura	EGAS	EGYPT	Total 33 cargoes	2		2015	
Portfolio / Vitol	EGAS	EGYPT	Total 9 cargoes	2		2015		

Origin	Export country/exporter	Buyer	Import country	ACQ (MTPA)	Duration (years)	Comments	Start	Delivery format
HEADS OF AGREEMENT (HOAs)	Portfolio / JERA	Shizuoka Gas	JAPAN	0.07	5		2022	DES
	Portfolio / Petronas LNG	Toho Gas	JAPAN	7 - 9 cargoes per annum	10		2017	DES
	USA/Diamond Gas International	Toho Gas	JAPAN	3 cargoes per annum (Approx. 0.2 MTPA)	20		Scheduled in 2018	DES
MEMORANDUMS OF UNDERSTANDING (MOUs)	MALAYSIA/ Petronas	Guanghai Energy	CHINA				2017	
	QATAR	Botas	TURKEY					
	USA / Cheniere Marketing	Litgas	LITHUANIA					
AGREEMENTS ON CAPACITY RIGHTS	RUSSIA / Novatek	Elengy						Transshipment agreement (at Montoir-de-Bretagne terminal)
	RUSSIA / Yamal Trade	Fluxys LNG		Up to 8	20			Transshipment agreement (at Zeebrugge LNG terminal)
	Portfolio / Kogas	EDF Trading	EUROPE	Up to 4	8		2017	Capacity and optimisation agreement



LONG-TERM AND MEDIUM-TERM CONTRACTS IN FORCE*

Export country	Loading point	Seller	Buyer	ACQ (MTPA)	Duration	Type of contract	Comments
ATLANTIC BASIN							
			ENGIE	3.7	1976/2019	DES	
			ENGIE	2.5	1972/2019	DES	Extension to 2019
			ENGIE	1.3	1992/2019	FOB	
			Eni	1.33	1997/2017	FOB	
			Iberdrola	1.15	2002/2021	DES	
			Botas	3.02	1994/2024	DES	
ALGERIA	Skikda-Bethioua	Sonatrach	Enel	0	1999/2022	DES	Delivery under the "ENGIE/Enel" swap agreement. In 2015 no delivery accounted under this contract
			Cepsa	0.77	2002/2022	DES	
			Statoil	0.75	2003/2009	DES	Extension to 2014
			Endesa	0.75	2002/2017	DES	
			DEPASA	0.35	2000/2021	CIF	
			ENGIE	3.6	2005/2025	FOB	No deliveries in 2015
			BG	3.6	2006/2026	FOB	No deliveries in 2015
EGYPT	Idku	ELNG T1	ENGIE	3.6	2005/2025	FOB	No deliveries in 2015
		ELNG T2	BG	3.6	2006/2026	FOB	No deliveries in 2015
	Damietta	SEGAS	BP	1	2005/2025	FOB	No deliveries in 2015
		SEGAS	Union Fenosa gas	3.3	2005/2030	FOB	No deliveries in 2015
EQUATORIAL GUINEA	Punta Europa	EGLNG	BG	3.3	2006/2023	FOB	
			Enel	2.57	1999/2022	DES	
			Gas Natural Aprovevisionamientos	1.17	1999/2021	DES	
			Botas	0.91	1999/2021	DES	
			ENGIE	0.33	1999/2022	DES	
			Galp Energia	0.26	1999/2022	DES	
			Gas Natural sdg	1.99	2002/2024	DES	
			Galp Energia	0.73	2002/2022	DES	
NIGERIA	Bonny Island	Nigeria LNG T1 & 2	Eni	1.15	2006/2026	DES	
			Iberdrola	0.38	2006/2026	DES	
			BG	2.3	2006/2026	DES	
			Galp Energia	1.42	2006/2026	DES	
			Shell International Trading Middle East	1.13	2006/2026	DES	Contract novated to Shell Middle East from Shell Western
			Endesa	0.75	2006/2026	DES	
			Total	0.23	2006/2026	DES	
			Shell International Trading Middle East	3.1	2008/2027	DES	
			Total	0.9	2008/2027	DES	
			Statoil	-1.75	2007/2021	DES	
NORWAY	Hammerfest	Iberdrola	Statoil	1.13	2006/2025	DES	
			Total	0.7	2007/depletion	FOB	
			ENGIE	0.5	2007/depletion	FOB	
			Statoil	0.1	2012/depletion	FOB	
			ENGIE	1.98	1999/2018	FOB	
			Gas Natural Aprovevisionamientos	1.06	1999/2018	FOB	
			BG	1.7	2004/2023	FOB	
			BG	0.4	2004/2026	DES	
			Shell	1.6	2006/2023	FOB	Former Repsol contract
			BP	0.85	2002/2021	FOB	
TRINIDAD & TOBAGO	Point Fortin	Naturgas Energia	BP	0.7	2003/2023	FOB	GNF/Naturgas swap. GNF buys 0.74 MTPA on a FOB basis until 2023
			Gas Natural sdg	0.65	2002/2023	FOB	
			BP	2.5	2006/2025	FOB	
			BG	1.5	2007/2027	FOB	
			Shell	1	2014/2024	FOB	As part of Repsol LNG Acquisition
			BP	0.75	2003/2023	DES	Related to BP/ALNG T2 & 3 contract
			ENGIE	0.6	2000/2020	DES	Related to ENGIE/ALNG T1 contract

* Duration above four years.

Export country	Loading point	Seller	Buyer	ACQ (MTPA)	Duration	Type of contract	Comments
PACIFIC BASIN							
			The Chugoku Electric	1.43	2009/2021	DES	
			Tokyo Gas, Toho Gas	1.37	2004/2029	FOB	
			Kyushu Electric	1.05	2009/2023	FOB	
			Osaka Gas	1	2004/2033	FOB	
			Tohoku Electric	1	2010/2019	DES	
			Toho Gas	0.76	2009/2019	DES	
			Chubu Electric	0.6	2009/2029	DES	
			Tokyo Gas	0.5	2009/2024	DES	
			The Kansai Electric	0.5-0.93	2009/2024	DES	
			Chubu Electric	0.5	2009/2016	DES	
			The Kansai Electric	0.2-0.44	2009/2024	DES	
			Tokyo Electric	0.3	2009/2024	DES	
			Kyushu Electric	0.18	2006/2021	DES	
			Shizuoka Gas	0.13	2004/2029	FOB	
			KOGAS	0.5	2003/2016	DES	
			GDLNG	3.3	2006/2030	FOB	
			Tokyo Electric	2	2006/2022	FOB	
			Tokyo Gas	1	2006/2022	FOB	
			The Kansai Electric	1.75-2	2011/2025	FOB/DES	
			Tokyo Gas	1.5	2011/2025	FOB/DES	
			BG	up to 8.5	2014/2034	FOB	
			CNOOC	3.6	2014/2034	DES	
			Tokyo Gas	1.2	2015/2035	DES	
			Tokyo Gas, Osaka Gas, Tokyo Electric	3.4	2013/2023	DES	Extended to 2023
			KOGAS	1	1997/2018	DES	
			Shell	0.8	2013/2023	FOB	
			The Kansai Electric, Chubu Electric, Kyushu Electric, Osaka Gas, Toho Gas, Nippon Steel & Sumitomo Metal	3	2011/2020	FOB/DES	Nominal quantity (ACQ) 2011/2015: 3 MTPA 2016/2020: 2 MTPA
			Hiroshima Gas, Nippon Gas, Osaka Gas	0.39	1996/2015	DES	
			KOGAS	2	1994/2014	FOB	Expired in 2014
			KOGAS	1	1998/2017	FOB	
			CPC	1.84	1998/2017	DES	
			Sempra LNG	3.7	2008/2029	DES	1.7 MTPA divertible
			CNOOC	2.6	2009/2033	FOB	
			Kansai Electric	1	2014/2035	DES	
			SK	0.6	2006/2026	DES	
			Posco	0.55	2005/2024	DES	
			Tohoku Electric	0.12	2010/2024	DES	
			Chubu Electric	1	2015/2028	DES	
			Kyushu Electric	0.3	2015/2028	DES	
			KOGAS	0.7	2015/2028	DES	
			Tokyo Gas, Tokyo Electric	7.4	1983/2003	1.8 MTPA FOB/ 5.6 MTPA DES	Extended to 2018
			Saibu Gas	0.45	2014/2028	DES/FOB	
			Shikoku Electric	0.36	2010/2025	DES	
			Hiroshima Gas	0.008-0.016	2005/2012	FOB	Extended to 2015
			The Kansai Electric, Toho Gas, Tokyo Gas, Osaka Gas	2.1	1995/2015	DES	Ended in March 2015
			Gas Bureau, City of Sendai	0.15	1997/2018	DES	
			Chubu Electric	-0.54	2011/2031	DES	
			Tohoku Electric	0.5	1996/2016	DES	
			Shizuoka Gas	0.45	1996/2016	DES	
			JX Nippon Oil & Energy Corporation	0.38	2015/2025	DES	
			KOGAS	1-2	1995/2018	FOB	
			CPC	2.25	1995/2015	DES	
			Tokyo Gas	0.9	2015/2025	DES	
			Tokyo Gas, Toho Gas, Osaka Gas	0.68	2004/2024	DES	
			Toho Gas	0.52	2007/2027	DES	
			Tohoku Electric	0.5	2005/2025	DES	
			Japan Petroleum Exploration co.	0.48	2002/2021	DES	
			CNOOC	3	2009/2029	DES	
			KOGAS	2	2008/2028	DES	
			Sinopec	2	2014/2034	DES	
			Tokyo Electric	1.8	2014/2034	DES/FOB	
			Osaka Gas	1.5	2014/2034	DES	
			CPC	1.2	2014/2034	DES	
PAPUA NEW GUINEA	Port Moresby	PNG LNG	PNG LNG				
			Tokyo Electric	1.8	2014/2034	DES/FOB	
			Osaka Gas	1.5	2014/2034	DES	
			CPC	1.2	2014/2034	DES	
PERU	Pamba Melchorita	Peru LNG	Shell	3.89	2014/2028	FOB	Contract novated to Shell Middle East from Shell Western

Export country	Loading point	Seller	Buyer	ACQ (MTPA)	Duration	Type of contract	Comments
PACIFIC BASIN							
RUSSIA	Prigorodnoye	Sakhalin Energy Investment	Shell	1.6	2009/2028	DES	Initially linked to Costa Azul / Destination flexible
			Tokyo Electric	1.5	2009/2029	FOB	
			KOGAS	1.5	2008/2028	FOB	
			Tokyo Gas	1.1	2007/2031	FOB	
			Gazprom Global LNG	1	2009/2028	DES	
			Kyushu Electric	0.5	2009/2031	DES	
			Toho Gas	0.5	2009/2033	DES	
			Chubu Electric	0.5	2011/2026	DES	
			Tohoku Electric	0.42	2010/2030	FOB	
			Hiroshima Gas	0.21	2008/2028	FOB	
Osaka Gas	0.2	2008/2031	FOB				
Saibu Gas	0.07	2014/2027	DES				
MIDDLE EAST							
ABU DHABI	Das Island	Adgas	Tokyo Electric	4.3	1994/2019	DES	
			Chubu Electric	4	1997/2021	DES	
		Qatargas I	Tohoku Electric, Tokyo Gas, Osaka Gas, The Kansai Electric, Tokyo Electric, Toho Gas, Chugoku Electric	2	1998/2021	DES	
			Tokyo Electric	1	2012/2021	DES	
			Gas Natural sdg	0.75	2005/2024	DES	
			Gas Natural sdg	0.75	2006/2025	FOB	
		Qatargas II T1	ExxonMobil	7.8	2009/2034	DES	
			CNOOC	2	2009/2034	DES	
			Total	1.85	2009/2034	DES	
		Qatargas II T2	Total	1.5	2009/2034	DES	
			Total	1.15	2009/2034	DES	
			Total	0.7	2009/2034	DES	
			ExxonMobil	0.6	2009/2033	DES	
			ConocoPhillips	7.8	2010/2035	DES	
			Centrica	3	2014/2018	DES	Extension of the previous 3 year contract ending in 2014
QATAR	Ras Laffan	Qatargas II T2	CNOOC	2	2011/2035	DES	
			Chubu Electric	1	2013/2028	DES	Nominal quantity (ACQ) 2013/2017: 1 MTPA 2018/2028: 0.7 MTPA
			The Kansai Electric	0.5	2013/2027	DES	
			Shell	3.6	2011/2036	DES	Quantity and total years amended
		Qatargas IV	Petrochina	3	2011/2036	DES	
			Marubeni	1	2011/2031	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	
			Endesa	0.74	2005/2025	DES	
			EDF Trading	3.4	2007/2012	DES	Extended to 2027
		RasGas II T3	CPC	3.08	2008/2032	FOB	
			ENI	2.05	2007/2027	DES	Former Distrigas contract
	ExxonMobil	7.8	2009/2034	DES			
	Petronet LNG	2.5	2009/2029	FOB			
RasGas III T1	KOGAS	2.1	2007/2026	DES			
	KOGAS	2	2012/2032	DES	New LT contract		
RasGas III T2	ExxonMobil	7.8	2010/2035	DES			
RasGas III	CPC	1.5	2013/2032	DES			
OMAN	Qalhat	Oman LNG	KOGAS	4.06	2000/2024	FOB	
			Osaka Gas	0.66	2000/2024	FOB	
			Union Fenosa Gas	1.65	2006/2025	DES	
		Qalhat LNG	Mitsubishi Corp.	0.8	2006/2020	FOB	
			Osaka Gas	0.8	2009/2026	FOB	
			Itochu Corp.	0.77	2006/2020	FOB	
YEMEN	Balhaf	Yemen LNG T1	KOGAS	2	2008/2028	FOB	
		Yemen LNG T2	ENGIE	2.55	2009/2029	FOB	Currently under Force Majeure
		Yemen LNG T1 & 2	TGPL	2	2009/2029	DES	
OTHER							
BG PORTFOLIO	BG	CNOOC	5	2015/2035	DES		
BG PORTFOLIO	BG	CNOOC	3.6	2014/2034	DES		
BG PORTFOLIO	BG	Quintero LNG	3	2009/2030	DES		
BG PORTFOLIO	BG	Singapore LNG	3	2013/2033	DES		
BG PORTFOLIO	BG	GSPC	Up to 2.5	2015/2035	DES		
BG PORTFOLIO	BG	KOGAS	1.3	2008/2016	DES		
BG PORTFOLIO	BG	Tokyo Gas	1.2	2015/2035	DES		



