



# THE LNG INDUSTRY

2009

# THE LNG INDUSTRY IN 2009

## World energy situation

The average annual growth of the world primary energy consumption has been 2.4% over the last ten years, with the highest growth rate observed for 2004 (+4.6%). In 2008, world primary energy consumption registered a 1.7% increase, which represents the lowest growth since 2001 and breaks a series of 5 consecutive years above the 10-year average. It should be noted that for the first time non-OECD primary energy consumption exceeded OECD consumption.

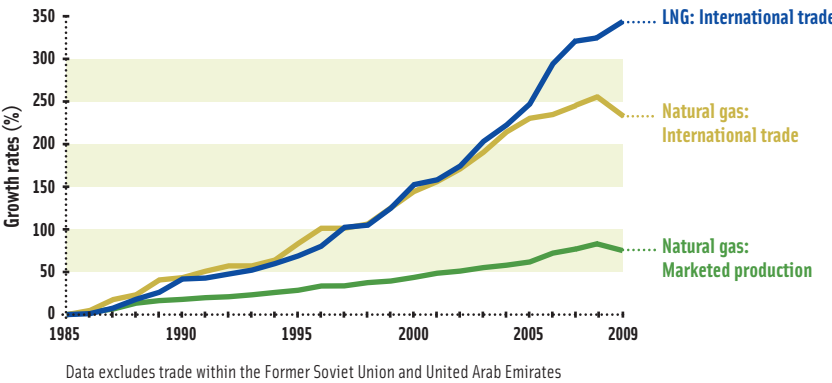
As for the previous years, the Asia Pacific region shows the most important increase for 2008, rising by 4% and accounting for 87% of the global growth. China alone accounts in 2008 for 73% of this global growth (and has been accounting for more than half of the global growth since 2005). Consumption in the US fell by 2.8%, which represents the most important decline since 1982. Over the last ten years, the world energy consumption rose from 9 022 10<sup>6</sup> toe in 1999 to 11 295 10<sup>6</sup> toe in 2008, a 25.2% overall increase.

The breakdown for the major types of energy in 2008, as compared to 2007, was as follows:

Year	Consumption by fuel (in 10 <sup>6</sup> toe)		variation
	2008	2007	
Oil	3 928	3 939	- 0.3%
Coal	3 304	3 195	+ 3.4%
Natural gas	2 726	2 652	+ 2.8%
Nuclear	620	622	- 0.3%
Hydroelectric	717	696	+ 3.0%

For the eighth year in a row, coal has increased its share of the overall energy market to 29.3%. Oil consumption declined in 2008 (-0.3%) for the first time since 1993. Nuclear power decreased for a second consecutive year (-0.3% in 2008 and -2% in 2007). The growth of natural gas consumption in 2008 (+2.8%) was lower than in 2007 (+3.4%). The largest growth was observed in China. The EU consumption increased slightly (+0.5%), after 2 consecutive years of decrease. The market share for natural gas remained stable in 2008 (24.1%) compared to 2007 (23.9%)<sup>(1)</sup>. Estimates for the marketed production of natural gas in 2009<sup>(2)</sup> show a decrease of about 3.9% over 2008. The share of LNG in the gas trade accounts for 30% of the total (excluding trade within the Former Soviet Union and United Arab Emirates).

The graph hereunder gives the respective growth rates since 1985 for the marketed gas production, the total cross-border gas trade and the LNG trade:



<sup>(1)</sup> Source BP Statistical Review of World Energy June 2009

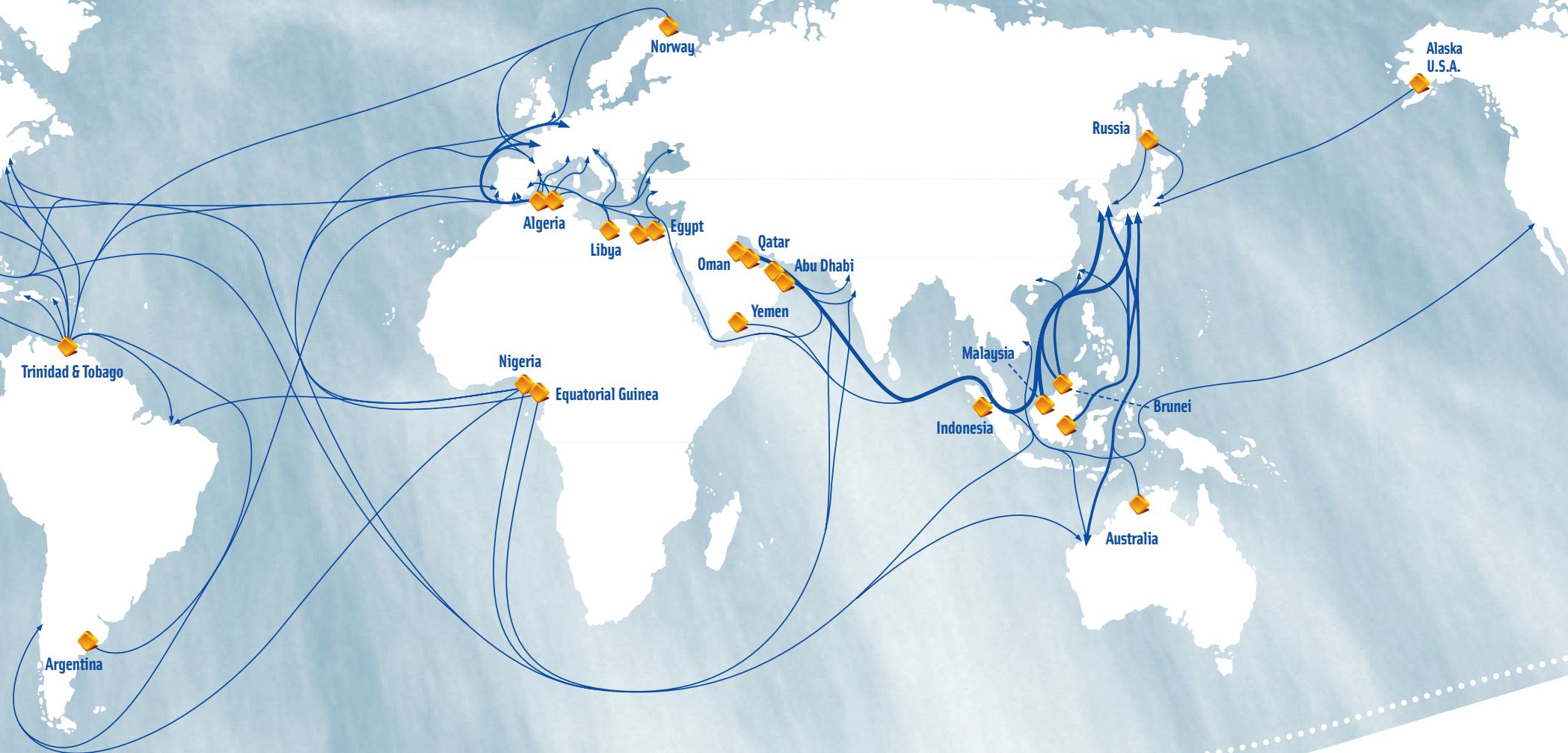
<sup>(2)</sup> Source Cédigaz



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# LNG CONTRACTS AND TRADE



144 long-term and medium-term contracts were in force in 2009, or 24 more than in 2008\*. The international trade<sup>(1)</sup> accounted for 398.7 10<sup>6</sup> m<sup>3</sup> (in liquid form) or 181.7 10<sup>6</sup> t. It rose by 21.4 10<sup>6</sup> m<sup>3</sup>, or a growth of 5.66%, as a result of the commissioning of several liquefaction and regasification plants. This was quite a significant growth rate compared with the previous year and in spite of the worldwide recession.

On the import side, Japan retained its position as the leading LNG importer worldwide with 141.6 10<sup>6</sup> m<sup>3</sup>, or 35.31% of all imports, followed by Korea with 54.9 10<sup>6</sup> m<sup>3</sup> (13.74%) and Spain with 44.9 10<sup>6</sup> m<sup>3</sup> (11.3%). However, in a market growing at 5.66%, their positions have edged back in relative as well as absolute terms, Japan decreasing from 150.4 10<sup>6</sup> m<sup>3</sup> to 141.6 10<sup>6</sup> m<sup>3</sup>, Korea from 63.4 10<sup>6</sup> m<sup>3</sup> to 54.9 10<sup>6</sup> m<sup>3</sup> and Spain from 48.9 10<sup>6</sup> m<sup>3</sup> to 44.9 10<sup>6</sup> m<sup>3</sup>.