Export country	Loading point	Seller	Buyer	ACQ (MTPA)	Duration	Type of contract	Comments
OTHER							
BG PORTFOLIO		BG	Chubu Electric	Up to 0.4	2014/2035	DES	Total quantity of LNG during contract duration: maximum 12.2 cargoes
BP PORTFOLIO		BP	Chubu Electric	0.5	2012/2028	DES	
BP PORTFOLIO		BP	The Kansai Electric	Up to 13 MT through 23 years	2015/2038	DES	Total quantity of LNG during contract duration: approx 13 MT
CHUBU ELECTRIC PORTFOLIO		Chubu Electric	INPEX	*	2013/2018	DES	*Total quantity of LNG during contract duration: 17 cargoes
ENI PORTFOLIO		Eni	Tokyo Electric	1.04	2011/2015	DES	
ENI PORTFOLIO		Eni	Iberdrola	0.92	2002/2018	DES	
ENI PORTFOLIO		Eni	E.ON Global Commodities	0.65	2007/2022	DES	
ENI PORTFOLIO		Eni	Hydrocabras + EDP	0.36	2005/2016	DES	
ENI PORTFOLIO		Eni	KOGAS/Chubu Electric	*	2013/2017	DES	*Total quantity of LNG during the contract duration: 28 cargoes (approx. 1.68 MTPA)
IBERDROLA PORTFOLIO		Iberdrola	DONG	0.72	2011/2021	DES	
IBERDROLA PORTFOLIO		Iberdrola	BP	0.38	2012/2021		
MITSUBISHI PORTFOLIO		Mitsubishi	Shizuoka Gas	0.3-0.7	2010/2015	DES	
OSAKA GAS PORTFOLIO		Osaka Gas	Shizuoka Gas	0.3	2015/2034	DES	
SHELL PORTFOLIO		Shell	CFE	3.08	2011/2027		
SHELL PORTFOLIO		Shell	KOGAS	1-3.64	2013/2035	DES	
SHELL PORTFOLIO		Shell	Gas Natural Fenosa	1.16	2006/2023	DES	Related to the Shell (ex-Repsol) Atlantic LNG Train 2 & 3 contract of 2.05 MTPA
SHELL PORTFOLIO		Shell	Kuwait Petroleum Corporation	1.07	2014/2019		
SHELL PORTFOLIO		Shell	Osaka Gas	0.8	2012/2038	DES	
SHELL PORTFOLIO		Shell	BBE	0.8	2003/2020		Ex-Repsol Contract
SHELL PORTFOLIO		Shell	ENGIE	0.4	2014/2034	DES	
SHELL PORTFOLIO		Shell	Portfolio player	0.3	2014/2019		
SHELL PORTFOLIO (NIGERIA, RUSSIA, AUSTRALIA)		Shell	JX Nippon Oil & Energy Corporation	0.2	2015/2032	DES	
SHELL PORTFOLIO		Shell	Chubu Electric	*	2014/2034	DES	*Maximum 12 cargoes per year
TOKYO ELECTRIC PORTFOLIO		JERA LNG Coordination	Shizuoka Gas	0.26	2014/2032	DES	
TOKYO GAS PORTFOLIO		Tokyo Gas	Hokkaido Gas	0.3-0.4	2012/2023	DES	
TOKYO GAS PORTFOLIO		Tokyo Gas	Saibu Gas	0.3	2014/2029	DES	
TOTAL PORTFOLIO		Total	KOGAS	Up to 2	2014/2031	DES	
TOTAL PORTFOLIO		Total	CNOOC	1	2010/2024	DES	

* Duration above four years.

Built	Vessel Name	Capacity (m ³)	CCS*	Owner	Builder	Manager Name
2011	Energy Horizon	177 441	KM	Tokyo LNG Tanker Co.	Kawasaki HI Sakaide	NYK LNG Shipmngt.
2011	Lobito	161 337	TZM	MI NT LNG	Samsung HI	Teekay Shpg. (Gla)
2011	Malanje	160 400	TZM	MI NT LNG	Samsung HI	Mitsui & Co
2011	Norgas Conception	10 030	Other	Norgas Carriers	Taizhou Skaugen	Norgas Carriers
2011	Norgas Invention	10 030	Other	Norgas Carriers	Taizhou Skaugen	Norgas Carriers
2011	Norgas Unikum	12 000	Other	Teekay LNG Partners	AVIC Dingheng SB	Norgas Carriers
2011	Sonangol Benguela	160 500	GT	Sonangol	Daewoo (DSME)	Chevron Shpg. Co.
2011	Sonangol Etosha	160 786	GT	Sonangol	Daewoo (DSME)	Chevron Shpg. Co.
2011	Sonangol Sambizanga	160 785	GT	Sonangol	Daewoo (DSME)	Chevron Shpg. Co.
2011	Soyo	161 337	TZM	MI NT LNG	Samsung HI	Teekay Shpg. (Gla)
2011	Stena Clear Sky	173 593	GT	Stena Bulk	Daewoo (DSME)	Northern Marine Mngt
2011	Stena Crystal Sky	173 611	GT	Stena Bulk	Daewoo (DSME)	Northern Marine Mngt
2012	Coral Energy	15 600	Other	Anthony Veder	Neptun Werft	Anthony Veder
2012	Cubal	160 534	TZM	MI NT LNG	Samsung HI	NYK LNG Shipmngt.
2012	Shen Hai	147 210	GT	CLNG	Hudong Zhonghua	CLNG
2013	Arctic Aurora	154 899	TZM	Dynagas LNG	Hyundai HI	Dynagas LNG
2013	Cool Voyager	160 372	TZM	Thenamaris	Samsung HI	B. Schulte (Hellas)
2013	Coral Antheia	6 500	Other	Anthony Veder	AVIC Dingheng SB	Anthony Veder
2013	GasLog Santiago	155 000	TZM	GasLog	Samsung HI	GasLog LNG Services
2013	GasLog Seattle	155 000	TZM	GasLog	Samsung HI	GasLog LNG Services
2013	GasLog Shanghai	155 000	TZM	GasLog	Samsung HI	GasLog LNG Services
2013	GasLog Skagen	155 000	TZM	GasLog	Samsung HI	GasLog LNG Services
2013	GasLog Sydney	155 000	TZM	GasLog	Samsung HI	GasLog LNG Services
2013	Golar Celsius	160 000	TZM	Golar LNG	Samsung HI	Golar LNG
2013	Golar Seal	160 000	TZM	Golar LNG	Samsung HI	Golar LNG
2013	Grace Dahlia	177 630	KM	Nippon Yusen Kaisha	Kawasaki HI Sakaide	NYK LNG Shipmngt.
2013	Kakuyu Maru	2 538	Other	Tsurumi Sunmarine	Kawasaki HI Sakaide	Tsurumi Sunmarine
2013	Lena River	155 165	TZM	Dynagas Ltd.	Hyundai HI	Dynagas Ltd.
2013	Wilforce	156 007	GT	Awilco LNG	Daewoo (DSME)	Awilco LNG Technical
2013	Wilpride	156 007	GT	Awilco LNG	Daewoo (DSME)	Awilco LNG Technical
2013	Woodside Goode	159 662	GT	Maran Gas Maritime	Daewoo (DSME)	Maran Gas Maritime
2013	Woodside Rogers	160 668	GT	Maran Gas Maritime	Daewoo (DSME)	Maran Gas Maritime
2013	Yenisei River	155 000	TZM	Dynagas LNG	Hyundai HI	Dynagas LNG
2014	Adam LNG	161 870	TZM	Oman Shipping Co.	Hyundai HI	Oman Shipping Co.
2014	Amani	154 800	TZM	Brunei Gas Carriers	Hyundai HI	STASCO (Shell)
2014	Asia Energy	160 000	TZM	Chevron Transport	Samsung HI	Chevron Transport
2014	Asia Vision	160 000	TZM	Chevron Transport	Samsung HI	Chevron Transport
2014	Clean Ocean	161 881	TZM	Dynagas Ltd.	Hyundai HI	Dynagas Ltd.
2014	Clean Planet	161 814	TZM	Dynagas Ltd.	Hyundai HI	Dynagas Ltd.
2014	Cool Runner	160 000	TZM	Thenamaris	Samsung HI	B. Schulte (Hellas)
2014	Corcovado LNG	160 106	GT	Cardiff Marine Inc.	Daewoo (DSME)	TMS Cardiff Gas
2014	Esshu Maru	155 300	KM	Mitsubishi Corp	MHI Nagasaki	Mitsui O.S.K. Lines
2014	Gaslog Saratoga	155 000	TZM	GasLog	Samsung HI	GasLog LNG Services
2014	Golar Bear	160 000	TZM	Golar LNG	Samsung HI	Golar LNG
2014	Golar Crystal	160 000	TZM	Golar LNG	Samsung HI	Golar LNG
2014	Golar Frost	160 000	TZM	Golar LNG	Samsung HI	Golar LNG

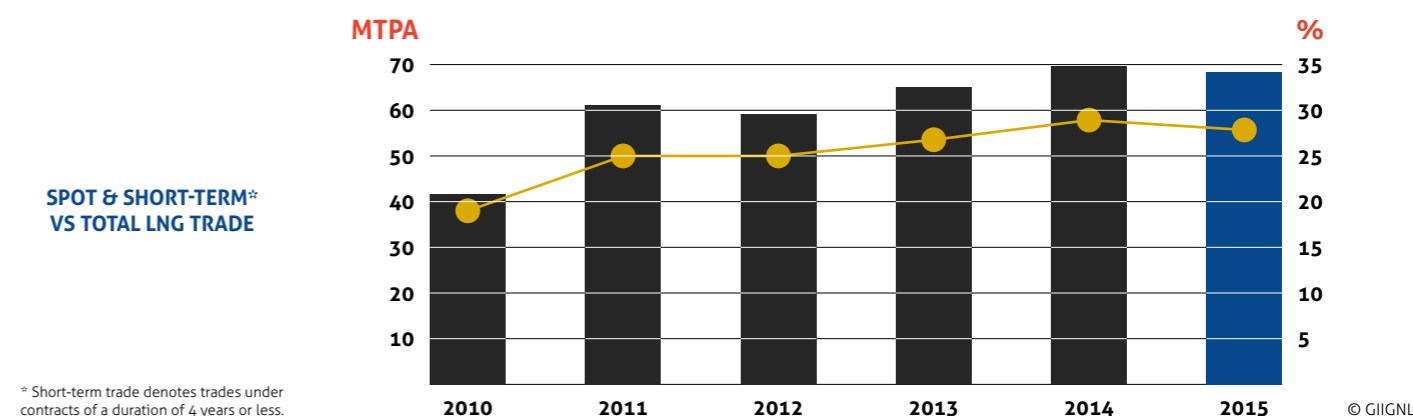
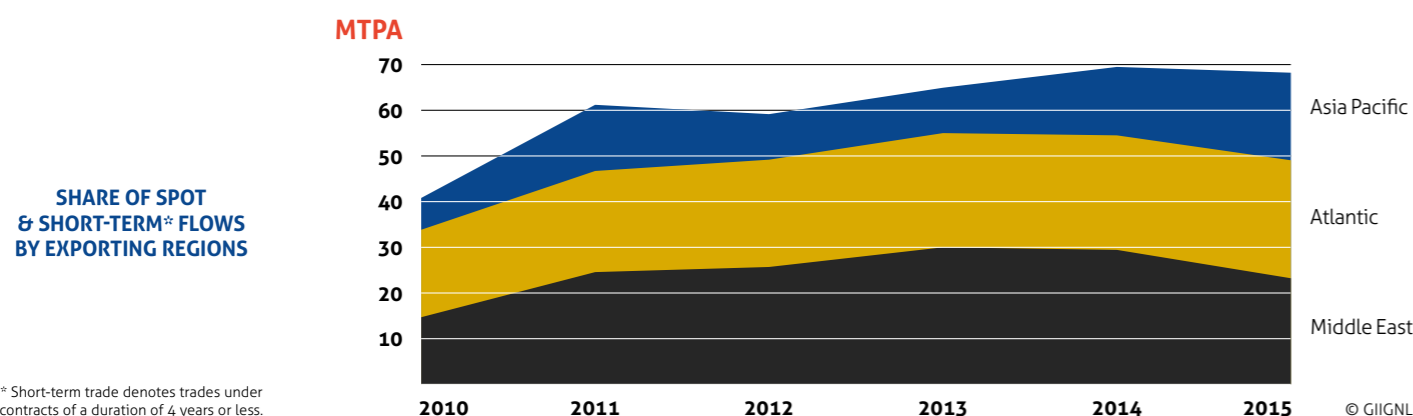
* Cargo Containment System

Built	Vessel Name	Capacity (m ³)	CCS*	Owner	Builder	Manager Name
2014	Golar Glacier	162 000	TZM	Golar LNG	Hyundai Samho HI	Golar LNG
2014	Golar Penguin	160 000	TZM	Golar LNG	Samsung HI	Golar LNG
2014	Kita LNG	160 118	GT	Cardiff Marine Inc.	Daewoo (DSME)	TMS Cardiff Gas
2014	LNG Venus	155 873	KM	Osaka Gas	MHI Nagasaki	Osaka Gas
2014	Maran Gas Apollonia	161 870	TZM	Maran Nakilat	Hyundai Samho HI	Maran Nakilat
2014	Maran Gas Delphi	159 800	GT	Maran Nakilat	Daewoo (DSME)	Maran Nakilat
2014	Maran Gas Efessos	159 800	GT	Maran Nakilat	Daewoo (DSME)	Maran Nakilat
2014	Maran Gas Posidonia	161 870	TZM	Maran Nakilat	Hyundai Samho HI	Maran Nakilat
2014	Pacific Arcadia	147 200	KM	Nippon Yusen Kaisha	MHI Nagasaki	Nippon Yusen Kaisha
2014	Palu LNG	160 000	GT	Cardiff Marine Inc.	Daewoo (DSME)	TMS Cardiff Gas
2014	Pskov	170 200	GT	Sovcomflot JSC	STX SB (Jinhae)	Unicom Mngt
2014	Seishu Maru	155 300	KM	Mitsubishi Corp	MHI Nagasaki	Nippon Yusen Kaisha
2014	Solaris	155 000	TZM	GasLog	Samsung HI	GasLog LNG Services
2014	Velikiy Novgorod	170 567	GT	Sovcomflot JSC	STX SB (Jinhae)	Unicom Mngt
2014	Yari LNG	160 000	GT	Cardiff Marine Inc.	Daewoo (DSME)	TMS Cardiff Gas
2015	Amadi	154 800	TZM	Brunei Gas Carriers	Hyundai HI	STASCO (Shell)
2015	Asia Endeavour	160 000	TZM	Chevron Transport	Samsung HI	Chevron Transport
2015	Asia Excellence	160 000	TZM	Chevron Transport	Samsung HI	Chevron Transport
2015	Beidou Star	172 000	GT	Mitsui O.S.K. Lines	Hudong Zhonghua	Mitsui O.S.K. Lines
2015	BW Pavilion Leeara	161 870	TZM	BW Gas	Hyundai HI	BW Gas
2015	BW Pavilion Vanda	161 870	TZM	BW Gas	Hyundai HI	BW Fleet Mngt
2015	Clean Horizon	161 870	TZM	Dynagas Ltd.	Hyundai HI	Dynagas Ltd.
2015	Cool Explorer	161 352	TZM	Thenamaris	Samsung HI	B. Schulte (Cyprus)
2015	Energy Atlantic	159 924	GT	Alpha Tankers & Frt.	STX SB (Jinhae)	Alpha Tankers & Frt.
2015	GasLog Salem	155 000	TZM	GasLog	Samsung HI	GasLog LNG Services
2015	Golar Ice	160 000	TZM	Golar LNG	Samsung HI	Golar Wilhelmsen
2015	Golar Kelvin	162 000	TZM	Golar LNG	Hyundai Samho HI	Golar LNG
2015	Golar Snow	160 000	TZM	Golar LNG	Samsung HI	Golar Wilhelmsen
2015	Hai Yang Shi You 301	31 043	Other	CNOOC EnerTech	Jiangnan SY Group	CNOOC EnerTech
2015	JS Ineos Ingenuity	27 566	Other	Evergas AS	Sinopacific Offshore	Evergas AS
2015	JS Ineos Insight	27 566	Other	Evergas AS	Sinopacific Offshore	Evergas AS
2015	JS Ineos Intrepid	27 566	Other	Evergas AS	Sinopacific Dayang	Evergas AS
2015	LNG Bonny II	176 760	TZM	Bonny Gas Transport	Hyundai HI	Bonny Gas Transport
2015	LNG Finima II	174 900	GT	Bonny Gas Transport	Samsung HI	Bonny Gas Transport
2015	LNG Jurojin	155 300	KM	Mitsui O.S.K. Lines	MHI Nagasaki	Mitsui O.S.K. Lines
2015	LNG Port Harcourt II	174 900	GT	Bonny Gas Transport	Samsung HI	Bonny Gas Transport
2015	Maran Gas Alexandria	161 870	TZM	Maran Gas Maritime	Hyundai Samho HI	Maran Gas Maritime
2015	Maran Gas Lindos	159 800	GT	Maran Gas Maritime	Daewoo (DSME)	Maran Gas Maritime
2015	Maran Gas Mystras	159 800	GT	Maran Gas Maritime	Daewoo (DSME)	Maran Gas Maritime
2015	Maran Gas Sparta	161 870	TZM	Maran Gas Maritime	Hyundai Samho HI	Maran Gas Maritime
2015	Maran Gas Troy	159 800	GT	Maran Gas Maritime	Daewoo (DSME)	Maran Gas Maritime
2015	Papua	172 000	GT	Mitsui O.S.K. Lines	Hudong Zhonghua	MOL LNG Europe
2015	SCF Melampus	170 200	GT	Sovcomflot JSC	STX SB (Jinhae)	Unicom Mngt
2015	SCF Mitre	170 200	GT	Sovcomflot JSC	STX SB (Jinhae)	Unicom Mngt
2015	Southern Cross	172 000	GT	Mitsui O.S.K. Lines	Hudong Zhonghua	MOL LNG Europe

Source: Clarkson Research 2016

SPOT AND SHORT-TERM VOLUMES (10³ T) RECEIVED IN 2015 BY THE IMPORTING COUNTRIES FROM THE EXPORTING COUNTRIES

	Algeria	Equ. Guin.	Nigeria	Norway	Trinidad& Tobago	Abu Dhabi	Oman	Qatar	Yemen	Australia	Brunei	USA	Indonesia	Malaysia	Papua New Guinea	Peru	Russia	Re-exports received	Re-exports loaded	Net imports
Japan	757	319	4443	61	60	678	126	5562	219	2028	573	157	1397	877	1093	-	1766	391	-	20507
India	-	579	2002	34	227	51	566	4277	299	874	-	-	302	123	70	59	-	435	-198	9698
South Korea	315	-	1011	-	55	-	245	476	-	1229	-	-	1653	-	76	-	700	477	-193	6045
China	443	63	308	-	58	-	65	-	64	353	-	-	202	1886	-	-	192	62	-	3697
Taiwan	-	65	59	67	-	-	-	1853	-	264	-	168	401	-	134	-	252	62	-	3326
Malaysia	389	63	170	122	-	-	127	126	-	332	-	-	-	-	-	-	-	14	-	1342
Pakistan	-	176	180	-	-	-	-	368	-	196	-	-	-	-	-	-	-	126	-	1046
Thailand	-	-	132	-	-	-	-	96	-	206	-	-	66	127	-	-	-	-	-	627
Indonesia	-	-	-	-	-	-	-	-	-	-	-	-	391	-	-	-	-	-	-	391
Singapore	-	-	-	-	-	-	-	-	-	146	-	-	72	-	-	-	-	68	-195	90
Asia	1904	1265	8305	284	399	729	1129	12758	582	5630	573	325	4483	3012	1372	59	2912	1634	-586	46770
U.K	155	-	-	-	174	-	-	2114	-	-	-	-	-	-	-	-	-	-	-198	2245
Turkey	-	-	193	132	116	-	-	1236	-	-	-	-	-	-	-	-	-	61	-	1739
Spain	763	-	746	174	114	-	62	472	-	-	-	-	-	-	-	-	-	-	-1160	1172
Portugal	159	58	-	62	60	-	-	170	-	-	-	-	-	-	-	-	-	-	-258	249
Greece	-	-	59	111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	170
Sweden	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	145	-	145
Italy	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43	-	66
France	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-359	-359
Netherlands	160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-836	-676
Belgium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-826	-826
Europe	1260	58	999	479	464	-	62	3992	-	-	-	-	-	-	-	-	-	250	-3637	3926
Brazil	-	189	1645	562	911	49	-	1030	-	-	-	-	-	-	-	-	-	393	-	4777
Argentina	-	117	803	491	1832	-	-	356	-	-	-	-	-	-	-	-	-	479	-	4078
Puerto Rico	-	-	181	-	356	-	-	-	-	-	-	-	-	-	-	-	-	66	-	602
Mexico	-	-	174	-	218	-	-	-	-	-	-	-	-	-	-	123	-	45	-	561
USA	-	-	-	126	400	-	-	-	154	-	-	-	-	-	-	-	-	-	-163	517
Chile	-	-	-	-	283	-	-	-	-	-	-	-	-	-	-	-	-	-	-	283
Canada	-	-	-	-	205	-	-	-	-	-	-	-	-	-	-	-	-	59	-	264
Domin Rep	-	-	-	-	227	-	-	-	-	-	-	-	-	-	-	-	-	-	-	227
Americas	-	306	2803	1178	4432	49	-	1386	154	-	-	-	-	-	-	123	-	1042	-163	11309
Egypt	341	134	64	60	54	-	-	1356	-	70	-	-	-	-	-	-	-	521	-	2600
Kuwait	-	65	266	-	124	-	447	365	-	130	64	-	-	70	-	-	-	377	-	1909
Dubai	71	-	-	-	65	106	-	433	-	208	-	-	65	-	-	-	-	288	-	1237
Jordan	-	-	256	-	-	-	-	-	-	-	-	-	-	-	-	-	-	261	-	517
Israel	-	-	-	-	109	-	-	-	-	-	-	-	-	-	-	-	-	12	-	121
Middle East	412	199	586	60	352	106	447	2154	-	409	64	-	65	70	-	-	-	1460	-	6385
Total	3577	1827	12693	2001	5648	884	1638	20290	736	6039	638	325	4548	3082	1372	182	2912	4386	-4386	68390



* Short-term trade denotes trades under contracts of a duration of 4 years or less.

* Short-term trade denotes trades under contracts of a duration of 4 years or less.

QUANTITIES (IN 10⁶ T) RECEIVED IN 2015 BY THE IMPORTING COUNTRIES FROM THE EXPORTING COUNTRIES

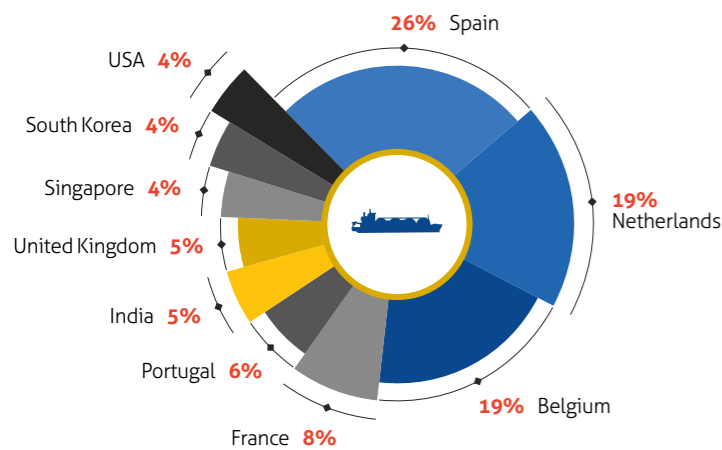
	Algeria	Equ. Guin.	Nigeria	Norway	Trinidad& Tobago	Abu Dhabi	Oman	Qatar	Yemen	Australia	Brunei	USA	Indonesia	Malaysia	Papua New Guinea	Peru	Russia	Re-exports received	Re-exports loaded	Net imports
Japan	0.76	0.39	4.62	0.06	0.06	5.44	2.26	14.64	0.22	18.62	4.23	0.16	5.85	15.57	4.06	0.15	7.57	0.39	-	85.05
South Korea	0.38	0.71	1.26	-	0.05	-	4.03	12.62	0.58	1.82	1.24	-	3.87	3.80	0.22	-	2.55	0.48	-0.19	33.42
China	0.44	0.20	0.43	0.06	0.06	-	0.06	5.07	0.27	5.76	-	-	2.91	2.98	1.52	-	0.19	0.06	-	20.02
India	-	0.77	2.00	0.03	0.23	0.11	0.57	8.92	0.30	0.87	-	-	0.30	0.12	0.07	0.06	-	0.44	-0.20	14.60
Taiwan	-	0.06	0.06	0.07	-	-	-	6.93	-	0.26	0.69	0.17	2.27	2.31	1.31	-	0.25	0.06	-	14.45
Thailand	-	-	0.13	-	-	-	-	2.17	-	0.21	-	-	0.07	0.13	-	-	-	-	-	2.70
Indonesia	-	-	-	-	-	-	-	-	-	-	-	-	2.18	-	-	-	-	-	-	2.18
Singapore	-	0.59	-	-	0.11	-	-	0.47	-	0.76	-	-	0.27	-	-	-	-	0.07	-0.20	2.08
Malaysia	0.39	0.06	0.17	0.12	-	-	0.13	0.13	-	0.33	0.19	-	-	-	-	-	-	0.01	-	1.53
Pakistan	-	0.18	0.18	-	-	-	-	0.37	-	0.20	-	-	-	-	-	-	-	0.13	-	1.05
Asia	1.97	2.96	8.86	0.35	0.51	5.55	7.05	51.31	1.37	28.84	6.36	0.32	17.71	24.92	7.18	0.21	10.57	1.64	-0.59	177.07
U.K.	0.29	-	-	0.13	0.17	-	-	9.69	-	-	-	-	-	-	-	-	-	-	-0.2	10.08
Spain	2.74	-	2.86	0.53	0.84	-	0.06	2.25	-	-	-	-	-	-	-	0.71	-	-	-1.16	8.82
Turkey	2.81	-	0.99	0.13	0.12	-	-	1.24	-	-	-	-	-	-	-	-	-	0.06	-	5.35
France	3.29	-	0.71	0.33	-	-	-	0.19	-	-	-	-	-	-	-	0.20	-	-	-0.36	4.35
Italy	0.02	-	-	-	-	-	-	4.25	-	-	-	-	-	-	-	-	-	0.04	-	4.32
Belgium	0.00	-	-	-	-	-	-	2.69	-	-	-	-	-	-	-	-	-	-	-0.83	1.87
Portugal	0.16	0.06	0.84	0.06	0.06	-	-	0.17	-	-	-	-	-	-	-	-	-	-	-0.26	1.09
Netherlands	0.16	-	-	0.7	-	-	-	0.61	-	-	-	-	-	-	-	-	-	-	-0.84	0.63
Greece	0.28	-	0.06	0.11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.45
Lithuania	-	-	-	0.32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.32
Sweden	-	-	-	0.15	-	-	-	-	-	-	-	-	-	-	-	-	-	0.15	-	0.29
Europe	9.75	0.06	5.45	2.45	1.19	-	0.06	21.09	-	-	-	-	-	-	-	0.91	-	0.25	-3.64	37.57
Mexico	-	-	1.37	0.06	0.26	-	-	0.56	-	-	-	-	0.19	-	-	2.45	-	0.05	-	4.94
Brazil	-	0.19	1.64	0.56	0.91	0.05	-	1.03	-	-	-	-	-	-	-	-	-	0.39	-	4.78
Argentina	-	0.12	0.80	0.49	1.83	-	-	0.36	-	-	-	-	-	-	-	-	-	0.48	-	4.08
Chile	-	0.13	-	0.11	2.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.74
USA	-	-	-	0.25	1.46	-	-	-	0.15	-	-	-	-	-	-	-	-	-	-0.16	1.70
Puerto Rico	-	-	0.18	-	0.90	-	-	-	-	-	-	-	-	-	-	-	-	0.07	-	1.15
Dominican Rep.	-	-	-	-	0.87	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.87
Canada	-	-	-	-	0.43	-	-	-	-	-	-	-	-	-	-	-	-	0.06	-	0.49
Americas	-	0.43	4.00	1.48	9.16	0.05	-	1.95	0.15	-	-	-	0.19	-	-	2.45	-	1.04	-0.16	20.73
Kuwait	-	0.07	0.40	-	0.42	-	0.45	0.81	-	0.26	0.13	-	0.06	0.07	-	-	-	0.38	-	3.04
Egypt	0.34	0.13	0.06	0.06	0.05	-	-	1.36	-	0.07	-	-	-	-	-	-	-	0.52	-	2.60
Dubai	0.07	-	-	-	0.18	0.11	-	1.29	-	0.21	-	-	0.06	-	-	-	-	0.29	-	2.21
Jordan	-	-	0.74	-	0.19	-	-	0.59	-	0.07	-	-	-	-	-	-	-	0.26	-	1.85
Israel	-	-	-	-	0.11	-	-	-	-	-	-	-	-	-	-	-	-	0.01	-	0.12
Middle East	0.41	0.20	1.20	0.06	0.95	0.11	0.45	4.05	-	0.61	0.13	-	0.13	0.07	-	-	-	1.46	-	9.82
Total	12.13	3.65	19.50	4.33	11.81	5.70	7.56	78.4	1.52	29.45	6.48	0.32	18.03	24.99	7.18	3.57	10.57	4.39	-4.39	245.19

INTERNATIONAL RE-EXPORTS

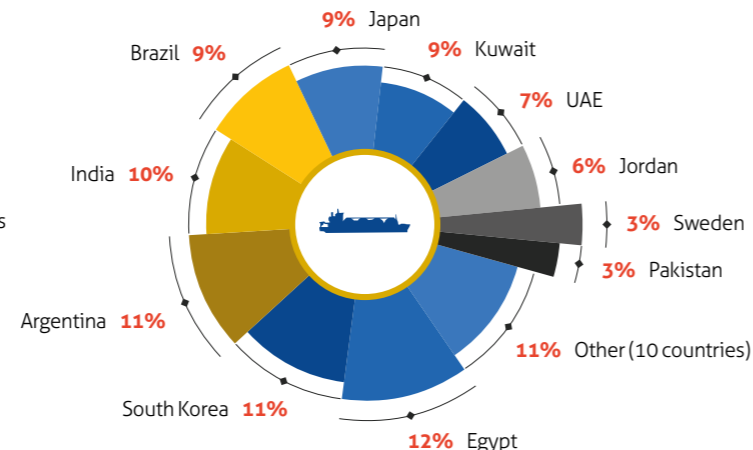
Export country	Import country	Re-exported volumes (MT)	Total (MT)
Belgium	Argentina	0.04	0.83
	Egypt	0.07	
	India	0.21	
	Jordan	0.07	
	Puerto Rico	0.07	
	Singapore	0.07	
	South Korea	0.07	
	Sweden	0.11	
	Taiwan	0.06	
	Turkey	0.06	
France	Argentina	0.04	0.36
	Egypt	0.13	
	Japan	0.06	
	Kuwait	0.12	
	Malaysia	0.01	
	UAE	0.05	
Netherlands	Argentina	0.15	0.84
	Brazil	0.02	
	Egypt	0.06	
	India	0.10	
	Jordan	0.13	
	Mexico	0.05	
	Sweden	0.03	
	South Korea	0.08	
UAE	0.22		
Portugal	Argentina	0.10	0.26
	Brazil	0.16	
	Argentina	0.13	
	Brazil	0.07	
	Canada	0.06	
Spain	Egypt	0.13	1.16
	India	0.12	
	Israel	0.01	
	Italy	0.04	
	Japan	0.20	
	Jordan	0.06	
	Kuwait	0.13	
	Pakistan	0.07	
	South Korea	0.13	
	Brazil	0.07	
United Kingdom	Pakistan	0.06	0.20
	UAE	0.07	
	UAE	0.07	
Europe			3.64