The LNG market share for Europe grew strongly from 24.7% to 28.8%. This situation is mainly due to a significant reduction in 2009 in the flows from the Atlantic to the Pacific Basin compared to 2008, as a result of the much smaller premiums of Asian spot prices over the Atlantic price benchmarks. This change in trade pattern with respect to 2008 has also been induced by increased LNG terminal capacity in the United Kingdom with two terminals coming on line simultaneously in Milford Haven in Wales. The country's recent capability to attract LNG cargoes drastically changed its import situation and hence its security of supply position. Massive imports from Qatar went to South Hook, one of the key destinations for the new Q-Max ships as well as the smaller Q-Flex ships. The United Kingdom's market share jumped from 0.5% to 4.45% at 17.6 10<sup>6</sup> m<sup>3</sup>. Furthermore, Belgium's market share rose from 1.3% to 2.7% at 10.9 10<sup>6</sup> m<sup>3</sup> and Italy's from 0.6% to 1.2% at 4.7 10<sup>6</sup> m<sup>3</sup>, mainly attributable to the commissioning of a new offshore terminal in the north of the Adriatic Sea. France, still the second largest market in Europe behind Spain

at 21.2 10<sup>6</sup> m<sup>3</sup>, saw its market share remain stable at 5.4% while maintaining a positive growth of 3.6%, well behind the average European growth rate of 22.5%. Turkey and Portugal were in a similar position with a market share respectively of 2.2% at 8.8 10<sup>6</sup> m<sup>3</sup> and 1.1% at 4.5 10<sup>6</sup> m<sup>3</sup>. Finally, Greece witnessed a significant decline of -16.1% with a market share of 0.3% at 1.4 10<sup>6</sup> m<sup>3</sup>.

In the Americas, LNG imports into the U.S.A. have risen from 16.05 to 20.9 10<sup>6</sup> m<sup>3</sup>, or a 30.5% gain over 2008. However, there was not as much activity as expected in all the U.S. terminals, including the newly commissioned Cameron terminal in Louisiana, as many LNG cargoes were diverted to higher-priced markets in Europe and rising domestic supplies of shale gas lessened the appetite for LNG imports. Mexico recorded a no-growth staying at 6.03 10<sup>6</sup> m<sup>3</sup>. The Dominican Republic grew 14.2% at 0.9 10<sup>6</sup> m<sup>3</sup>. Argentina, which started importing LNG last year, almost doubled its volumes to 1.5 10<sup>6</sup> m<sup>3</sup>. Three newcomers in the international LNG market in 2009, Brazil, Chile and Canada, gained a market share of respectively 0.2%, 0.3% and 0.4%. As a whole, imports for the Americas were up by 36.7% and their total market share moved forward to 8.7%.

Globally, the Asian market was slightly receding by -4% with imports falling from 259.1 to 249 10<sup>6</sup> m<sup>3</sup>. India and China are consolidating their position with 20.3 and 12.4 10<sup>6</sup> m<sup>3</sup> respectively. Korea, for the first time since 1998, declined by -13.3%, while Taiwan's imports fell as well by -2.5% to 19.5 10<sup>6</sup> m<sup>3</sup>.

In the Middle East, Kuwait entered the LNG import market with purchases reaching 1.6 10<sup>6</sup> m<sup>3</sup>. The country has ambitious plans for power generation and petrochemicals, and a strong environmental drive.

As to the sources of imports, Qatar, with new plants on stream, was still, by far, leading the market with 81.1 10<sup>6</sup> m<sup>3</sup>, or a 23.2% rise over 2008. Malaysia ranked second with 49 10<sup>6</sup> m<sup>3</sup>, and Indonesia (third) posted a decline of 4%. Australia was fourth at 39.4 10<sup>6</sup> m<sup>3</sup> with a 19.4% growth. Algeria (fifth) tumbled to 34.4 10<sup>6</sup> m<sup>3</sup>. Trinidad & Tobago grew at 33.5 10<sup>6</sup> m<sup>3</sup> with an increase of 11.2%. It is worth mentioning that cargoes from Trinidad & Tobago were delivered to all the importing countries except Italy. Egypt's LNG exports were slightly receding at 22.3 10<sup>6</sup> m<sup>3</sup>. Nigeria underwent a severe drop of -30.6% to 25.5 10<sup>6</sup> m<sup>3</sup> due to interruptions of feed gas supply in the Niger Delta.

The Pacific Basin was still the largest source in absolute terms with 157.4 10<sup>6</sup> m<sup>3</sup> but the gap with the Atlantic Basin is widening again from 5.7 10<sup>6</sup> m<sup>3</sup> in 2008 to 27.8 10<sup>6</sup> m<sup>3</sup> this year, due to the beginning of Russian exports.

Middle-East exports were on the rise from 97.1 10<sup>6</sup> m<sup>3</sup> to 111.2 10<sup>6</sup> m<sup>3</sup>, driven essentially by Qatar (23.2%) while Oman and Abu Dhabi were receding respectively by -5.5% and -6.6%.

It is worth mentioning that four cargoes were successfully loaded at the Zeebrugge LNG terminal in 2009 and were re-exported to Kuwait, China and Spain. One of them was still at sea at the end of the year. They were, in fact, sourced from Qatar, the source of all the LNG imported into Belgium over the period when the re-exports took place. One cargo was also re-exported from the Freeport LNG terminal in the United States in December and was to be delivered in 2010.

The spot and short-term imports (based on contracts with a duration of 4 years or less) amounted to 65.1 10<sup>6</sup> m<sup>3</sup> in liquid form (491 cargoes) as against 66.2 10<sup>6</sup> m<sup>3</sup> (498 cargoes) in 2008\*, accounting for 16.3% of the world LNG trade. (See table page 19)

Noteworthy in 2009 was the continuation of the downward trend observed since 2007 after a steady growth since the turn of the century. It should be pointed out that a part of this short-term trade is supplied by re-sales or diversions of lifting under long-term contracts. Asia was no more the destination of choice in global LNG spot and short-term trade and Korea recorded the largest decline. Spain maintained its position while the UK experienced the strongest growth overall. As to the sourcing of spot and short-term transactions, it is noted that Egypt was no longer the leader with a decline of its share from 21 to 12.2%. Trinidad & Tobago came first with a 23.3% share, followed by Qatar, although slightly decreasing to 17.8%.

The world trade involved 127 "flows" (i.e. country-to-country trades) over 359 sea transportation routes (port-to-port routes). Compared to 2008, 112 routes were new and 62 ceased in 2009. In 2009, there were 42 new country-to-country flows compared to 2008: ABU-DHABI/Portugal - AUSTRALIA/France, Kuwait, Taiwan and UK - EGYPT/Canada - EQUATORIAL GUINEA/Chile, France and Portugal - INDONESIA/China, India and Mexico - MALAYSIA/China, India and Kuwait - NIGERIA/Brazil - NORWAY/UK - OMAN/China, Kuwait and Turkey - TRINIDAD & TOBAGO/Brazil, Canada, Chile, China, France, Kuwait and Turkey - QATAR/Canada, Chile, China, France, Italy and Turkey - RUSSIA/China, India, Japan, Korea, Kuwait and Taiwan - YEMEN/Korea, Mexico and Spain.

8 flows disappeared: ALGERIA/China, Japan, Korea and Taiwan - EGYPT/Belgium - EQUATORIAL GUINEA/Spain and NORWAY/India and Japan.

<sup>(1)</sup> All figures related to LNG trade are based on unloaded volumes.  
\*Figures for 2008 revised from our 2008 report: 120