Export country	Import country	Re-exported volumes (MT)	Total (MT)
USA	Argentina	0.03	0.16
	Brazil	0.07	
	Egypt	0.06	
Americas			0.16
India	Egypt	0.07	0.20
	Kuwait	0.07	
	South Korea	0.07	
Singapore	Japan	0.07	0.20
	South Korea	0.13	
	China	0.06	
South Korea	Japan	0.07	0.19
	Kuwait	0.06	
Asia			0.59
World			4.39



© GIIGNL



© GIIGNL

LNG IMPORTS 2015 (NET OF RE-EXPORTS)

	10 ⁶ m ³ liquid	10 ⁶ T	10 ⁹ m ³ (n) gaseous	Share (%)	Var. 2015/2014 (%)
Belgium	4.13	1.87	2.35	0.8%	93.9%
France	9.62	4.35	5.51	1.8%	-5.0%
Greece	0.99	0.45	0.57	0.2%	18.6%
Italy	9.53	4.32	5.44	1.8%	31.9%
Lithuania	0.71	0.32	0.41	0.1%	193.4%
Netherlands	1.40	0.63	0.80	0.3%	50.5%
Portugal	2.41	1.09	1.38	0.4%	12.5%
Spain	19.61	8.82	11.23	3.6%	11.7%
Sweden	0.65	0.29	0.37	0.1%	N/A
Turkey	11.83	5.35	6.77	2.2%	-1.9%
U.K.	22.26	10.08	12.71	4.1%	20.1%

Europe 83.15 37.57 47.54 15.3% 15.8%

Argentina	9.23	4.08	5.32	1.7%	-7.7%
Brazil	10.68	4.78	6.13	1.9%	-10.4%
Chile	6.34	2.74	3.69	1.1%	6.7%
Dominican Rep	2.02	0.87	1.18	0.4%	5.3%
Mexico	10.96	4.94	6.28	2.0%	-25.0%
Puerto Rico	2.64	1.15	1.53	0.5%	-8.2%
Canada	1.12	0.49	0.65	0.2%	21.6%
USA	3.93	1.70	2.28	0.7%	46.8%

Americas 46.92 20.73 27.06 8.5% -8.0%

China	43.90	20.02	25.00	8.2%	5.5%
India	32.25	14.60	18.42	6.0%	0.4%
Indonesia	4.87	2.18	2.79	0.9%	39.9%
Japan	187.85	85.05	106.87	34.7%	-4.7%
Malaysia	3.37	1.53	1.92	0.6%	-7.2%
Pakistan	2.31	1.05	1.32	0.4%	N/A
Singapore	4.61	2.08	2.63	0.8%	23.6%
South Korea	73.60	33.42	41.98	13.6%	-11.2%
Taiwan	31.86	14.45	18.18	5.9%	7.4%
Thailand	5.94	2.70	3.39	1.1%	92.9%

Asia 390.56 177.07 222.49 72.2% -1.7%

Dubai	4.87	2.21	2.78	0.9%	64.8%
Egypt	5.75	2.60	3.29	1.1%	N/A
Israel	0.28	0.12	0.16	0.05%	45.0%
Jordan	4.10	1.85	2.35	0.8%	N/A
Kuwait	6.73	3.04	3.85	1.2%	13.3%

Middle East 21.74 9.82 12.43 4.0% 139.1%

Total 542.36 245.19 309.52 100% 2.5%

SOURCE OF IMPORTS 2015

	10 ⁶ m ³ liquid	10 ⁶ T	10 ⁹ m ³ (n) gaseous	Share (%)	Var. 2015/2014 (%)
Algeria	26.80	12.13	15.35	4.9%	-4.6%
Equatorial Guinea	8.28	3.65	4.79	1.5%	8.0%
Nigeria	43.15	19.50	24.64	8.0%	1.9%
Norway	9.66	4.33	5.54	1.8%	22.0%
Trinidad & Tobago	27.39	11.81	15.94	4.8%	-9.8%

Atlantic Basin 115.28 51.43 66.26 21.0% -2.1%

Abu Dhabi	12.58	5.70	7.12	2.3%	-6.2%
Oman	16.58	7.56	9.41	3.1%	-2.2%
Qatar	172.97	78.40	98.72	32.0%	2.7%
Yemen	3.43	1.52	1.98	0.6%	-75.8%

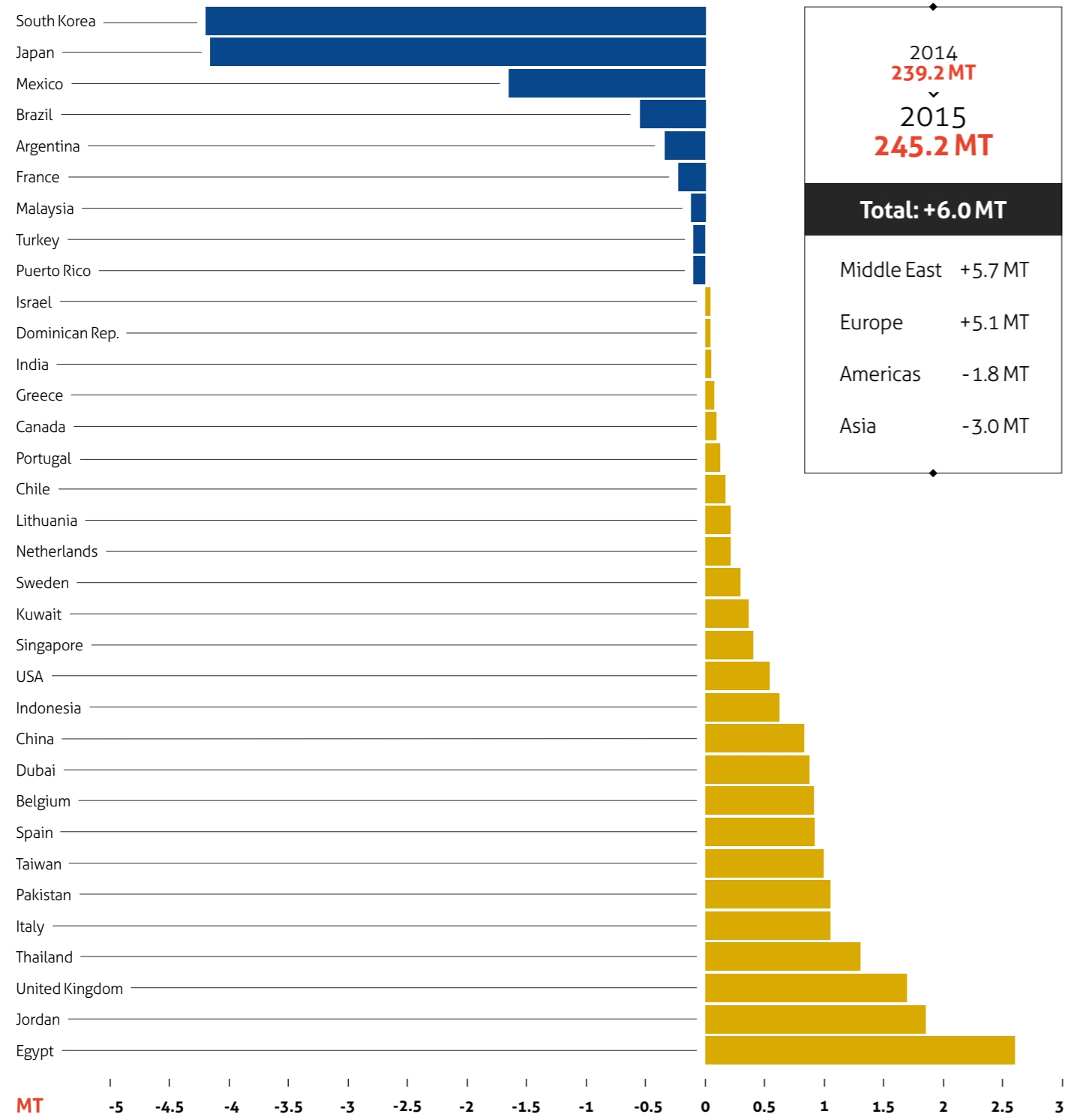
Middle East 205.56 93.19 117.23 38.0% -3.4%

Australia	64.46	29.45	36.43	12.0%	24.8%
Brunei	14.22	6.48	8.03	2.6%	5.9%
USA (Alaska)	0.75	0.32	0.44	0.1%	28.3%
Indonesia	40.12	18.03	22.98	7.4%	3.7%
Malaysia	54.82	24.99	31.20	10.2%	0.6%
Papua New Guinea	15.88	7.18	9.08	2.9%	112.2%
Peru	7.91	3.57	4.54	1.5%	-11.5%
Russia	23.37	10.57	13.35	4.3%	-0.1%

Pacific Basin 221.53 100.58 126.04 41.0% 11.5%

Total 542.36 245.19 309.52 100% 2.5%

LNG IMPORTS: 2015 VS 2014



2014	239.2 MT
2015	245.2 MT
Total: +6.0 MT	
Middle East	+5.7 MT
Europe	+5.1 MT
Americas	-1.8 MT
Asia	-3.0 MT



LIQUEFACTION PLANTS

In 2015, global liquefaction capacity increased by around 14.4 MTPA to reach a total nameplate capacity of 308 MTPA at year-end.

Three projects started up in 2015: GLNG (3.9 MTPA) and QCLNG (8.5 MTPA) in Australia, Donggi-Senoro in Indonesia (2 MTPA). Production gains were partially offset by plant shut-downs in Angola and Egypt and force majeure events in Yemen. Five FIDs were taken during the year, 4 of which in the United States (Sabine Pass Train 5, Corpus Christi Trains 1 & 2, Freeport Train 3) and 1 in Cameroon (GoFLNG.)

At the end of the year, approximately 140 MTPA of new liquefaction capacity were under construction, 62 MTPA of which were located in the United States and 50 MTPA in Australia.

In 2016, around 42 MTPA of new liquefaction capacity are expected to come online, 28 MTPA of which will be located in Australia.



Angola

In Angola, the liquefaction facility has remained shut down for repair works since April 2014. The plant has started recommissioning and should resume exports in the first half of 2016.

Australia

In Australia, 2 projects—Queensland Curtis (QCLNG) Train 2 and GLNG Train 1—started operations in 2015. Around 50 MTPA of liquefaction capacity were under construction in the country at the end of the year, 28 MTPA of which were scheduled to come on stream in 2016.

After BG Group's QCLNG started production from Train 1 in 2014, Train 2 loaded its first LNG cargo in July 2015. BG Group has formally taken operatorship of the QCLNG facility from contractor Bechtel after commercial operations were announced for Train 1 in May 2015, followed later by a similar announcement for Train 2 in November 2015. Full production capacity of 8.5 MTPA should be reached by 2016.

The 7.8 MTPA GLNG project (a joint venture of Santos, Petronas Total, and Kogas, previously "Gladstone" project) exported its first cargoes from Train 1 in the last quarter of 2015.

In addition to the ramp-up of QCLNG and GLNG in 2016, two projects should start commercial deliveries during the year: **Australia Pacific LNG** (2 trains, 9 MTPA) and **Gorgon LNG** (3 trains, 15.6 MTPA). Led by ConocoPhillips, **Australia Pacific LNG** announced first exports from Train 1 in January 2016.

At the end of 2015, the first cargoes from Train 1 of Chevron's **Gorgon** project were expected in the first quarter of 2016, while construction is in progress for the two other trains.

In **Wheatstone**, Chevron's other Australian project, first LNG volumes of the 4.5 MTPA Train 1 are expected around mid-2017.

In the **Ichthys** project (Inpex, Total, and other Japanese partners), construction is still underway and production from Train 1 (now 4.5 MTPA) has been further delayed to 2017. Shell's giant FLNG Prelude (3.6 MTPA) remains under construction, with expected start-up in 2017.

Cameroon

In September, Golar and Perenco took FID on their near-shore **GoFLNG** project. The project will convert the LNG tanker "Golar Hilli". The total production (1.2 MTPA) will be off-taken by Gazprom under an 8-year agreement.

Canada

In Canada, over 340 MTPA of liquefaction projects have been proposed, a large majority of which are located in British Columbia, on the West Coast.

In Prince Rupert, Petronas took a conditional FID on its 12 MTPA **Pacific Northwest LNG** project, subject to approval by the Legislative Assembly of British Columbia, and to a positive regulatory decision on the environmental assessment by the Government of Canada.

In Kitimat, two projects have completed FEED:

- The **LNG Canada** project led by Shell, PetroChina, Kogas and Mitsubishi. The 12 MTPA project has received a construction permit from the government of British Columbia and a 40 year export license from the NEB. However, partners have decided to put the project's FID on hold due to the weak pricing conditions.
- The **Douglas Channel LNG** project, led by a consortium which includes AltaGas, EDFT, Exmar and Idemitsu. The 0.5 MTPA barge mounted FLNG project is targeting to start commercial operations in 2018.

Among the numerous other Canadian projects, Kitimat LNG (developed by Chevron and Woodside on the West coast) and Goldboro LNG (developed by Pieridae Energy on the East coast) were reported to be in FEED stage at the end of 2015.

Colombia

In Colombia, the start-up of the 0.5 MTPA **Caribbean FLNG** (Pacific Rubiales), initially planned for 2015, has been formally deferred due to low prices. The 0.5 MTPA HOA signed by Pacific Rubiales with Gazprom Marketing & Trading in 2014 was reported to be cancelled at the end of 2015.

Egypt

In Egypt, the Idku and Damietta plants did not export any cargoes during the year due to feedgas shortage as priority has been given to domestic demand. Eni discovered a new field offshore of 30 Tcf (Zohr). This new discovery could free up gas for LNG exports from 2020 onwards.

Equatorial Guinea

In Equatorial Guinea, Ophir Energy and Schlumberger are planning to take FID on the 2.2 MTPA **Fortuna FLNG** project in 2016. The project will consist in converting the 126 000 m³ Golar Gandria LNG carrier. Developers are targeting 2019 as the start-up for commercial operations.



Indonesia

In Indonesia, the Arun export plant has been converted into a 3 MTPA import terminal.

The 2 MTPA **Donggi-Senoro** project started producing in October 2015. On the island of Sulawesi Hong-Kong-based Energy World Corporation (EWC) is finalizing construction of a 0.5 MTPA liquefaction project (**Sengkang**). Start-up could take place in June 2016.

Malaysia

At the existing Bintulu plant, a 9th liquefaction train of 3.6 MTPA is currently under construction.

In addition, two projects led by Petronas are being built: a 1.2 MTPA FLNG expected to start producing in 2016 and a second 1.5 MTPA FLNG (Rotan FLNG) scheduled to start production in 2018.

Papua New Guinea

In 2015, the 6.9 MTPA plant in Papua New Guinea reached full production capacity.

Russia

The **Yamal LNG project** is under construction and the first volumes from Train 1 are expected around 2018/2019. In June, Engie and Novatek signed a 1 MTPA FOB SPA of a 23 year duration. This represents 14 cargoes per year which will be delivered by the icebreaker LNG carriers before transshipment at the Montoir-de-Bretagne LNG terminal in France.

USA

In Alaska, Kenai LNG plant asked for a renewal of its export license, which has been extended until February 2018.

At the time of this writing, the first two trains of the **Sabine Pass** liquefaction plant were scheduled to come online before mid-2016, with a combined 9 MTPA liquefaction capacity.

Four FIDs have been taken in the USA in 2015, all of which were announced for start-up in 2019: **Sabine Pass** Train 5 (with a capacity of 4.5 MTPA), **Corpus Christi** Trains 1 and 2 (with a capacity of 4.5 MTPA each), and **Freeport** Train 3 (4.5 MTPA). **These FIDs bring total US capacity under construction at the end of 2015 to 62 MTPA.**

In addition to the projects already under construction, around 330 MTPA of new projects have been proposed in the United States, mainly in the Gulf of Mexico.



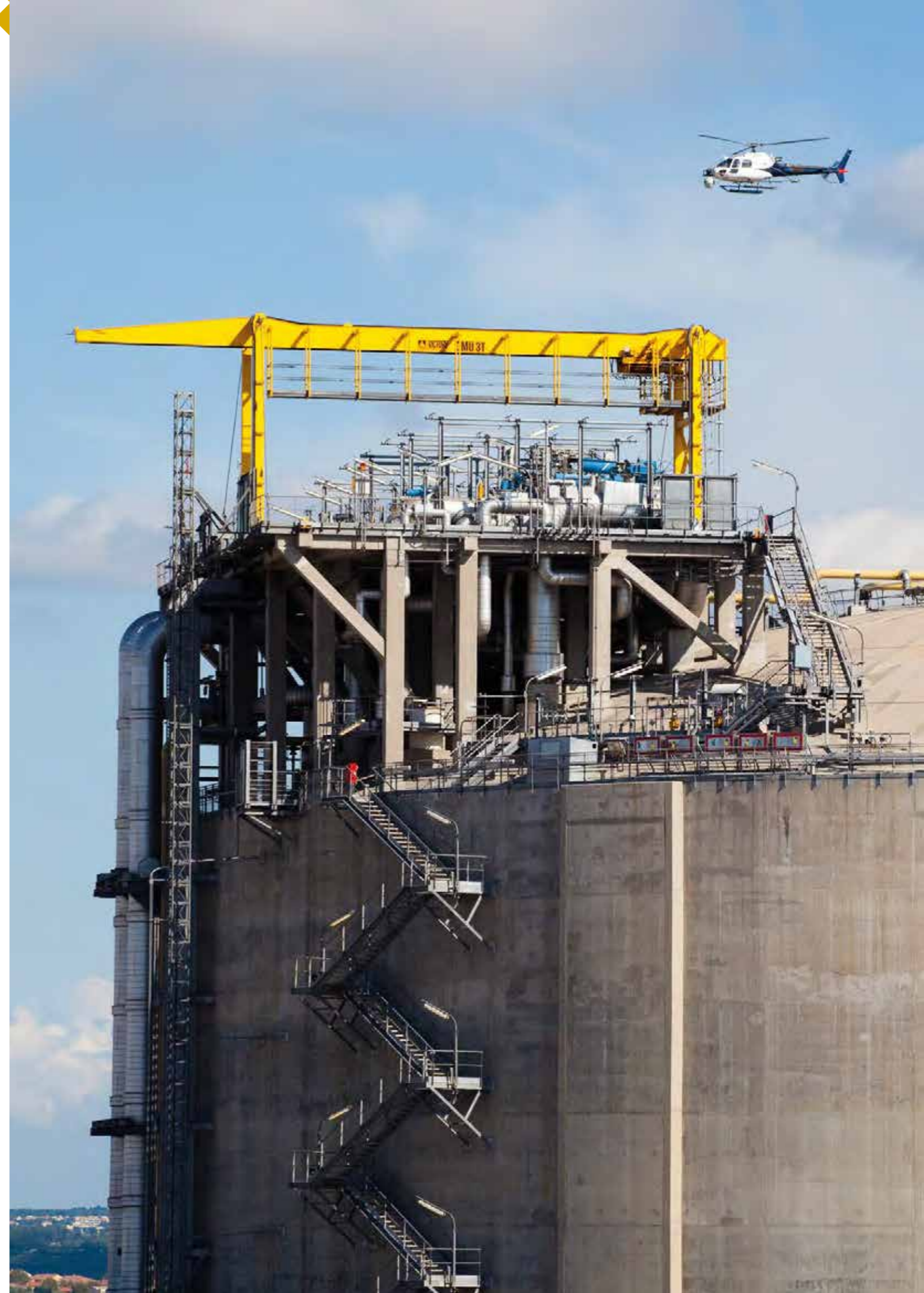
LIQUEFACTION PLANTS AT THE START OF 2016

Country	Site	Liquefaction		Storage		Owner(s)	Operator	LT Buyer(s)	Start-up date
		Number of trains	Nominal capacity in 10 ⁶ t/y	Number of tanks	Total capacity in MTPA				
ATLANTIC BASIN									
	Arzew-Bethioua GL 1Z	6	7.9	3	300 000	Sonatrach	Sonatrach	ENGIE, Botas, ENI, Iberdrola, Depa, Cepsa Gas, Endesa	1978
	Arzew-Bethioua GL 2Z	6	8.2	3	300 000	Sonatrach	Sonatrach	ENGIE, Botas, ENI, Iberdrola, Depa, Cepsa Gas, Endesa	1981
ALGERIA	Arzew-Bethioua GL 3Z	1	4.7	2	320 000	Sonatrach	Sonatrach	ENGIE, Botas, ENI, Iberdrola, Depa, Cepsa Gas, Endesa	2014
	Skikda - GL1K/GL2K	3	3.2	4	280 000	Sonatrach	Sonatrach	ENGIE, Botas, ENI, Iberdrola, Depa, Cepsa Gas, Endesa	1972-1981
	Skikda GL1K megatrain	1	4.5	1	150 000	Sonatrach	Sonatrach	ENGIE, Botas, ENI, Iberdrola, Depa, Cepsa Gas, Endesa	2013
ANGOLA (STOPPED)	Soyo	1	5.2	2	320 000	Angola LNG (Chevron 36.4%, Sonangol 22.8%, BP 13.6%, ENI 13.6%, Total 13.6%)	Chevron	Angola LNG	2013
	Damietta	1	5	2	300 000	Union Fenosa Gas (80%), EGPC (10%), EGAS (10%)	SEGAS SERVICES	BP, Union Fenosa Gas	2005
EGYPT (STOPPED)	Idku	2	7.2	2	280 000	T1: BG (35.5%), Petronas (35.5%), ENGIE (5%), Egyptian LNG (EGPC 12%, EGAS 12%) T2: BG (38%), Petronas (38%), EGAS (12%), EGPC (12%)	Egyptian LNG (EGPC, EGAS, BG, ENGIE, Petronas)	ENGIE (T1), BG (T2)	2005
EQUATORIAL GUINEA	Bioko Island	1	3.7	2	272 000	Marathon (60%), Sonagas (25%), Mitsui (8.5%), Marubeni (6.5%)	EG LNG	BG	2007
LIBYA (STOPPED)	Marsa-el-Brega	4	3.2	2	96 000	LNOC	LNOC	Gas Natural Fenosa	1970
	Bonny Island (NLNG T1-3)	3	9.6	3	336 800	Nigeria LNG (NNPC 49%), Shell (25.6%), Total (15%), ENI (10.40%)	Shell	Enel, Gas Natural Fenosa, Botas, ENGIE, GALP	1999-2002
NIGERIA	Bonny Island (NLNG T4 & 5)	2	8.1			Nigeria LNG (NNPC 49%), Shell (25.6%), Total (15%), ENI 10.40%	Shell	BG, Shell, Iberdrola, Endesa, GALP, Total, ENI	2006
	Bonny Island (NLNG T6)	1	4.1	1	84 200	Nigeria LNG (NNPC 49%), Shell (25.6%), Total (15%), ENI 10.40%	Shell	Total, Shell	2008
NORWAY	Hammerfest	1	4.3	2	250 000	Statoil (36.79%), Petoro (30%), Total (18.4%), ENGIE (12%), RWE (2.81%)	Statoil	ENGIE, Iberdrola, Statoil, Total	2007
	Atlantic LNG T1	1	3.3	2	204 000	BP (34%), BG (26%), Shell (20%), CIC (10%), NGC Trinidad (10%)	Atlantic LNG	ENGIE, Gas Natural Fenosa	1999
TRINIDAD & TOBAGO	Atlantic LNG T2 & 3	2	7	1	160 000	BP (42.5%), BG (32.5%), Shell (25%)	Atlantic LNG	BG, BP, Gas Natural Fenosa, Naturgas, Shell	2002-2003
	Atlantic LNG T4	1	5.2	1	160 000	BP (37.8%), BG (28.9%), Shell (22.2%), NGC Trinidad (11.1%)	Atlantic LNG	BG, BP, Shell	2006

Country	Site	Liquefaction		Storage		Owner(s)	Operator	LT Buyer(s)	Start-up date
		Number of trains	Total capacity in MTPA	Number of tanks	Total capacity in MTPA				
MIDDLE EAST									
ABU DHABI	Das Island	3	5.8	3	240 000	ADNOC (70%), Mitsui (15%), BP (10%), Total (5%)	Adgas	Tokyo Electric	1977
		2	7.1			Omani gvt (51%), Shell (30%), Total (5.5%), Korea LNG (5%), Mitsubishi (2.8%), Mitsui (2.8%), Partex (2%), Itochu (0.9%)	Oman LNG	KOGAS, Shell, Osaka Gas, BP, Itochu	2000
OMAN	Qalhat			2	240 000	Omani gvt (46.8%), Oman LNG (36.8%), Union Fenosa Gas (7.4%), Osaka Gas (3%), Mitsubishi (3%), Itochu (3%)	Qalhat LNG	Mitsubishi, Osaka Gas, Union Fenosa Gas, Itochu	2006
	Ras Laffan (Qatargas 1 - T1 & 2)	2	6.4			Qatar Petroleum (65%), ExxonMobil (10%), Total (10%), Marubeni (7.5%), Mitsui (7.5%)	Qatargas I	Chubu Electric, The Chugoku Electric, The Kansai Electric, Osaka Gas, Toho Gas, Tohoku Electric, Tokyo Gas, Tokyo Electric, Gas Natural Fenosa, PTT	1999
	Ras Laffan (Qatargas 1 - T3)	1	3.1	2	240 000	Qatar Petroleum (65%), ExxonMobil (10%), Total (10%), Marubeni (7.5%), Mitsui (7.5%)	Qatargas I	Tokyo Gas	1999
	Ras Laffan (Qatargas 2 - T1)	1	7.8			Qatar Petroleum (70%), ExxonMobil (30%)	Qatargas II	ExxonMobil, Chubu	2009
	Ras Laffan (Qatargas 2 - T2)	1	7.8			Qatar Petroleum (65%), ExxonMobil (18.3%), Total (16.7%)	Qatargas II	ExxonMobil, Total, CNOOC	2009
QATAR	Ras Laffan (Qatargas 3 - T1)	1	7.8	8	1 160 000	Qatar Petroleum (68.5%), ConocoPhillips (30%), Mitsui (1.5%)	Qatargas III	ConocoPhillips, Shell, Centrica	2010
	Ras Laffan (Qatargas 4 - T1)	1	7.8			Qatar Petroleum (70%), ExxonMobil (30%)	Qatargas IV	Shell, Petrochina, Marubeni	2011
	Ras Laffan (Rasgas 1 - T1 & 2)	2	6.6			Qatar Petroleum (63%), ExxonMobil (25%), KOGAS (5%), Itochu (4%), LNG Japan (3%)	RasGas I	KOGAS, ENI	1999-2000
	Ras Laffan (Rasgas 2 - T1)	1	4.7			Qatar Petroleum (70%), ExxonMobil (30%)	RasGas II	Petronet LNG	2004
	Ras Laffan (Rasgas 2 - T2)	1	4.7	6	840 000	Qatar Petroleum (70%), ExxonMobil (30%)	RasGas II	Endesa, Edison	2005
	Ras Laffan (RasGas 2 - T3)	1	4.7			Qatar Petroleum (70%), ExxonMobil (30%)	RasGas II	Petronet, EDF, ENI, CPC	March 2007
	Ras Laffan (Rasgas 3 - T1)	1	7.8			Qatar Petroleum (70%), ExxonMobil (30%)	RasGas III	Petronet, KOGAS	August 2009
	Ras Laffan (Rasgas 3 - T2)	1	7.8			Qatar Petroleum (70%), ExxonMobil (30%)	RasGas III	ExxonMobil	April 2010
YEMEN (STOPPED)	Balhaf - T1 & 2	2	6.7	2	280 000	Yemen LNG (Total 39.6%, Hunt Oil Co. 17.2%, SK Corp. 9.6%, KOGAS 6%, Yemen Gas Co. 16.7%, Hyundai 5.9%, GASSP 5%)	Yemen LNG	KOGAS, ENGIE, Total	October 2009