\*revised figures for 2008



# CONTRACTS CONCLUDED IN 2009

	Export country	Purchaser	Import country	Amount (mtpa)	Duration (Years)	Extra Years	Start	Delivery Format
Long & medium-term Sales & Purchase Agreements (> 4 yrs)	Australia	Petronet LNG Limited	India	1.44	20		2014/15	F.O.B.
	Australia	Kansai Electric	Japan	0.40	8		2009	D.E.S.
	Australia	Tokyo Electric	Japan	0.30	8		2009	D.E.S.
	Australia	Tokyo Gas	Japan	1.10	25	5	2014	F.O.B.
	Australia	Osaka Gas	Japan	1.38	25		2014	F.O.B.
	Australia	Chubu Electric	Japan	1.44	25		2014	F.O.B./D.E.S.
	Indonesia	Tohoku Electric	Japan	0.12	15		2010	D.E.S.
	Papua New Guinea	Osaka Gas	Japan	1.50	20		2013	
	Papua New Guinea	Tokyo Electric	Japan	1.80	20		2013	
	Papua New Guinea	Sinopec	China	2.00	20		2013	
	Russia	Osaka Gas	Japan	0.20	23		2008	F.O.B.
	Trinidad and Tobago	Gas Natural Aprovisionamientos	Spain	0.72	5		2009	F.O.B.
Short-term contracts (4 yrs)	Algeria	Edison Spa	Italy	0.13	<1 year		2009	D.E.S.
	BP*	Petronet LNG Limited	India	0.60	1		2009	
	Qatar	Sempra LNG Marketing	USA	0~3.5*	1.5		2009	
	Qatar	Edison Spa	Italy	0.13	<1 year		2009	Ex-Ship
	Qatar	Statoil	USA	up to 1.5	1.5 year	N/A	June 2009	
	U.S.A	Tokyo Electric, Tokyo Gas	Japan	0.34	2		2009	D.E.S.
	portfolio incl. Russia	Korea Gas Corporation	Korea	year 1: 0.18 year 2: 0.42 year 3: 0.42	3	1 (0.18mt)	2010	D.E.S.
Project Dev. Agreement (P.D.A.)	Australia	CNOOC	China	3.60	20		2014	D.E.S.
Heads of Agreement (H.O.A.)	Australia	Tokyo Electric	Japan	4.1	20		2016	
	Australia	Korea Gas Corporation	Korea	1.50	15	5	2015	F.O.B.: 50% D.E.S.: 50%
	Indonesia (Bontang)	Osaka Gas, Toho Gas, Chubu Electric, Kansai Electric, Kyushu Electric, Nippon Steel	Japan	3.00~2.00	10		2011	F.O.B./D.E.S.
Memorandum of understanding (M.O.U.)								
Agreements on re-gasification rights	Russia**	Gazprom	Mexico	1	19		2009	
		GAIL	India		2		1 May 2009	
		GSPCL	India				26 August 2009	
		Indian Oil Corporation	India		2		30 Dec. 2009	
Re-export of cargoes	Belgium		Kuwait	0.06	spot			
	Belgium		Spain	0.06	spot			
	Belgium		China	0.06	spot			
Aggregator Agreement	Singapore	EMA		up to 3.0	20		2012/13	D.E.S.
Storage and regasification or reloading agreements***								
ConocoPhillips	U.S.	Citigroup from COP and Macquarie at Freeport; Citigroup to Kogas	Korea	1 cargo	7.5months		juil-09	
Macquarie Energy				1 cargo	6 months		juin-09	

\*10 cargoes  
\*\*This is a permanent assignment from Shell of a portion of Shell's existing contracted capacity (~ 25%)  
\*\*\*Under two separate agreements, ConocoPhillips and Macquarie brought one cargo each to the Freeport terminal. The arrangements gave them the right to store LNG for several months and then either reexport or regasify. ConocoPhillips reexported one full cargo lot in December 2009 through LNG sale to Citigroup. Macquarie ended up selling part of the cargo to Freeport LNG Development and part to Citigroup, and regasifying and sending out the balance of their inventory to the US market in January 2010.



## LNG IMPORTS

	10 <sup>6</sup> m <sup>3</sup> liquid	10 <sup>6</sup> t	10 <sup>9</sup> m <sup>3</sup> (n) gaseous	share %	Var. 2008-09 %
Belgium	10.910	5.004	6.215	2.73	116.04
France	21.235	9.601	12.194	5.36	3.62
Greece	1.366	0.611	0.788	0.35	-16.14
Italy	4.741	2.174	2.709	1.19	98.70
Portugal	4.547	2.063	2.589	1.14	1.43
Spain	44.963	20.230	25.805	11.35	-8.07
Turkey	8.873	4.048	5.085	2.24	3.98
U.K.	17.661	7.992	10.125	4.45	887.75
Europe	114.296	51.722	65.511	28.82	22.54
Argentina	1.448	0.625	0.844	0.37	101.95
Brazil	0.805	0.351	0.467	0.21	
Chile	1.052	0.466	0.611	0.27	
Dominican Rep	0.932	0.403	0.543	0.24	14.22
Mexico	6.034	2.734	3.433	1.51	0.08
Puerto Rico	1.223	0.528	0.713	0.31	-7.00
Canada	1.623	0.707	0.943	0.41	
USA	20.965	9.110	12.184	5.36	30.56
Americas	34.082	14.924	19.738	8.68	36.68
China	12.397	5.742	7.001	3.08	70.43
India	20.262	9.277	11.536	5.08	11.91
Japan	141.599	65.196	80.268	35.31	-5.83
Korea	54.95	25.220	31.234	13.74	-13.30
Taiwan	19.530	8.938	11.107	4.89	-2.48
Asia	248.738	114.372	141.146	62.09	-4.02
Kuwait	1.600	0.720	0.915	0.40	
Middle East	1.600	0.720	0.915		
Total	398.716	181.739	227.309	100.00	5.66

The conversion factors are calculated from the table page 8.  
The figures are based on unloaded volumes.

## SOURCES OF IMPORTS

	10 <sup>6</sup> m <sup>3</sup> liquid	10 <sup>6</sup> t	10 <sup>9</sup> m <sup>3</sup> (n) gaseous	share %	Var. 2008-09 %
Algeria	34.350	15.681	19.734	8.68	-1.51
Egypt	22.325	9.633	12.982	5.71	-4.17
Equatorial Guinea	7.65	3.358	4.475	1.97	0.64
Libya	1.185	0.575	0.662	0.29	39.91
Nigeria	25.480	11.670	14.422	6.34	-30.54
Norway	5.198	2.334	2.999	1.32	43.95
Trinidad & Tobago	33.464	14.456	19.510	8.58	11.17
Atlantic Basin	129.652	57.707	74.784	32.90	-5.37
Abu Dhabi	11.544	5.391	6.534	2.87	-6.57
Oman	17.901	8.413	10.078	4.43	-5.54
Qatar	81.058	37.287	46.122	20.29	23.20
Yemen	0.717	0.311	0.407	0.18	
Middle East	111.220	51.402	63.141	27.78	14.54
Australia	39.402	18.401	22.144	9.74	19.39
Brunei	14.316	6.600	8.074	3.55	-6.01
USA	1.317	0.557	0.776	0.34	-24.05
Indonesia	42.331	19.324	24.065	10.59	-4.06
Malaysia	49.019	22.598	27.794	12.23	0.94
Russia	11.054	4.963	6.301	2.77	
Pacific Basin	157.439	72.443	89.154	39.22	10.37
Other	0.405	0.186	0.230	0.10	-30.53
Total	398.716	181.739	227.309	100.00	5.66

## QUANTITIES (10<sup>6</sup> liquid m<sup>3</sup>) RECEIVED IN 2009 BY THE IMPORTING COUNTRIES FROM THE EXPORTING COUNTRIES

	Algeria	Egypt	Equat. Guin.	Libya	Nigeria	Norway	Trinidad & Tobago	Abu Dhabi	Oman	Qatar	Yemen	Australia	Brunei	U.S.A.	Indonesia	Malaysia	Russia	Other	Total Import
Belgium		0.146			0.143	0.283	0.263			10.075									10.910
France	12.249	2.556	0.133		3.867	0.722	1.211			0.352		0.145							21.235
Greece	0.873	0.418					0.075												1.366
Italy	2.042									2.699									4.741
Portugal	0.184		0.136		3.408		0.688	0.131											4.547
Spain	8.901	7.917		1.185	7.416	2.314	7.277		2.187	7.481	0.155							0.130	44.963
Turkey	6.909	0.140			1.404		0.138		0.132	0.150									8.873
The U.K.	2.806	0.822				0.354	3.420			10.128		0.131							17.661
Europe	33.964	11.999	0.269	1.185	16.238	3.673	13.072	0.131	2.319	30.885	0.155	0.276						0.130	114.296
Argentina		0.259					1.189												1.448
Brazil					0.124		0.681												0.805
Chile			0.524				0.255			0.273									1.052
Domin Rep							0.932												0.932
Mexico		0.688			4.491	0.136	0.261			0.205	0.141				0.112				6.034
Puerto Rico							1.223												1.223
Canada		0.132					1.282			0.209									1.623
The U.S.A.		7.460			0.644	1.389	10.892			0.580									20.965
Americas		8.539	0.524		5.259	1.525	16.715			1.267	0.141				0.112				34.082
China		0.135	0.134		0.137		0.134		0.143	0.910		7.718			0.739	1.777	0.426	0.144	12.397
India	0.257	0.551			0.515		1.192	0.265	0.561	13.470		1.802			0.138	0.413	1.098		20.262
Japan		0.413	2.874		1.294		0.244	11.148	5.680	17.042		25.917	13.293	1.317	28.325	27.876	6.176		141.599
Korea	0.129	0.569	2.740		0.528		1.579		8.941	14.736	0.421	2.599	1.023		6.681	12.739	2.265		54.950
Taiwan		0.119	1.109		1.509		0.142		0.131	2.748		0.956			6.336	6.076	0.404		19.530
Asia	0.386	1.787	6.857		3.983		3.291	11.413	15.456	48.906	0.421	38.992	14.316	1.317	42.219	48.881	10.369	0.144	248.738
Kuwait							0.386		0.126			0.134				0.138	0.685	0.131	1.600
Middle East							0.386		0.126			0.134				0.138	0.685	0.131	1.600
Total export	34.350	22.325	7.650	1.185	25.480	5.198	33.464	11.544	17.901	81.058	0.717	39.402	14.316	1.317	42.331	49.019	11.054	0.405	398.716

# LNG TANKERS

## The world LNG tanker fleet consisted of 336 vessels at the end of 2009.

- 2009 was a major milestone for the LNG shipping with:
- the celebration of its 50<sup>th</sup> anniversary. The very first voyage of a laden methane tanker took place on January 28, 1959: the Methane Pioneer (an experimental ship built in 1958, 5 123 m³) carried LNG from Lake Charles in the United States to Canvey Island in the United Kingdom to demonstrate that LNG cargoes could be transported over long distances by maritime transport. It should be noted that the first commercial voyage took place in 1964.
  - the celebration of the 40<sup>th</sup> anniversary of the Moss design.
  - the celebration of the 150<sup>th</sup> anniversary of the Suez Canal.