Country	Site	Liquefaction		Storage		Owner(s)	Operator	LT Buyer(s)	Start-up date
		Number of trains	Nominal capacity in 10 ⁶ t/y	Number of tanks	Total capacity in MTPA				
PACIFIC BASIN									
	Withnell Bay - Trains 1-4	4	12.1	4	260 000	Woodside, Shell, BHP, BP Australia, Chevron (1.7% each), Mitsubishi, Mitsui (8% each)	Woodside	Tokyo Electric, Chubu Electric, Kansai Electric, The Chugoku Electric, Kyushu Electric, Tokyo Gas, Osaka Gas, Shizuoka Gas, Tohoku Electric, Nippon Gas, KOGAS, Shell, CNOOC	Trains 1 & 2: 1989 Train 3: 1992 Train 4: 2004
	Withnell Bay - Train 5	1	4.3	1	65 000	Woodside, Shell, BHP, BP Australia, Chevron (1.7% each), Mitsubishi, Mitsui (8% each)	Woodside	Tokyo Electric, Chubu Electric, Kansai Electric, The Chugoku Electric, Kyushu Electric, Tokyo Gas, Osaka Gas, Shizuoka Gas, Tohoku Electric, Nippon Gas, KOGAS, Shell, Hazira Gas, CNOOC	2008
AUSTRALIA									
	Darwin	1	3.4	1	188 000	ConocoPhillips (57%), ENI, Santos, Inpex (11% each), The Tokyo Electric Power Co. (6%), Tokyo Gas (3%)	ConocoPhillips	Tokyo Electric, Tokyo Gas	2006
	Pluto	1	4.3	2	240 000	Woodside (90%), The Kansai Electric (5%), Tokyo Gas (5%)	Woodside	The Kansai Electric, Tokyo Gas, Petronas	2012
	Curtis Island - Train 1	1	4.3	2	280 000	BG (50%), CNOOC (50%)	BG	BG, CNOOC	2014
	Curtis Island - Train 2	1	4.3	2	280 000	BG (97.5%), Tokyo Gas (2.5%)	BG	BG, Tokyo Gas	2015
	GLNG - Train 1	1	3.9	2	280 000	KOGAS (15%), Petronas (27.5%), Santos (30%), Total (27.5%)	Santos	KOGAS, Petronas	2015
BRUNEI									
	Lumut	5	7.1	3	195 000	Brunei gvt (50%), Shell (25%), Mitsubishi (25%)	Brunei LNG Sdn Bhd	Tokyo Gas, Tokyo Electric, Osaka Gas, KOGAS	1973
USA									
	Kenai	1	0.4	3	108 000	ConocoPhillips	ConocoPhillips	Tokyo Gas, Tokyo Electric	1969
	Bontang - Badak (Total capacity)	8	22.3						
	Badak A & B	2						Kansai Electric, Chubu Electric, Kyushu Electric, Osaka Gas, Toho Gas, Nippon Steel Co.	1977
	Badak C & D	2		6	630 000	Pertamina	Pertamina (55%), VICO (BP, ENI, 20%), JILCO (15%), Total (10%)	Kansai Electric, Chubu Electric, Osaka Gas, Toho Gas	1983
	Badak E	1						CPC	1990
	Badak F	1						Tokyo Gas, Osaka Gas, Toho Gas, Hiroshima Gas, Nippon Gas	1994
INDONESIA									
	Badak G	1						KOGAS	1998
	Badak H	1						CPC	1998
	Donggi-Senoro	1	2	1	170 000	Mitsubishi (45%), Pertamina (29%), KOGAS (15%), Medco (11%)		Chubu, Kogas, Kyushu Electric	2015
	Tangguh	2	7.6	2	340 000	Tangguh LNG (BP 37.16%, CNOOC 13.9%, JX Nippon 13.5%, Mitsubishi 9.9%, INPEX 7.8%, LNG Japan 7.4%, KG Berau 5%, Talisman 3.1%, Mitsui 2.3%)	Tangguh LNG	KOGAS, Posco, SK Energy Co., CNOOC, Chubu Electric, Kansai Electric, Tohoku Electric, Sempra LNG	2009
	Bintulu MLNG 1 (Satu)	3	8.1			Petronas (90%), Mitsubishi (5%), Sarawak state gvt (5%)	Petronas	Tokyo Gas, Tokyo Electric, Saibu Gas, Shikoku Electric, Hiroshima Gas	1983
	Bintulu MLNG 2 (Dua)	3	7.8			Petronas (60%), Shell (15%), Mitsubishi (15%), Sarawak state gvt (10%)	Malaysia LNG Dua	Chubu Electric, Tokyo Gas, Osaka Gas, Toho Gas, The Kansai Electric, Shizuoka Gas, Tohoku Electric, Sendai City Gas, KOGAS, CPC	1995
MALAYSIA									
	Bintulu MLNG 2 (Dua) - debottleneck	1	1.5		390 000	Petronas (60%), Shell (15%), Mitsubishi (15%), Sarawak state gvt (10%)	Malaysia LNG Dua	Chubu Electric, Tokyo Gas, Osaka Gas, Toho Gas, The Kansai Electric, Shizuoka Gas, Tohoku Electric, Sendai City Gas, KOGAS, CPC	2010
	Bintulu MLNG 3 (Tiga)	2	6.8			Petronas (60%), Shell (15%), JX Nippon Oil (10%), Sarawak state gvt (10%), Mitsubishi (5%)	Malaysia LNG Tiga	Tokyo Gas, Osaka Gas, Toho Gas, Tohoku Electric, Japex, KOGAS, CNOOC	2003
PAPUA NEW GUINEA									
	PNG LNG	2	6.9	2	320 000	Exxon Mobil (33.2%), Oil Search (29%), Indep Public Business Corp (16.6%), Santos (13.5%), JX Nippon (3.7%), MRDC (2.8%), Marubeni (1%), Petromin PNG (0.2%)	PNG LNG	CPC, Sinopec, Tokyo Electric, Osaka Gas	2014
PERU									
	Peru LNG	1	4.5	2	260 000	Hunt Oil (50%), Shell (20%), SK Energy (20%), Marubeni (10%)	Hunt Oil	Shell	2010
RUSSIA									
	Sakhalin 2	2	9.6	2	200 000	Sakhalin Energy Invest Co. (Gazprom 50%, Shell 27.5%, Mitsui 12.5%, Mitsubishi 10%)	Sakhalin Energy Invest Co. (Gazprom 50%, Shell 27.5%, Mitsui 12.5%, Mitsubishi 10%)	Gazprom, Shell, KOGAS, Chubu Electric, Hiroshima Gas, Kyushu Electric, Osaka Gas, Saibu Gas, Toho Gas, Tohoku Electric, Tokyo Electric, Tokyo Gas	2009
TOTAL		96	308		11 023 000				



REGASIFICATION PLANTS

In 2015, global regasification capacity continued to grow, reaching 777 MTPA at year-end.

Three onshore terminals (1 in Indonesia and 2 in Japan) and 4 offshore terminals (2 in Egypt, 1 in Jordan, 1 in Pakistan) started operating in 2015, representing a combined **23.5 MTPA** additional capacity.

Three new markets imported LNG, all of which through offshore terminals: Egypt (**Ain-Sokhna BW** and **Ain-Sokhna Höegh**), Jordan (**Aqaba**) and Pakistan (**Port Qasim**). In addition, in December, Poland brought a commissioning cargo to its onshore terminal in Swinoujscie. The terminal is expected to start commercial operations in 2016.

One expansion project was completed during the year (**GNL Quintero**, in Chile).

At the end of the year, 15 new onshore terminals were reported to be under construction, 8 of which in China.

Five expansion projects were also underway (2 in China, 1 in India, 1 in Thailand and 1 in Greece).

Total regasification capacity under construction at year-end reached **71.9 MTPA**, of which 71% or **51.7 MTPA** located in Asia.

In addition, 5 FSRU-based projects were under consideration in Chile, Colombia, Ghana, Puerto Rico and Uruguay.



Belgium

In Zeebrugge, a second jetty enabling LNG ships with a capacity as small as 2,000 m³ is under construction and commissioning is foreseen in 2016. The small scale LNG-infrastructure investment at the second jetty –LNG to berth– is co-financed by the European Union via the Trans-European Transport Network (TEN-T).

Sweden-based Skangas has selected the **Zeebrugge** terminal as an LNG supply point for its Lysekil small-scale terminal and has signed a contract with the Zeebrugge LNG terminal user Eni for the regular supply of small scale cargoes in 2015 and 2016. Besides, Fluxys is developing transshipment services. In March 2015, Fluxys has signed a 20 year capacity contract with Yamal Trade for transshipment services at the Zeebrugge LNG terminal. Fluxys has also awarded an EPC contract for the construction of a 5th 180,000 m³ LNG storage tank and additional process installations.

Chile

In **Quintero**, Phase 1 of the terminal expansion project has been completed in February, increasing the regasification capacity by 50% to a total of 5.8 Bcm/y. An Environmental Impact Assessment (EIA) for the potential Phase II Expansion Project has been submitted. Phase II includes increasing the terminal's processing capacity by an additional 33% and increasing the truck loading facility's capacity by an additional 50% (from 2,500 m³ to 3,750 m³ of LNG per day).

In May 2015, Höegh LNG signed an FSRU contract with Octopus LNG SpA for the **Penco-Lirquén** LNG import terminal to be located in Concepción Bay, Chile, but construction has not commenced yet.

China

In **Guangdong Dapeng**, a fourth LNG tank has been completed, taking the storage capacity to 640,000 cubic meters.

At the end of 2015, there were 13 LNG terminals in operation in China, with a total capacity of 41.3 MTPA and an average annual utilization rate of around 50%. Eight terminals were under construction for a combined capacity of around 24 MTPA, including the **Yuedong** LNG terminal, scheduled to start-up in Q1 2016 at the time of this writing. Two expansions are expected to be completed in 2016, in **Rudong** and **Dalian**.

Colombia

In Cartagena, on the Caribbean coast, a consortium of power generators signed an EPC contract in order to develop a 3 MTPA FSRU-based terminal. The terminal could start-up in 2017.

Dubai

In Dubai, the total regasification capacity has been doubled, as FSRU Golar Freeze was dry-docked in April and replaced by Excelerate's Explorer, with a regasification capacity of 6 MTPA.

Egypt

Two FSRUs started importing LNG in 2015. In April 2015, Höegh Gallant (FSRU) commenced commercial operations under a five year FSRU contract between Höegh LNG and Egyptian company EGAS. In October, a second unit owned by Singapore-based BW (BW Singapore) started operating, also under a five year charter with EGAS.

France

France's fourth LNG import terminal **Dunkerque LNG** was still under construction in 2015. At the time of this writing, the start-up of the 9.6 MTPA terminal was expected in June 2016.

In **Montoir**, following a first commercial transshipment operation in August 2013 (direct transfer of LNG between two vessels via the two existing berths), Elengy has taken FID in September 2015 in order to develop upgraded LNG transshipment services after securing a long-term transshipment contract with Novatek Gas & Power in June 2015.

In **Fos Cavaou**, transshipment services have been in effect from December 2015, allowing to transfer LNG between two vessels with the use of cryogenic hoses, by mooring two vessels in double banking alongside the terminal jetty.

In **Fos Tonkin**, the regasification capacity of the terminal has been reduced to 3 Bcm/y since April 2015.

Greece

Construction of a third tank of 95,000 m³ storage capacity and associated installations has continued at the **Revithoussa** LNG regasification terminal. After completion expected in 2017, the total storage capacity of the terminal will reach 225,000 m³ and the port will be able to handle up to fully laden Q-flex vessels. Facilities for loading LNG vessels will also become available.



India

In **Dahej**, the expansion of the existing LNG terminal from 10 to 15 MTPA is underway. The new facility includes two LNG storage tanks, five high pressure send-out pumps and four shell and tube vaporizers.

In **Mundra**, GSPC LNG Ltd. is building a green field LNG regasification terminal of 5 MTPA capacity in Mundra, Gujarat, India. The terminal will include two full containment LNG storage tanks of net capacity 160,000 m³ each. The terminal is scheduled to be commissioned in the first quarter of 2017. On the East coast, two terminals are in advanced development stages:

- ENGIE, Shell and Indian companies Andhra Pradesh Gas Distribution Corporation (APGDC) and GAIL have signed twin agreements for a floating LNG terminal in the port of **Kakinada**, with a nominal capacity of up to 5 MTPA. Environmental permits have already been obtained.
- In **Ennore**, Indian Oil was reported to have started construction of a 5 MTPA onshore terminal expected to be operational around 2020.

Indonesia

In Indonesia, the former **Arun** export plant was converted into an import terminal which started receiving domestic LNG in 2015.

Italy

The **Panigaglia** LNG terminal has been operating in low send-out mode. In December 2015, GNL Italia started revamping one of the two tanks. The project will be completed by September 2017. The company also commissioned a feasibility study in order to offer bulk breaking services, such as loading of bunker ships and truck loading.

Japan

Two new terminals were commissioned in 2015: **Hachinohe LNG** (1.4 Bcm/y, developed by JX Nippon Oil), and **Shin-sendai** (1.1 Bcm/y, developed by Tohoku Electric.)

Two terminals were under construction at the time of this writing: **Hitachi LNG** terminal (1.5 MTPA,

developed by Tokyo Gas and expected to start-up commercial operations in 2016) and **Soma LNG** (1 MTPA, developed by Japex, targeted to start importing in 2018.)

Expansion works were also underway on several existing terminals:

- Toho Gas is building a third LNG storage tank of 220,000 m³ in Chita Midorihamma Works, with completion expected in 2016.
- Hiroshima Gas is expanding **Hatsukaichi LNG's** jetty from 247m to 427m.
- In **Ishikari**, Hokkaido Gas has started the operation of an additional LNG vaporizer since November 2015 and two more LNG storage tanks are under construction.

In **Senboku**, Osaka Gas has added a fifth LNG storage tank of a 230,000 m³ capacity to its **Senboku 1** LNG terminal.

In **Fukuhoka**, Saibu Gas decommissioned its small-scale LNG Terminal in June 2015 due to the start-up of commercial operations at the **Hibiki LNG** Terminal.

Jordan

In Jordan, who previously resorted to fuel oil for power following the drop in Egyptian gas supplies, the 3.8 MTPA **Aqaba LNG** terminal developed by NEPCO started commercial operations in July. The terminal is using Golar's FSRU Eskimo, which has a peak send-out capacity of 710 mscf/d. It has a five year SPA with Shell.

Malta

In Malta, a 0.4 MTPA terminal intended to supply two local gas-fired power plants is currently under construction. The terminal will use a floating storage unit and onshore regasification facilities.

Netherlands

In Rotterdam, **Gate Terminal** is constructing a third jetty which will be dedicated to small scale LNG. Start-up is planned during summer 2016. Gate has been offering transshipment services since the second half of 2015 and the company took FID to construct a second truckloading bay.



Pakistan

In May, the 3.8 MTPA Port Qasim terminal developed by Excelerate and Engro Corp. started commercial operations. The terminal is using Excelerate's Exquisite FSRU.

Panama

In Panama, Costa Norte LNG Terminal and Gas Natural Atlántico (subsidiaries of AES) are currently developing an integrated LNG to power project at the entrance of the Panama Canal, to come on-line in 2018.

The project includes an LNG import terminal with 180,000 m³ storage capacity, which will provide natural gas to a 350 MW CCGT.

Philippines

In **Pagbilao**, Energy World Corporation is building an onshore terminal linked to a local combined cycle power plant. In its first phase, the terminal will include one storage tank of 130,000 cubic meters capacity.

Poland

The commissioning of the terminal has started in the end of 2015 and a first cargo was received in December 2015. However, the start-up date of the terminal in **Swinoujscie** was delayed. Start of commercial operations is scheduled for 1st June 2016.

Singapore

Through 2015, construction activities of a fourth tank of a 260,000 m³ capacity continued to progress. SLNG also further expanded storage and reload Services in support of LNG trading out of Singapore.

South Korea

In **Boryeong**, GS Energy and SK E&S are constructing a 3 MTPA terminal, now expected to be completed in 2017.

Spain

In **Bilbao**, BBG is working on adding bunkering services, expected to be available in the first quarter of 2017.

Two new terminal projects are currently under consideration in Gran Canaria and Tenerife, each with a regasification capacity of 1 MTPA.



Taiwan

In Taiwan, CPC is planning to build a third receiving terminal in northern Taiwan, with expected start-up in 2022. Taiwan plans to increase the country's receiving capacity from the current 13.5 to 20 MTPA in 2030.

Thailand

PTTLNG has started to expand the **Map-Ta-Phut** terminal by building two additional LNG tanks (160,000 m³ each), one jetty (125,000 - 270,000 m³) as well as a new regasification unit of 5 MTPA. The regasification unit will be completed by mid-2016 and commercial operation is expected by mid-2017.

United Kingdom

In November 2015, National Grid commissioned a road tanker loading facility at the **Grain LNG** import terminal. Loading of bunkering ships should be available from 2017 onwards.

Uruguay

In Uruguay, the FSRU-based **GNL del Plata** project has been delayed. Engie and Marubeni exited the project in 2015 following issues with the EPC contractor.