### LAIID-UP SHIPS

Name	Capacity	Delivery date	Containment
Abdel Kader	177 000	2009	Mark III
Al Kharaana	210 100	2009	NO 96
Al Khattiga	210 100	2009	NO 96
Al Mayeda	266 000	2009	Mark III
Al Nuaman	210 100	2009	NO 96
Aseem	154 800	2009	Mark III
Ben Badis	177 000	2009	Mark III
Dapeng Star	147 200	2009	NO 96
Galeomma (ex Arzew)	126 500	1978	TGZ
GDF SUEZ Neptune	145 000	2009	Mark III
Hilli	126 200	1975	Moss
Hoegh Gandria	125 903	1977	Moss
Maersk Arwa	165 000	2008	Mark III
Maersk Methane	165 000	2008	Mark III
Margaret Hill (ex Hoegh Galleon)	87 600	1974	Moss
Mel (ex-Hassi R'Mel)	40 850	1971	GT
Methania	131 200	1978	GT
Min Lu	147 200	2009	NO 96
Shagra	266 000	2009	Mark III
Taitar n° 2	147 000	2009	Moss
Tangguh Hiri	155 000	2008	Mark III
Tangguh Jaya	155 000	2008	Mark III
Tenaga Empat	130 000	1981	GT
Transgas (ex Edouard L.D.)	129 299	1977	GT
TOTAL	3 795 052		

- No ship was sold for scrapping in 2009 but, for the following two ships, this option is strongly being considered:
  - Margaret Hill ex Hoegh Galleon (Moss, 137 000 m³, delivered in 1974)
  - Mel ex Hassi R'Mel (CNIM1388, NO82, 40 000 m³, delivered in 1971).
- Two new methane tankers are being converted in FSRU:
  - Golar Frost (HHI 1444, Moss, 137 000 m³, delivered in 2004)
  - Golar Freeze (HDW83, Moss, 129 000 m³, delivered in 1977)
- No order was placed for new ships.

Total shipping capacity in operation was almost 45 10<sup>6</sup> m³ in 2009; the average capacity per carrier was about 145 000 m³.

Total shipping capacity available on the market in 2009 was almost 49 10<sup>6</sup> m³, including some 7.6 10<sup>6</sup> m³ of additional capacity with all the new ships delivered during the year.

At the end of December 2009, the number of LNG carriers under construction or on firm order was 37 of which 5 using the Moss technique, 0 using the SPB technique and 32 using the GTT membrane technique. 26 should be delivered in 2010 (23 Membrane and 3 Moss).



In all, 3 414 loaded voyages were completed in 2009, compared to 3 308 in 2008:

- 1 267 to Japan (1 351 in 2008)
- 261 to the United States, Puerto Rico, the Dominican Republic, Mexico, Argentina, Brazil, Chile and Canada (203 in 2008)
- 1 080 to Europe (942 in 2008)
- 405 to Korea (476 in 2008)
- 145 to Taiwan (150 in 2008)
- 149 to India (133 in 2008)
- 95 to China (53 in 2008)
- 12 to Kuwait

In addition, 4 orders were placed for FPSO hulls, using the SPB technique and 6 new orders for small-scale capacity ships (10 000 to 12 000 m³), 5 for 2010 and 1 for 2011. The Coral Methane (7 500 m³) was delivered in 2009.

The total number of nautical miles covered in 2009 was 22.7 10<sup>6</sup> down from 23.19 10<sup>6</sup> in 2008. Several long distance routes disappeared between Algeria and Norway towards Asia. In 2009, the activity in the LNG tanker fleet was about 1 460 10<sup>9</sup> m³ x nautical miles, as opposed to 1 451 10<sup>9</sup> m³ x nautical miles in 2008, or a 0.6% rise. This equates to about 4.7 10<sup>9</sup> m³ x nautical miles per operational ship having delivered at least one cargo in 2009, as against 5.2 10<sup>6</sup> m³ x nautical miles in 2008.

# 40 SHIPS DELIVERED IN 2009

### MEMBRANE TECHNIQUE (34)

Delivery date	Ship Name	Capacity (cu.m.)	Shipowner	Shipbuilder	Cargo System	Hull #
01/01/2009	Lijmiliya	263 000	Nakilat 100%	DSME	NO 96	2256
13/02/2009	Al Mayeda	266 000	Nakilat 100%	SHI	Mark III	1694
25/02/2009	Al Sheehamiya	210 000	Nakilat 100%	DSME	NO 96	2264
27/02/2009	Min Rong	147 200	CLNG 77% - FJC 20% - ETG 3%	Hudong Zhonghua	NO 96	1378A
27/02/2009	Abdel Kader	177 000	MOL 100%	HHI	Mark III	1876
27/02/2009	Mesaim eer	216 000	Nakilat 100%	HHI	Mark III	1908
01/03/2009	Al Samriya	263 000	Nakilat 100%	DSME	NO 96	2257
01/03/2009	Trinity Glory	154 200	K Line - Mitsui & Co - Imabari	Imabari	Mark III	2260
03/03/2009	Tangguh Palung	155 000	K Line - PT Pelayaran Meratus	SHI	Mark III	1634
15/03/2009	Tangguh Sago	155 000	Teekay 70% - PT Fast Marine - Services 30%	HHI	Mark III	5 298
16/03/2009	Al Sadd	210 100	Nakilat 100%	DSME	NO 96	2255
25/03/2009	Mekaines	266 000	Nakilat 100%	SHI	Mark III	1695
31/03/2009	Seri Balqis	157 000	MISC 100%	MHI	NO 96	2224
10/04/2009	Maersk Magellan	165 000	AP Moller - Maersk A/S 100%	SHI	Mark III	1626
28/04/2009	Al Ghashamiya	217 330	Nakilat 100%	SHI	Mark III	1696
30/04/2009	Onaiza	210 000	Nakilat 100%	DSME	NO 96	2266
29/05/2009	Express	150 900	Excelerate 50% - Exmar 50%	DSME	NO 96	2263
29/05/2009	Al Mafyar	266 000	Nakilat 100%	SHI	Mark III	1697
30/06/2009	Al Kharaitiyat	216 000	Nakilat 100%	HHI	Mark III	1909
30/06/2009	Al Rekayyat	216 000	Nakilat 100%	HHI	Mark III	1910
29/07/2009	BW GDF Suez Paris	162 400	BW Group 100%	DSME	NO 96	2258
29/07/2009	BW GDF Suez Brussels	162 400	BW Group 100%	DSME	NO 96	2259
12/08/2009	Min Lu	147 200	CLNG 77% - FJC 20% - ETG 3%	Hudong Zhonghua	NO 96	1379A
01/10/2009	Al Kharaana	210 100	Nakilat 100%	DSME	NO 96	2284
03/10/2009	Al Dafna	266 000	Nakilat 100%	SHI	Mark III	1726
14/10/2009	Ben Badis	177 000	MOL 100%	HHI	Mark III	5 324
15/10/2009	Al Khattiga	210 100	Nakilat 100%	DSME	NO 96	2283
19/10/2009	Woodside Donaldson	165 000	AP Moller - Maersk A/S 100%	SHI	Mark III	1632
30/10/2009	Exquisite	150 900	Excelerate 50% - Exmar 50%	DSME	NO 96	2270
16/11/2009	Aseem	154 800	MOL 26% - SCI 26% - Nakilat 20% NYK 16.67% - K Line 8.33% - Petronet 3%	SHI	Mark III	1686
24/11/2009	Shagra	266 000	Nakilat 100%	SHI	Mark III	1751
24/11/2009	Al Nuaman	210 100	Nakilat 100%	DSME	NO 96	2285
30/11/2009	GDF Suez Neptune	145 000	Hoegh LNG 50% - MOL 50%	SHI	Mark III	1688
11/12/2009	Dapeng Star	147 200	CLNG 61.5% - UHI 20% - SMC 15.5% - ETG 3%	Hudong Zhonghua	NO 96	1320A