REGASIFICATION TERMINALS AT THE START OF 2016

Country	Site	Storage		Send-out		Owner	Operator	Third Party Access	Services offered	Start-up date of the terminal
		Number of tanks	Total capacity in liq m ³	Number of vaporizers	Nominal capacity in Bcm/y					
ARGENTINA	Bahia Blanca GasPort (OFFSHORE) - FSRU Excelerate Express		151 000	6	5.1	YPF	YPF	No		2008
	GNL Escobar (OFFSHORE) - FSRU Excelerate Exemplar		151 000	6	5.1	UTE Escobar (50% Enarsa, 50% YPF)	YPF	No		2011
BRAZIL	Bahia (OFFSHORE) - FSRU Golar Winter		137 000		5.2	Owner: Golar / Charterer: Petrobras	Petrobras	No		2013
	Guanabara Bay (OFFSHORE) - FSRU Excelerate Experience		173 400		8.1	Owner: Excelerate Energy / Charterer: Petrobras	Excelerate Energy	No	Reloading	2009
CANADA	Pecem (OFFSHORE) - FSRU Golar Spirit		129 000	2	2.5	Owner: Golar / Charterer: Petrobras	Petrobras	No	Reloading	2009
	Canaport LNG	3	160 000	8	10	Repsol (75%), Irving Oil (25%)	Repsol Canada Ltd	Yes (but no RTPA)	Reloading	2009
CHILE	Mejillones	1	175 000	3	2	Codelco (37%), ENGIE (63%)	GNLM	Yes		2010
	Quintero	3	334 000	3	3.7	Terminal de Valparaiso S.A [Enagas (51%)/ Oman Oil Company (49%)] (40%), ENAP (20%), Endesa Chile (20%), Metrogas (20%)	GNL Quintero S.A.	Yes	Truck loading	2009
DOMINICAN REP.	Punta Caucedo	1	160 000	3	2.3	AES	AES	No	Truck loading	2003
MEXICO	Altamira	2	300 000	5	7.8	Terminal de LNG de Altamira (Vopak 60%, Enagas 40%)	Terminal de LNG de Altamira (Vopak 60%, Enagas 40%)	Yes		2006
	Energia Costa Azul	2	320 000	6	10.3	Sempra	Sempra	Yes	Reloading	2008
	Manzanillo	2	300 000		5.2	Samsung (37.5%), Kogas (25%), Mitsui (37.5%)	Kogas			2012
PUERTO RICO	Penuelas	1	160 000	2	3.8	Gas Natural Fenosa (47.5%), ENGIE (35%), Mitsui (15%), GE (2.50%)	Eco Electrica			2000
USA	Cameron LNG	3	480 000	10	15.5	Sempra	Sempra	Yes		2009
	Cove Point	5	380 000	10	10.7	Dominion Cove Point LNG	Dominion Cove Point LNG	Shell, BP, Statoil, Peakers 1/4 each		1978, restarted 2003
	Cove Point Expansion	2	320 000	15	8	Dominion Cove Point LNG	Dominion Cove Point LNG	Statoil		2008
	Elba Island	5	535 000	11	16.3	Southern LNG (Kinder Morgan)	Southern LNG	Yes		1978, restarted 2001, expanded 2006, expanded 2010
	Everett	2	155 000	4	6.9	ENGIE	ENGIE	Yes	Truck loading	
	Freeport LNG	2	320 000	7	18	Freeport LNG Development, L.P.	Freeport LNG Development, L.P.	Yes	Reloading, Storage	2008
	Golden Pass	5	775 000	8	21.4	QP (70%) Exxon (17.60%), Conoco Phillips (12.40%)	Golden Pass LNG	No		2010
	Gulf LNG Energy	2	320 000		12	Kinder Morgan (50%), GE (40%), AES (10%)	Gulf LNG Energy	No		2011
	Lake Charles	4	425 000	14	24.3	Trunkline LNG	Trunkline LNG	Yes		1982, Infrastructure enhancement project completed March 2010
	Northeast Gateway (OFFSHORE)		151 000	6	4.1	Excelerate Energy	Excelerate Energy			2008
Sabine Pass	5	800 000	16	41.4	Cheniere Energy	Cheniere Energy		Reloading	2008	
AMERICAS TOTAL			7 311 400		249.6					
CHINA	Dalian	3	480 000	3	4.1	Petrochina (75%), other companies	Petrochina	No	Reloading	2011
	Guangdong Dapeng, Shenzhen	4	640 000	7	9.2	CNOOC (33%), BP (30%), other companies	GDLNG	No	Truck loading	2006
	Dongguan, Guangdong province	2	160 000		1.4	Jovo Group				2013
	Fujian	4	640 000		6.9	Fujian LNG (CNOOC 60%, Fujian Inv. & Dev.Co. 40%)	CNOOC	No		2008
	Hainan	3	480 000		4.1	CNOOC (65%), other companies	CNOOC	No	Reloading	2014
	Qingdao	3	480 000		4.2	Sinopec	Sinopec	No		2014
	Rudong, Jiangsu	2	320 000	3	4.8	Petrochina (55%), other companies	Petrochina	No		2011
	Shanghai, Mengtougou	3	120 000		0.2	Shanghai Gas Group	Shanghai Gas Group	No		2008
	Shanghai LNG	3	495 000		4.1	Shanghai LNG (CNOOC 45%, Shenergy Group Ltd 55%)	CNOOC	No		2009
	Tangshan (Caofeidian)	3	480 000		4.8	Petrochina	Petrochina, Beijing Entreprises			2013

Country	Site	Storage		Send-out		Owner	Operator	Third Party Access	Services offered	Start-up date of the terminal
		Number of tanks	Total capacity in liq m ³	Number of vaporizers	Nominal capacity in Bcm/y					
CHINA	Tianjin (OFFSHORE) - GDP SUEZ Cape Ann	2	60 000		3	Owner: Höegh LNG (50%), MOL (48.50%), Tokyo Gas (1.50%) / Charterer: ENGIE - relet to CNOOC for 5 years	Höegh LNG			2013
	Zhejiang Ningbo	3	480 000		4.1	CNOOC (51%), other companies	CNOOC	No		2012
	Zhuhai (Gaolan)	3	480 000		4.8	CNOOC (30%), other companies	CNOOC			2013
INDIA	Dabhol	2	320 000	6	2.4	Ratnagiri Gas & Power Ltd (GAIL, NTPC)	Gail	No		2013
	Dahej	4	592 000	19	12.5	Petronet LNG	Petronet LNG	Yes (on a cargo by cargo basis)		2004, expansion in July 2009
	Hazira	2	320 000	5	6.9	Hazira LNG Private Ltd (Shell 74%, Total 26%)	Hazira LNG Private Ltd	No		2005
INDONESIA	Kochi	2	368 000	6	6.3	Petronet LNG	Petronet LNG	Yes (on a cargo by cargo basis)	Reloading	2013
	Arun Regas	2	220 000	1		PT Perta Arun Gas	PT Perta Arun Gas	Yes		2015
	Lampung LNG (OFFSHORE) - PGN FSRU Lampung	4	173 000	3	2.4	Owner: Höegh LNG/ Charterer: PGN LNG	Höegh LNG			2014
JAPAN	Nusantara Regas Satu (OFFSHORE) - FSRU Jawa Barat	6	125 016	6	4.1	Owner: Golar LNG Charterer: Nusantara Regas	PT Nusantara Regas (JV Pertamina & PGN)	No		2012
	Chita	7	640 000	11	14.8	Chita LNG	Chita LNG	Yes		1983
	Chita Kyodo	4	300 000	14	9.9	Toho Gas / Chubu Elec	Toho Gas	Negotiated TPA		1978
MALAYSIA	Chita-Midorihama Works	2	400 000	8	10.5	Toho Gas	Toho Gas	Negotiated TPA		2001
	Futtsu	10	1 110 000	13	26	Tokyo Electric	Tokyo Electric	Yes		1985
	Hachinohe	2	280 000	5	1.4	JX Nippon Oil & Energy	JX Nippon LNG Service	Yes	Truck loading	2015
PAKISTAN	Hatsukaichi	2	170 000	4	1.2	Hiroshima Gas	Hiroshima Gas	No		1996
	Hibiki	2	360 000	5	2.9	Hibiki LNG (Saibu Gas 90%, Kyushu Electric 10%)	Hibiki LNG	Negotiated TPA	Truck loading	2014
	Higashi-Ohgishima	9	540 000	9	18	Tokyo Electric	Tokyo Electric	Yes	Truck loading	1984
SINGAPORE	Himeji	8	740 000	6	6.4	Osaka Gas	Osaka Gas	Yes		1984
	Himeji LNG	7	520 000	8	11	Kansai Electric	Kansai Electric	Yes	Truck loading	1979
	Ishikari LNG	1	180 000	4	3.7	Hokkaido Gas	Hokkaido Gas	Negotiated TPA	Truck loading	2012
SOUTH KOREA	Joetsu	3	540 000	8	3.2	Chubu Electric	Chubu Electric			2011
	Kagoshima	2	86 000	3	0.3	Nippon Gas	Nippon Gas	No		1996
	Kawagoe	6	840 000	7	6.7	Chubu Electric	Chubu Electric	Yes		1997
TAIWAN	Mizushima	2	320 000	6	5.8	Mizushima LNG	Mizushima LNG	Yes		2006
	Nagasaki	1	35 000	3	0.2	Saibu Gas	Saibu Gas	Yes	Truck loading	2003
	Naetsu	2	360 000	4	2	INPEX Corporation	INPEX Corporation	No		2013
THAILAND	Negishi	14	1 180 000	14	15.1	Tokyo Gas / Tokyo Electric	Tokyo Gas / Tokyo Electric	Negotiated TPA	Truck loading	1969
	Niigata	8	720 000	14	11.6	Nihonkai LNG	Nihonkai LNG	Yes		1984
	Ohgishima	4	850 000	12	13.4	Tokyo Gas	Tokyo Gas	Negotiated TPA		1998
ASIA TOTAL	Oita	5	460 000	7	7.3	Oita LNG	Oita LNG	Yes		1990
	Sakai	3	420 000	6	8.7	Kansai Electric	Kansai Electric	Yes	Truck loading	2006
	Sakaide	1	180 000	3	1.6	Sakaide LNG	Sakaide LNG	Yes	Truck loading	2010
EUROPE TOTAL	Senboku I	3	320 000	5	2.9	Osaka Gas	Osaka Gas	Yes		1972
	Senboku II	18	1 585 000	15	15.7	Osaka Gas	Osaka Gas	Yes		1977
	Shin-Minato	1	80 000	3	0.4	Gas Bureau, City of Sendai	Gas Bureau, City of Sendai	No		1997
WORLD TOTAL	Shin-Sendai	1	160 000	3	1.1	Tohoku Electric	Tohoku Electric	TBD		2015 (2 tanks operation 2016)
	Sodegaura	35	2 660 000	36	40.4	Tokyo Gas / Tokyo Electric	Tokyo Gas / Tokyo Electric	Negotiated TPA	Truck loading	1973
	Sodeshi	3	337 200	8	3.9	Shimizu LNG (Shizuoka Gas 65%, Tonen General 35%)	Shimizu LNG	No	Truck loading	1996
WORLD TOTAL	Tobata	8	480 000	9	10.3	Kita Kyushu LNG	Kita Kyushu LNG	Yes		1977
	Yanai	6	480 000	5	3.1	The Chugoku Electric	The Chugoku Electric	Yes		1990
	Yokkaichi LNG Centre	4	320 000	8	8.7	Chubu Electric	Chubu Electric	Yes		1987
WORLD TOTAL	Yokkaichi Works	2	160 000	6	2.9	Toho Gas	Toho Gas	Negotiated TPA		1991
	Melaka (OFFSHORE) - FSRUs Tenaga Empat and Tenaga Satu		260 000	3	5.2	Petronas	Petronas Gas	No		2013
	Port Qasim (OFFSHORE) - FSRU Excelerate Exquisite		150 900		5.2	Owner: Excelerate Energy / Charterer: Engro Corp.	Excelerate Energy	No		2015
WORLD TOTAL	SLNG	3	540 000	5	7.8	SLNG	SLNG	Yes but sale of re-gasified LNG limited to licensed LNG importers	Cool-down Services, Reloading, Storage	2013
	Gwangyang	4	530 000	2	2.3	Posco	Posco	No	Reloading	2005
	Incheon	20	2 880 000	43	56.4	KOGAS	KOGAS	No		1996
WORLD TOTAL	Pyeong-Taek	23	3 360 000	39	51.5	KOGAS	KOGAS	No		1986
	Samcheok	7	1 400 000	8	9	KOGAS	KOGAS	No		2014
	Tong-Yeong	17	2 620 000	20	33.7	KOGAS	KOGAS	No		2002
WORLD TOTAL	Taichung	3	480 000	8	3.9	CPC	CPC	No		2009
	Yung-An	6	690 000	18	9.8	CPC	CPC	No		1990
	Map Ta Phut	2	320 000	4	7.3	PTT	PTT LNG	No		2011
ASIA TOTAL			38 477 116		553.4					

Country	Site	Storage		Send-out		Owner	Operator	Third Party Access	Services offered	Start-up date of the terminal
		Number of tanks	Total capacity in liq m ³	Number of vaporizers	Nominal capacity in Bcm/y					
DUBAI	Jebel Ali (OFFSHORE) - Excelerate Explorer		150 900		8.2	Owner: Excelerate Energy/ Charterer: Dubai Supply Authority	Golar	No		2010
	Ain-Sokhna (OFFSHORE) - BW Singapore		170 000	4	7.8	Owner: BW / Charterer: Egas	BW	No		2015
EGYPT	Ain-Sokhna Höegh Gallant		170 000	4	5.2	Owner: Höegh LNG/ Charterer: Egas	Höegh LNG	No		2015
ISRAEL	Hadera Gateway (OFFSHORE)		138 000	6	4.8	INGL	Excelerate Energy	No		2013
JORDAN	Aqaba LNG (OFFSHORE) - Golar Eskimo		160 000		5.2	Owner: Golar/Charterer: Jordan Ministry of Energy and Mineral Resources (MEMR)	Golar	No		2015
KUWAIT	Mina Al Ahmadji (OFFSHORE) - Golar Igloo		170 000		7.9	Owner: Golar/Charterer: KPC	Golar	No		2014
MIDDLE EAST TOTAL			958 900		39.1					
BELGIUM	Zeebrugge	4	380 000	12	9	Fluxys LNG	Fluxys LNG	Yes	Bunkering, Reloading, Truck loading	1987
	Fos-Cavaou	3	330 000	4	8.3	Fosmax LNG (Elengy 72.5%, Total 27.5%)	Elengy	Yes	Bunkering, Cool-down services, Reloading, Truck loading through Fos Tonkin	2009 (commercial operation from April 2010)
FRANCE	Fos Tonkin	3	150 000	6	3	Elengy	Elengy	Yes	Bunkering, Cool-down services, Reloading, Truck loading	1972
	Montoir-de-Bretagne	3	360 000	11	10	Elengy	Elengy	Yes	Bunkering, Cool-down services, Reloading, Trans-shipment, Truck loading	1980
GREECE	Revithoussa	2	130 000	6	5	DESFA S.A.	DESFA S.A.	Yes		2000
	OLT LNG Toscana (OFFSHORE) - FSRU Toscana	4	137 500	3	3.8	OLT (Uniper 48.24%, IREN Group 49.07%, Golar 2.69%)	OLT Offshore LNG Toscana	Regulated TPA		2013
ITALY	Panigaglia	2	100 000	4	3.3	GNL Italia S.p.A.	GNL Italia S.p.A.	Yes		1971
	Rovigo (OFFSHORE)	2	250 000	5	8	Qatar Petroleum (22%), Edison (7.3%), ExxonMobil (70.7%)	Adriatic LNG (Qatar Petroleum, Edison, Exxon)	Yes (20%)		2009
LITHUANIA	Klaipeda (OFFSHORE) - Höegh Independence		173 000	4	4	Owner: Höegh LNG / Charterer: Klaipedos Nafta	Höegh LNG	Yes		2014
NETHERLANDS	Rotterdam	3	540 000	8	12	Gasunie (50%), Vopak (50%)	Gate Terminal	Yes	Bunkering, Cool-down services, Reloading, Trans-shipment, Truck loading	2011
PORTUGAL	Sines	3	390 000	7	7.6	Ren Atlântico	Ren Atlântico	Yes	Reloading, Truck loading	2004
	Barcelona	6	760 000	13	17.1	Enagas	Enagas	Regulated TPA	Bunkering, Reloading, Trans-shipment, Truck loading	1969
SPAIN	Bilbao	3	450 000	4	7	Enagas (50%), EVE (50%)	Bahia de Bizkaia Gas, SL (BBG)	Regulated TPA	Bunkering, Reloading, Truck loading	2003
	Cartagena	5	587 000	9	11.8	Enagas	Enagas	Regulated TPA	Bunkering, Reloading, Trans-shipment, Truck loading	1989
	El Musel	2	300 000	4	7.1	Enagas	Enagas	Regulated TPA	Reloading, Truck loading	Construction completed in 2013 but mothballed
TURKEY	Huelva	5	619 500	9	11.8	Enagas	Enagas	Regulated TPA	Reloading, Truck loading	1988
	Mugardos	2	300 000	3	3.6	Gas Natural Fenosa, Endesa, Xunta Galicia, Sonatrach, Tojeiro Group, Galicia Government, Caixa Galicia, Pastor, Caixanova	Reganosa	Regulated TPA	Bunkering, Reloading, Truck loading	2007
	Sagunto	4	600 000	5	8.8	Infraestructuras de Gas [Unión Fenosa Gas and Oman Oil Company S.A.O.C.] (50%), Iniciativas de Gas [Enagas and Osaka Gas] (50%)	Saggas	Regulated TPA	Reloading, Truck loading	2006
UNITED KINGDOM	Aliaga/Izmir	2	280 000	5	6	Egegaz	Egegaz	No	Truck loading	2006
	Marmara Ereğlisi	3	255 000	7	6.2	Botas	Botas	No	Truck loading	1994
	Dragon	2	320 000	6	7.6	BG Group (50%), Petronas (50%)	PTT LNG	No		2011
WORLD TOTAL	Isle of Grain	8	1 000 000	14	20.5	National Grid	PTT LNG	No	Cool-down services, Reloading, Truck loading	2011
	South Hook LNG	5	775 000	15	21.3	Qatar Petroleum International (67.5%), ExxonMobil (24.15%), Total (8.35%)	PTT LNG	No		2011
	Teesside GasPort (OFFSHORE)		138 000		4.2	Excelerate Energy	PTT LNG	No		2011
EUROPE TOTAL			9 325 000		206.9					
WORLD TOTAL			56 072 416		1 049					

LNG CHARACTERISTICS

Origin	Nitrogen N2 %	Methane C1 %	Ethane C2 %	Propane C3 %	C4+ %	TOTAL	LNG Density ⁽¹⁾ kg/m ³	Gas Density ⁽²⁾ kg/m ³ (n)	Expansion ratio m ³ (n)/m ³ liq	Gas GCV ⁽²⁾ MJ/m ³ (n)	Wobbe Index ⁽²⁾ MJ/m ³ (n)
Australia NWS	0.04	87.33	8.33	3.33	0.97	100	467.35	0.83	562.46	45.32	56.53
Australia Darwin	0.10	87.64	9.97	1.96	0.33	100	461.05	0.81	567.73	44.39	56.01
Algeria Skikda	0.63	91.40	7.35	0.57	0.05	100	446.65	0.78	575.95	42.30	54.62
Algeria Bethioua	0.64	89.55	8.20	1.30	0.31	100	454.50	0.80	571.70	43.22	55.12
Algeria Arzew	0.71	88.93	8.42	1.59	0.37	100	457.10	0.80	570.37	43.48	55.23
Brunei	0.04	90.12	5.34	3.02	1.48	100	461.63	0.82	564.48	44.68	56.18
Egypt Idku	0.02	95.31	3.58	0.74	0.34	100	437.38	0.76	578.47	41.76	54.61
Egypt Damietta	0.02	97.25	2.49	0.12	0.12	100	429.35	0.74	582.24	40.87	54.12
Equatorial Guinea	0.00	93.41	6.52	0.07	0	100	439.64	0.76	578.85	41.95	54.73
Indonesia Arun	0.08	91.86	5.66	1.60	0.79	100	450.96	0.79	571.49	43.29	55.42
Indonesia Badak	0.01	90.14	5.46	2.98	1.40	100	461.07	0.82	564.89	44.63	56.17
Indonesia Tangguh	0.13	96.91	2.37	0.44	0.15	100	431.22	0.74	581.47	41.00	54.14
Libya	0.59	82.57	12.62	3.56	0.65	100	478.72	0.86	558.08	46.24	56.77
Malaysia	0.14	91.69	4.64	2.60	0.93	100	454.19	0.80	569.15	43.67	55.59
Nigeria	0.03	91.70	5.52	2.17	0.58	100	451.66	0.79	571.14	43.41	55.50
Norway	0.46	92.03	5.75	1.31	0.45	100	448.39	0.78	573.75	42.69	54.91
Oman	0.20	90.68	5.75	2.12	1.24	100	457.27	0.81	567.76	43.99	55.73
Peru	0.57	89.07	10.26	0.10	0.01	100	451.80	0.79	574.30	42.90	55.00
Qatar	0.27	90.91	6.43	1.66	0.74	100	453.46	0.79	570.68	43.43	55.40
Russia Sakhalin	0.07	92.53	4.47	1.97	0.95	100	450.67	0.79	571.05	43.30	55.43
Trinidad	0.01	96.78	2.78	0.37	0.06	100	431.03	0.74	581.77	41.05	54.23
USA Alaska	0.17	99.71	0.09	0.03	0.01	100	421.39	0.72	585.75	39.91	53.51
Yemen	0.02	93.17	5.93	0.77	0.12	100	442.42	0.77	576.90	42.29	54.91

(1) Calculated according to ISO 6578 [T = -160°C]

(2) Calculated according to ISO 6976 [0°C / 0°C, 1.01325 bar]

Conversion table	Tonnes LNG	m ³ LNG (liquid) ⁽¹⁾	m ³ gas (n) ⁽²⁾	ft ³ gas (n) ⁽²⁾	ft ³ gas standard (scf) ⁽³⁾	MMBtu
Tonnes LNG		2.21	1.27 x 10 ³	44.96	47.53	51.02
m ³ LNG (liquid) ⁽¹⁾	0.45		571.0	20.17	21.31	23.12
m ³ gas (n) ⁽²⁾	7.85 x 10 ⁻⁶	1.75 x 10 ⁻³		3.53 x 10 ⁻²	3.73 x 10 ⁻²	37.33
ft ³ gas (n) ⁽²⁾	2.22 x 10 ⁻⁸	4.96 x 10 ⁻⁵	2.83 x 10 ⁻²		1.05	1.15 x 10 ⁻³
ft ³ gas standard (scf) ⁽³⁾	2.10 x 10 ⁻⁸	4.69 x 10 ⁻⁵	2.68 x 10 ⁻²	9.48 x 10 ⁻¹		1.09 x 10 ⁻³
MMBtu	1.96 x 10 ⁻²	4.33 x 10 ⁻²	24.69	872.2	920.1	

(1) Calculated according to ISO 6578 [T = -160°C]

(2) Calculated according to ISO 6976 [0°C / 0°C, 1.01325 bar]

(3) Standard conditions [15°C / 15°C, 1.01325 bar]

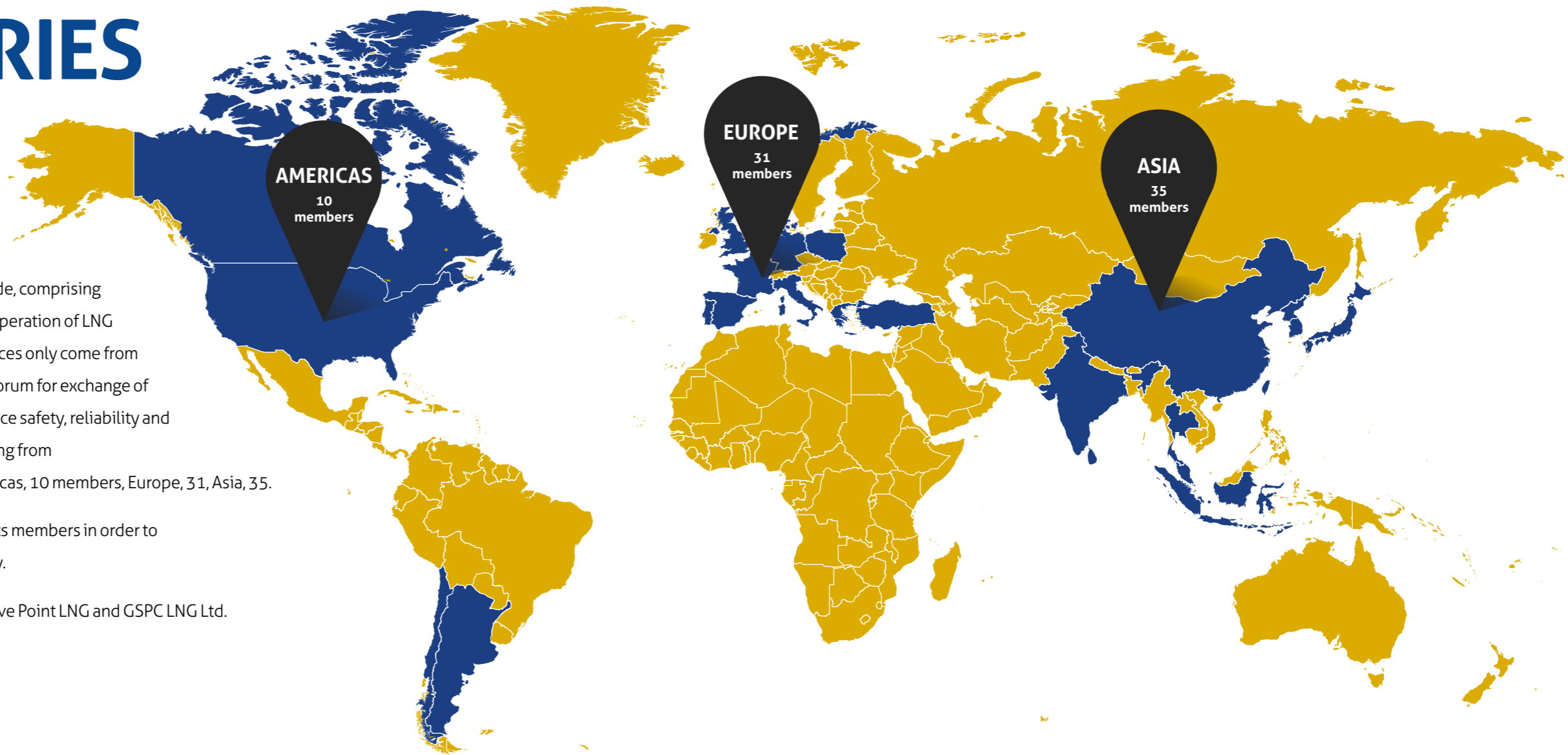
76 MEMBER COMPANIES IN 25 COUNTRIES

GIIGNL (International Group of LNG Importers) is the worldwide association of LNG importers.

Founded in 1971, at the outset of the LNG industry, its membership has grown to 76 companies worldwide, comprising nearly all companies active in LNG imports or in the operation of LNG terminals. It is a non profit organization 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 members are coming from 25 countries located in the main three regions: Americas, 10 members, Europe, 31, Asia, 35.

Every year, GIIGNL conducts a wide survey amongst its members in order to publish this global statistical report, The LNG Industry.

2 companies joined the group in 2015: Dominion Cove Point LNG and GSPC LNG Ltd.



AMERICAS

- BG Group Plc.
- Cheniere Energy, Inc.
- Dominion Cove Point LNG
- Engie Gas and LNG, LLC
- GNL Quintero S.A.
- LNG Development, L.P.
- Repsol Energy Canada
- Sempra LNG and Midstream
- Southern LNG Company, LLC
- YPF S.A.



EUROPE

- BP Global LNG
- Botas
- Centrica LNG Company
- DEPA
- Dong Energy
- Dunkerque LNG
- Edison S.p.A.
- Elengy S.A.
- EDF Trading Limited
- EDP Energias de Portugal, S.A.
- Enagas
- Enel Trade
- Engie
- Eni S.p.A.
- Fluxys LNG S.A.

- Gas Natural Fenosa
- Gate Terminal B.V.
- GNL Italia
- Höegh LNG
- Iberdrola Generacion S.A.U.
- National Grid Grain LNG, Ltd.
- N.V. Nederlandse Gasunie
- Polskie LNG S.A.
- Ren Atlântico, S.A.
- Shell Western LNG B.V.
- Sonatrach Gas Marketing UK Limited
- South Hook LNG Terminal Company, Ltd.
- Statoil ASA
- Total S.A.
- Uniper Global Commodities SE
- Vopak LNG Holding B.V.



ASIA

- Chubu Electric Power Company, Inc.
- CNOOC Gas & Power Group
- CPC Corporation, Taiwan
- Gail India Limited
- GSPC LNG Limited
- Guangdong Dapeng LNG Company, Ltd.
- Hazira LNG
- Hiroshima Gas Company, Ltd.
- Hokkaido Gas Co., Ltd.
- Inpex
- Itochu Corporation
- JX Nippon Oil & Energy Corp
- Korea Gas Corporation
- Kyushu Electric Power Company, Inc.
- LNG Japan Corporation

- Marubeni Corporation
- Mitsubishi Corporation
- Mitsui & Company, Ltd.
- Nippon Gas Company, Ltd.
- Osaka Gas Company, Ltd.
- Petronet LNG Limited
- PT Pertamina (Persero)
- PTT Public Company, Ltd.
- Saibu Gas Company, Ltd.
- Shikoku Electric Power Company
- Shizuoka Gas Company, Ltd.
- Singapore LNG Corporation
- SK E&S Company, Ltd.
- Sumitomo Corporation
- The Chugoku Electric Power Company, Inc.
- The Kansai Electric Power Company, Inc.

- The Tokyo Electric Power Company, Inc.
- Toho Gas Company, Ltd.
- Tohoku Electric Power Company, Inc.
- Tokyo Gas Company, Ltd.

© GIIGNL - International Group of Liquefied Natural Gas Importers

All data and maps provided in this publication are for information purposes and shall be treated as indicative only.
Under no circumstances shall they be regarded as data or maps intended for commercial use.
Reproduction of the contents of this publication in any manner whatsoever is prohibited without prior consent of the copyright owners.

Photo credits: BG Group, Dunkerque LNG, Elengy, ENGIE, Høegh LNG, TEPCO, TOTAL.



International Group of Liquefied Natural Gas Importers Groupe International des Importateurs de Gaz Naturel Liquéfié (GIIGNL)

8, rue de l'Hôtel de Ville - 92200 Neuilly-sur-Seine - France

Tel: + 33 1 56 65 51 60

E-mail: central-office@giignl.org - web site: www.giignl.org