### MOSS TECHNIQUE (6)

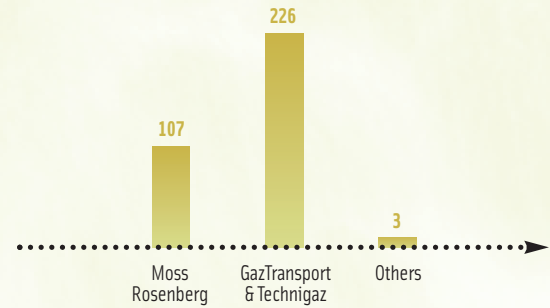
Delivery date	Ship Name	Capacity (cu.m.)	Shipowner	Shipbuilder	Cargo System	Hull #
31/01/2009	Cygnus Passage	147 200	Kyushu Electric Power 60% - TEPCO 30% Mitsubishi 3% - NYK 3%	MHI	Moss	2235
01/04/2009	Pacific Enlighten	147 200	Kyushu Electric Power 60% - TEPCO 30% NYK 3% - Mitsubishi 3% MOL 2% - Mitsui & Co 2%	MHI	Moss	2236
01/05/2009	Energy Confidence	155 000	Tokyo LNG Tanker 70% - NYK 30%	KSC	Moss	1611
17/07/2009	LNG Jupiter	155 000	OGIT 85% - NYK 10% - K line 5%	KSC	Moss	1592
31/10/2009	Taitar No. 1	147 000	CPC 45% - NYK 27.5% - Mitsui 27.5%	MHI	Moss	2241
29/12/2009	Taitar No. 2	147 000	CPC 45% - NYK 27.5% - Mitsui 27.5%	KSC	Moss	1625



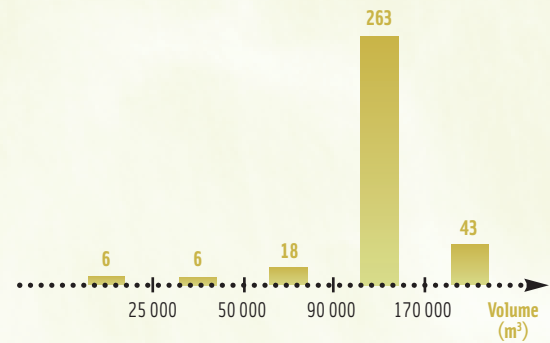
# TANKER DISTRIBUTION

(AT THE END OF 2009)

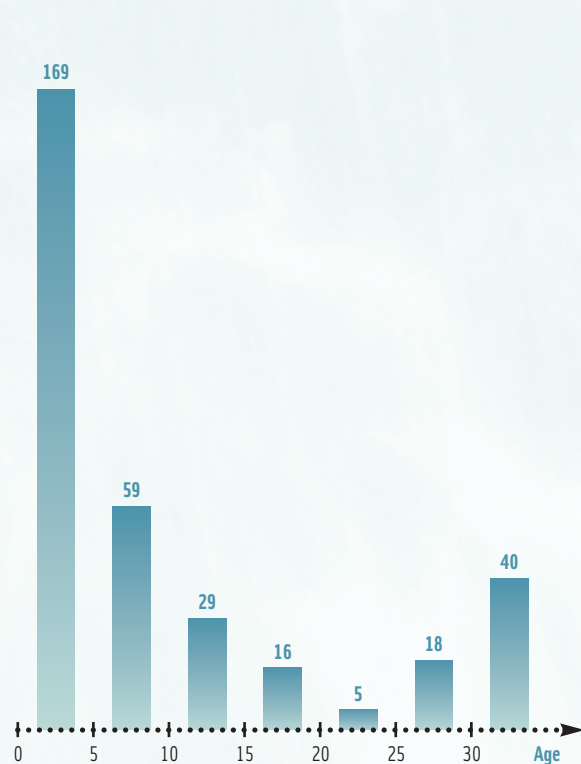
ACCORDING TO CONTAINMENT SYSTEM:



ACCORDING TO CARGO CAPACITY:



ACCORDING TO THE DELIVERY DATE OR THE AGE OF THE SHIPS:



# LIQUEFACTION PLANTS

There were 24 LNG liquefaction facilities in operation in seventeen countries at the end of 2009. 8 new trains were commissioned in 2009: 2 trains at Qatargas II and 1 train at RasGas 3 (Qatar), 2 trains at Tangguh (Indonesia), 2 trains at Sakhalin 2 (Russia), and 1 train at Balhaf (Yemen). The aggregate capacity of all liquefaction plants amounted to 540.1 10<sup>6</sup> m<sup>3</sup> of LNG per year, or 245.7 10<sup>6</sup> t, for 90 liquefaction trains. Considering a total production of 398.7 10<sup>6</sup> m<sup>3</sup> of LNG, the average utilization reached 74%. The total storage capacity amounts to 7.90 10<sup>6</sup> m<sup>3</sup> of LNG for 82 storage tanks, representing the equivalent of more than seven days of production.

## NEW PROJECTS / EXTENSIONS OF EXISTING PLANTS:

### Abu Dhabi:

Adgas expects to bring online fresh production from its offshore plant at Das Island in Q2 2010, when the company will send for the 1<sup>st</sup> time offshore gas to onshore facilities. Adgas will operate and maintain the subsea pipeline after commissioning. Currently, the engineering procurement contracts are managed by Gasco. All offshore associated gas and integrated gas development packages are in the final stages of construction with all IGD packages awarded in July last year.

### Algeria:

The new 4.5 mtpa LNG train at Skikda to replace three units destroyed in the explosion of January 2004 is expected to be operational in November 2011. The new 4.7 mtpa complex for the production of liquefied natural gas (GNL3) in Arzew has an estimated rate of progress of about 20%, and is scheduled to be completed by the end of 2012.

### Angola:

The Angola LNG project at Soyo, 300 km north of Luanda, is under construction and should start operating in the first quarter of 2012, with a production of 5.2 mtpa of LNG aimed at the US gas marketing affiliates of the partners - Sonagas 36.4% ; Chevron 36.4% ; BP and Total 13.6% each.

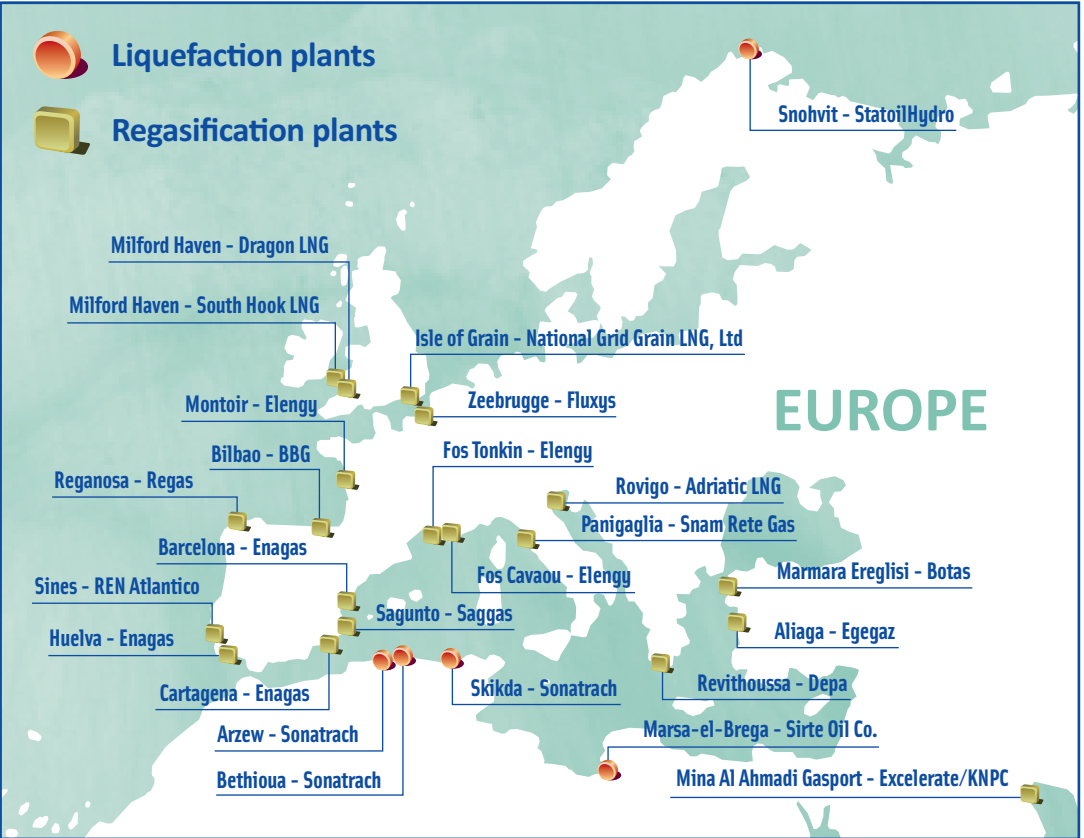
### Australia:

- On September 14, 2009, Shell has taken the Final Investment Decision on the **Gorgon** LNG project, signalling the start of initial construction on one of the world's largest natural gas developments. Chevron will operate the project, with a 50% stake, with participants Shell and ExxonMobil, each holding 25% shares. Construction began in the second half of 2009, with first gas planned for 2014. The initial project includes a 15 mtpa LNG facility and a domestic gas plant in north-western Australia.
- The **Pluto** LNG project: Woodside Petroleum is building its project on the Burrup Peninsula and is trying to secure gas to approve a 2<sup>nd</sup> train there. First production with an initial capacity of 4.3 mtpa is expected by early 2011.
- The **Queensland Curtis** LNG project: during 2009, significant progress was made on the QCLNG project: in February, BG Group entered into an agreement with the Queensland government to acquire a 270 hectare site at North China Bay on Curtis Island, the site of the proposed QCLNG liquefaction plant near Gladstone; an environmental impact statement (EIS) for the project was released for public consultation in August; FEED work with Bechtel for the liquefaction plant was completed and the Group drilled around 200 wells increasing its reserves and resources to some 17.3 tcf. A decision on the EIS from the Queensland and Australian governmental authorities is expected in 2010, following which BG Group will be able to sanction the 8.5 mtpa, two train LNG project with first cargoes of LNG expected in 2014.
- In May, BG Group signed an LNG Project Development Agreement with China National Offshore Oil Corporation and its affiliates (CNOOC), focused on the Queensland Curtis LNG (QCLNG) project. The agreement sets out the basis on which: CNOOC will purchase 3.6 mtpa of LNG for 20 years from the start-up of QCLNG; CNOOC will purchase a 5% interest in the reserves and resources of certain Walloons Fairway tenements in the Surat Basin; CNOOC will become a 10% equity investor in one of the two trains in the first phase of QCLNG; and BG Group and CNOOC will jointly participate in a consortium to construct and own two LNG ships in China. BG Group and CNOOC intend to execute fully-termed agreements prior to BG Group sanctioning the QCLNG project. The transactions will be conditional on applicable government and regulatory approvals.
- Santos and Petronas appointed Bechtel as the FEED contractor for the downstream components of the **Gladstone LNG** project. The FEED contract covers the liquefaction plant and associated infrastructure on Curtis Island. Work formally commenced in early 2009. A Final Investment Decision is expected in 1H 2010. The project remains on schedule for 1<sup>st</sup> shipments of gas in 2014. Over the next year, as part of FEED, GLNG

## LNG CHARACTERISTICS

The average composition is chosen as being representative among compositions provided by the different receiving terminals (2003 figures being revised)

Origin	Nitrogen N2 %	Methane C1 %	Ethane C2 %	Propane C3 %	C4+ %	LNG density kg/m³	Gas density kg/m³(n)	Expansion ratio m³(n)/m³ liq	Gas GCV MJ/m³(n)
Algeria-Arzew	0.6	87.6	9.4	2.0	0.5	462	0.809	571	44.1
Algeria-Bethioua 1	1.0	87.8	8.4	2.1	0.7	466	0.814	573	44.0
Algeria-Bethioua 2	0.8	90.7	7.7	0.7	0.0	450	0.779	578	42.4
Algeria-Skikda	0.7	91.7	6.9	0.6	0.1	448	0.777	576	42.2
Egypt-Damietta	0.1	97.7	1.8	0.2	0.2	427	0.730	585	40.8
Egypt-Idku	0.0	95.8	3.1	0.8	0.4	436	0.753	578	41.5
Equatorial Guinea	0.0	93.4	6.5	0.0	0.0	439	0.755	585	42.0
Lybia	0.7	81.6	13.4	3.7	0.7	485	0.867	559	46.6
Nigeria	0.1	91.3	4.6	2.6	1.4	458	0.809	566	44.2
Norway	0.7	92.2	5.3	1.2	0.4	449	0.782	577	40.1
Trinidad	0.0	96.8	2.7	0.3	0.1	432	0.741	583	41.0
Abu Dhabi	0.3	84.8	13.2	1.6	0.1	467	0.826	566	44.9
Oman	0.4	87.9	7.3	2.9	1.6	470	0.834	563	45.3
Qatar-Qatargas I	0.4	90.1	6.2	2.3	1.0	460	0.808	569	44.0
Yemen	0.0	93.3	5.7	0.9	0.1	434	0.765	567	38.5
USA-Alaska	0.2	99.7	0.1	0.0	0.0	423	0.719	589	39.9
Australia-NWS	0.1	87.4	8.3	3.4	0.8	467	0.831	562	45.3
Brunei	0.1	90.6	5.0	2.9	1.5	461	0.816	564	44.6
Indonesia-Arun	0.2	90.7	6.2	2.0	1.0	457	0.803	569	43.9
Indonesia-Badak	0.0	91.2	5.5	2.4	0.9	456	0.801	568	43.9
Malaysia	0.3	90.3	5.3	3.1	1.1	461	0.813	567	44.3
Russia-Sakhalin	0.1	92.6	4.5	1.9	0.2	449			



will be progressing the engineering design to ensure construction can commence as scheduled in 2010.

- **Bonaparte LNG** (Australia): In August 2009, GDF SUEZ and Santos announced a strategic partnership to develop a 2 mtpa floating liquefaction plant in the Bonaparte Basin, off the coasts of Australia. In the framework of this partnership, GDF SUEZ purchases a 60% stake in the gas fields Petrel, Tern and Frigate to feed the project and will become operator.
- In April 2009, Total announced that the joint venture holding the Australian exploration permit WA-285-P (Total 24%, INPEX 76% operator) has decided to launch the Front End Engineering and Design (FEED) for the development of the **Ichthys** field, located in the Browse Basin approximately 200 kilometers offshore North West Australia and approximately 850 kilometers to the west of Darwin. Middle Arm Peninsula in Darwin has been selected as the location for the liquefied natural gas processing facility.
- The **Wheatstone** project entered the Front End Engineering and Design phase in July 2009 and expects to make a Final Investment Decision in 2011. The initial phase of the project plans to have the capacity to process 8.6 mtpa of LNG and a domestic gas plant. An affiliate of Chevron is the operator and holds an approximate 75% interest in the project.

**Brunei:**

BLNG plant has delivered more than 5 600 cargoes safely and without missing a single contractual obligation since start-up in 1972. BLNG is undergoing a second rejuvenation to extend its life by a further 20 years from 2013.

**Canada:**

A Final Investment Decision (FID) on the **Kitimat LNG** export plant in British Columbia is to be taken in 2011 and first shipments could occur in 2014.

**Egypt:**

The global economic downturn has delayed development of a planned 2<sup>nd</sup> train at the **Damietta LNG** terminal. Egas is reassessing a plan to develop a second 5 mtpa train at Damietta.

**Equatorial Guinea:**

Marathon and its partners are consulting with potential gas suppliers in Nigeria, Cameroon and Equatorial Guinea relative to a second LNG train on **Bioko Island**. Major elements of a Front-End Engineering and Design study (“FEED”) were completed on a potential 4.4 mtpa LNG train. Further FEED work will be completed when gas supplies have been secured. Marathon expects a supply gap for LNG starting from 2016 or 2017 at the latest, that will create a window of opportunity for EG LNG Train 2.

**Indonesia:**

**Tangguh**, Indonesia's third LNG centre after Bontang and Arun, comprises the development of six gas fields in the Wiriagar, Berau and Muturi production sharing contracts in the Bintuni area of Papua in eastern Indonesia. Gas produced from two normally unmanned offshore platforms is fed via 22-kilometer pipelines to two onshore liquefaction trains, each with a production capacity of 3.8 mtpa of LNG. Train 1 began LNG production in mid-June, producing the LNG for the first cargo, and Train 2 started producing LNG in September. However, the plant was shut for over 3 months for maintenance following technical glitches.

**Libya:**

The LNG plant at **Marsa El-Brega** was built by Exxon and the upgrade is expected to give the facility 25 more years of production at 3.2 mtpa. It will concentrate on replacement of out-of-date equipment.

**Malaysia:**

With the debottlenecking of **MLNG Dua** scheduled for completion in 2010 – the total production capacity of the complex is expected to increase to 24 mtpa.

**Nigeria:**

- The Final Investment Decision on **Brass LNG** should be taken before the end of 2010.
- **OLNG** (Nigeria). BG Group and its project partners are undertaking a liquefaction plant at Olokola on the southwestern coast of Nigeria. The initial project will comprise two LNG trains of approximately 6.3 mtpa each, with the ability to expand with additional trains. Good progress has been made in the technical design, and work will continue to secure the regulatory and commercial framework within the wider Government's gas agenda for domestic and export projects.

**Norway:**

**Snohvit** liquefaction plant: it was shut-down from August 15, 2009 until late 2009 for extensive upgrading and maintenance operations.

**Papua New Guinea:**

A Final Investment Decision (FID) was made on the **PNG LNG** project on December 8. ExxonMobil is the project operator with a 33.2% stake. The other major participants in the project are PNG-based Oil Search with 29%, the PNG government-affiliated Independent Public Business Corp. with 16.6%, Santos with 13.5% and Nippon Oil with 4.7%. The first LNG project in PNG is expected to produce 6.6 mtpa from the end of 2013 at a liquefaction plant to be built near the capital Port Moresby.

**Peru:**

South America's first liquefaction plant at **Pampa Melchorita**, located 169 km south of Lima. Peru's LNG plant will start exporting in May 2010.

**Qatar:**

- April 2009: inauguration of **Qatargas 2**, composed of two trains of 7.8 mtpa each.
- Train B of the Qatargas 2 project started producing LNG on September 7, 2009. Train B, in which Total holds a 16.7% interest alongside the state-owned company Qatar Petroleum (65%) and ExxonMobil (18.3%). LNG from Qatargas 2 Train B is primarily intended for deliveries in the United Kingdom, France and the United States. The number of projects being undertaken simultaneously in Qatar, the world's largest exporter of LNG has led to a shortage of materials and labour and caused delays. The first LNG cargoes from the 7.8 mtpa LNG train of **Qatargas 3** are expected to be delivered in the first half of 2010. Qatargas 3 is an integrated project, jointly owned by Qatar Petroleum (68.5%), ConocoPhillips (30%) and Mitsui (1.5%).
- Shell has delayed **Qatargas 4** LNG project, now planned for late 2010 and the 1<sup>st</sup> cargo possibly pushed into 2011.

- In October 2009, RasGas inaugurated Train 6, another mega-train, coinciding with the 10<sup>th</sup> anniversary of the company's LNG production commencing. Start up of the 7<sup>th</sup> and final train is scheduled in 2010.

**Russia:**

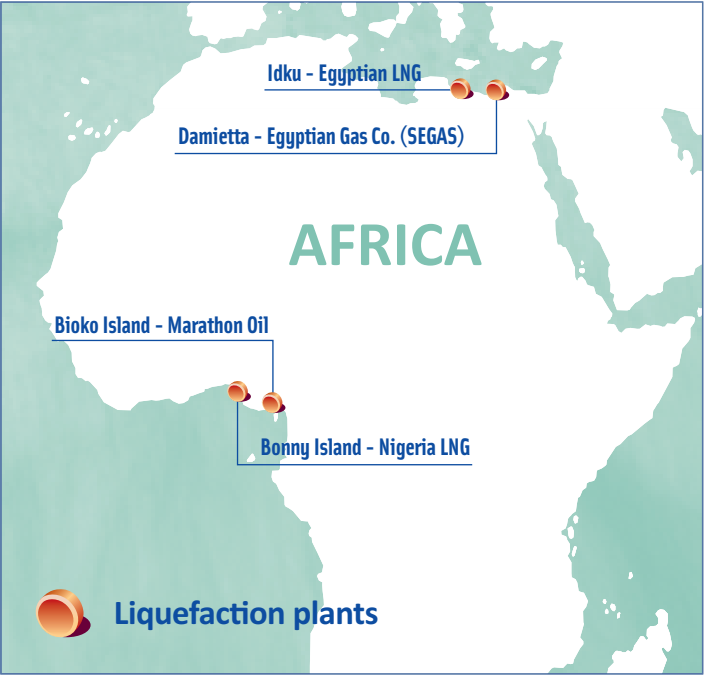
The first LNG train of the **Sakhalin-II LNG** Project started production in March 2009, and the first cargo of LNG was delivered the following month to Tokyo Gas Co. and Tokyo Electric Power Co. The LNG plant at Prigorosnoye is aiming to produce 9.6 mtpa from two trains. Commissioning of the 2<sup>nd</sup> train began at the beginning of June 2009. Planned LNG production has been sold under contract to customers across the Asia-Pacific region. **Shtokman**: The partners in Russia's giant Shtokman gas field in the Barents Sea expect to take a Final Investment Decision on the project's LNG phase in December 2011 but will go ahead with the pipeline phase even if the LNG decision is negative.

**Trinidad & Tobago:**

The possibility of a 5<sup>th</sup> train to add to the first 4 at **Atlantic LNG** has been on the table for some time, but there is no definite go-ahead because of lack of sufficient feed gas.

**Yemen:**

The Yemen LNG liquefaction plant started producing LNG from the 3.45 mtpa Train 1 in **Balhaf** on October 15. Total is lead shareholder of Yemen LNG and holds a 39.62% interest, alongside the state-owned company Yemen Gas Company (16.73%), Hunt Oil Company (17.22%), SK Energy (9.55%), Korea Gas Corporation (6%), Hyundai Corporation (5.88%), and GASSPI (5%). Total production capacity will reach 6.7 mtpa of LNG. Following the three gas sales agreements signed in 2005 with Kogas, GDF SUEZ and Total Gas & Power Ltd., LNG from Yemen LNG will be exported to both the Asian and Atlantic markets.



# REGASIFICATION PLANTS

At the end of 2009, there were 70 regasification plants in the world and 8 offshore structures or floating LNG regasification facilities (Argentina, Brazil, Italy, Kuwait, UK, US). Eight LNG terminals went on stream in 2009: Fos-Cavaou (France), South Hook and Dragon (UK), Cameron (USA), Canaport (Canada), Taichung (Taiwan), Quintero (Chile), and Yangshan in Shanghai (China). Four offshore or floating facilities were commissioned in 2009: Rovigo (Italy), Pecém and Guanabara Bay (Brazil), Mina Al Ahmadi (Kuwait). The total send-out capacity of the facilities in operation amounted to 784 Bcm (gaseous)/year and their storage capacity to 35.7 10<sup>6</sup> m<sup>3</sup> of LNG (liquid) with 344 storage tanks. It should be noted that the send-out capacity of the 8 non conventional terminals amounting to 39.4 Bcm (gaseous)/year, is not associated to any storage capacity since these are either floating or offshore facilities.

**Brazil:**

In November, BG Group announced a joint venture agreement to study a Floating Liquefied Natural Gas (FLNG) vessel as an additional option to commercialize the material associated natural gas reserves in the Santos Basin pre-salt, offshore Brazil. Further to the agreement, Front-End Engineering and Design (FEED) contracts have been awarded to three consortia for a FLNG vessel. The consortia will prepare FEED proposals through 2010 and a Final Investment Decision is anticipated in 2011. The partners in the joint venture are Petrobras (51.1%) and BG Group, Galp Energia and Repsol (all 16.3%). The FLNG vessel will operate close to the planned Santos Basin FPSO vessels. The 3 mtpa LNG produced would be shipped either to Petrobras-operated regasification terminals at Pecém and Guanabara Bay to supply the Brazilian domestic market or exported to international markets.

**Canada:**

- **Rabaska LNG** terminal (Canada): Gaz Métro, Enbridge and GDF SUEZ are promoting an LNG terminal on Saint Lawrence River near Quebec City. The Basic Engineering was performed by Kellogg in London and is now completed. Full permitting was achieved in March 2008 (final Federal and Provincial authorisations respectively in March 2008 and October 2007). The partnership is holding discussions with potential shippers to supply the terminal.

**Chile:**

- **GNL Quintero** (Chile): GNL Quintero S.A., in which BG Group holds a 40% interest, received its commissioning cargo in July. It was the first-ever cargo of LNG delivered to Chile and the first onshore LNG import terminal to begin operations in the southern hemisphere. BG Group has a 21-year LNG Sales and Purchase Agreement to supply the terminal with up to 1.7 mtpa of LNG. The terminal is expected to be in full operation by third quarter 2010.
- **GNL Mejillones** (Chile): Phase I – RFCD (ready for cool-down): March 2010. The tanker “BW GDF SUEZ Brussels” (used as floating storage vessel) will arrive at Mejillones around February 15, 2010. Phase II – on-shore tank of 160 000 m<sup>3</sup> – FID Q2 2010.

**China:**

- Construction of two additional open-rack vaporizers and one additional submerged combustion vaporizer at the **Dapeng, Shenzhen** LNG import terminal. Commissioning of a 40% increase in regas capacity of the terminal, from 8 to 9 mtpa of throughput capacity. Plan to start building a 4<sup>th</sup> storage tank by the beginning of 2010.
- **Fujian** terminal: CB&I will provide EPC services for 2 additional 160 000 m<sup>3</sup> full containment LNG storage tanks. The project is expected to be completed in 2011.
- **Yangshan** terminal in Shanghai: the design capacity of the second phase will reach 3.3 mtpa from 2012.
- CNOOC started building LNG storage tanks in its **Zhejiang** LNG receiving project. Construction of the 3 tanks, with capacity of 160 000 m<sup>3</sup> each, is scheduled to be completed in 2012. The Zhejiang LNG project, which was approved by the National Development and Reform Commission in May, will be CNOOC's 4<sup>th</sup> terminal.
- The construction of the first 160 000 m<sup>3</sup> storage tank of PetroChina's LNG terminal in **Dalian** has been completed. The terminal is to have a 1<sup>st</sup> phase capacity of 3 mtpa, scheduled for completion in early 2011. It will get LNG supplies from Qatar. There are plans to double capacity to 6 mtpa in a 2<sup>nd</sup> phase.
- PetroChina's **Rudong** LNG terminal in Jiangsu will be completed in July 2011 and commissioning cargoes for the facility will be bought from the spot market. It will have 3 storage tanks with a capacity of 3 mtpa. It will get LNG supplies from Australia.





- Other LNG terminals are planned, pending for final approval: PetroChina' Shenzhen (Dachan) and Caofeidian terminals, Sinopec's Qingdao terminal and CNOOC' Shenzhen (Diefu) and Zhuhai terminals.

#### Croatia:

The remaining consortium members in the proposed Adria LNG terminal on the Croatian island of **Krk** in Northern Adriatic have absorbed RWE's 16.69% shareholding after it exited the project in late October 2009. The new shareholding structure now sees E.ON Ruhrgas with a 39.17% stake, OMV with 32.47% of the shares, Total with 27.36% and Geoplina with 1%. The terminal capacity is estimated at between 10 and 15 bcm/y. A location permit is expected in Q1 2010 and a Final Investment Decision in 2011.

#### France:

- Fos Cavaou** LNG terminal (France): After a cancellation of the permitting by a court sentence of the administrative tribunal for procedural problem, despite the end of the construction, the French authorities finally gave on October 6, 2009 the permit for the start-up of the terminal with a limitation on operational send-out at 20% of nominal capacity (which means only two LNG tankers per month). This situation will go on until the end of a new permitting procedure. The first LNG tanker was received on October 26, 2009, and the cooling down and tests of equipment are under progress. The commercial operation is forecasted on March 2010.
- In July 2009, EDF confirmed that it has obtained a construction permit for its future 6 bcm/year import facility at **Dunkirk**. FID is expected in Q1 2010 and start-up in 2014.

#### Greece:

- A further expansion of the **Revithoussa** LNG terminal is planned. It includes the construction of a 3<sup>rd</sup> storage tank increasing substantially the storage capacity, expansion of send-out rate and truck-loading facilities.
- Construction of a planned LNG terminal in northern Greece could be completed by 2013-14. Depa is awaiting EU authorization.

#### India:

- Petronet implemented two contracts during 2009 for the construction of Regas facilities with consortium of M/s. CTCL, Taiwan & CINDA and for marine work with M/s. Afcons Infrastructure Limited for its **Kochi** terminal, which is slated for commissioning in Q1 2012.
- The **Dabhol** LNG receiving and regasification terminal on the west coast will start operating early 2010 as difficulties in dredging silt at the Ratnagiri port have further pushed its commissioning schedule. Full capacity of the terminal following completion of the breakwater in 2011 will be 5 mtpa. It will have three 160 000 m<sup>3</sup> storage tanks.

#### Italy:

- In June 2007, GNL Italia S.p.A. started up the authorization process for the upgrading of the **Panigaglia** regasification terminal in order to expand the capacity from 3.5 to 8 Bcm/year. Authorisation requests have been addressed to the Ministry for the Environment, the Ministry of Economic Development, the Ministry for the Arts and local authorities.  
**The project includes:**
  - the possibility to unload larger LNG ships (actually 65 000 m<sup>3</sup> LNG);
  - an updating process of the main equipments of the plant involving:
    - the LNG storage tanks;
    - the berthing area;
    - other technical infrastructures;
  - the realisation of a new cogeneration plant (32 MW) for electricity self-production.The expected schedule program provides further 2 years for engineering and authorisation process and 3 years for the construction: start-up is planned for the end of 2013. In October 2009, the Commission for the Evaluation of Environmental Impact of the Ministry for the Environment expressed its favourable opinion on the project. The Ministerial decree will be signed by the interested Ministries in a few months.
- OLT project:** the terminal (20 km offshore Livorno) is under construction by Saipem S.p.A. under a design, engineering, procurement, construction, installation, testing and commissioning ("EPCIC") contract and will consist of the conversion of an existing LNG vessel (the Golar Frost) into a floating storage and regasification unit ("FSRU"). Commercial operations are due to start by the beginning of 2011. It will be the 2<sup>nd</sup> offshore LNG plant to go into operation in Italy after Adriatic LNG. OLT's shareholders are: Iride Mercato S.p.A. and ASA Azienda Servizi Ambientali S.p.A., E.ON Ruhrgas AG, OLT Energy Toscana S.p.A., Golar Offshore Toscana Limited.
- Porto Empedocle** (Sicily). The authorization process is in the final phase. EPC (Engineering, Procurement and Construction) of the LNG terminal will be in charge to a Temporary Association of Company (TAC), through a Lump-Sum Turn Key contract awarded at the end of a European tender actually ongoing. Start of works is expected in January 2010 and commercial operation is expected in Q1 2014. Enel's LNG terminal will have a throughput of 8 Bcm/year; in respect of relevant Law, Nuove Energie will have at least 80% of the capacity for 20 years, the remaining capacity will be allocated to third parties.
- Triton LNG** (Italy): GDF SUEZ is developing an offshore LNG terminal in the North Adriatic, near Ancona. The project is under permitting, and call for tenders have been issued for the FSRU vessel and tug services, while the FEED studies for the deep water port have been achieved.



- Shell Energy Italia Srl and ERG Power & Gas S.p.A. signed a JVA for the development of a regasification terminal in Italy. Local Italian authorities announced a one-year delay in the permitting process of the start-up of the **Priolo** LNG project. It is now expected to come on stream in 2014.

#### Japan:

- Construction of the **Sakaide** terminal (Shikoku Electric, Cosmo Oil and Shikoku Gas) scheduled for completion in March 2010 within the Cosmo Oil's refinery boundaries. Heads of Agreement was signed in 2006 to buy 0.42 mtpa of LNG from Malaysia from 2010 onwards.
- Mizushima LNG** terminal (Chugoku Electric): completion of the construction of the second 160 000 m<sup>3</sup> tank scheduled in the winter 2011.
- Shizuoka Gas and its subsidiary, Shimizu LNG Company, which owns and operates the **Shimizu** LNG receiving terminal, began the construction of the third-phase expansion of facilities in April 2006 including a 3<sup>rd</sup> in-ground LNG storage tank (160 000 m<sup>3</sup> capacity) and 3 additional vaporisers (110 t/h each). The expanded facilities will be ready for commercial operation at the beginning of 2010.
- Hokkaido Gas will start commercial operations at its LNG receiving terminal located at a port on **Ishikari Bay** in December 2012, one year earlier than originally planned. It will have a 180 000 m<sup>3</sup> tank, a regasification facility and a berth to accommodate large LNG tankers.
- Inpex Holdings has decided to build an LNG import terminal in northwestern Japan to meet robust growth in LNG demand. The company is considering building two 180 000 m<sup>3</sup> LNG storage tanks at the port in **Joetsu**, Niigata prefecture and aims to begin operations in 2014.
- Tokyo Gas plans to construct a new LNG tank at **Ohgishima** LNG terminal with a storage capacity of 250 000 m<sup>3</sup>, which will make it the largest in the world. The tank is being built to meet increasing demand for natural gas and further stabilize supply. The LNG tank will be underground to ensure exceptional safety against major earthquakes and other accidents.

#### Korea:

- South Korea plans to build additional LNG tanks by 2013 so as to meet increasing domestic gas demand.
- KOGAS continues to expand its LNG storage capacity, by building additional storage tanks of 9.2 10<sup>6</sup> m<sup>3</sup> in **Pyeong-Taek**, **Tong-Young** and **Sam-Cheok** which is located on the east coast of Korean peninsula where the proposed 4<sup>th</sup> receiving terminal is to be built.
  - Ongoing expansion of the 1.7 mtpa LNG receiving terminal in Gwangyang (Posco), adding a 3<sup>rd</sup> above-ground storage tank (165 000 m<sup>3</sup>) by September 2010 to increase operational flexibility.

#### Kuwait:

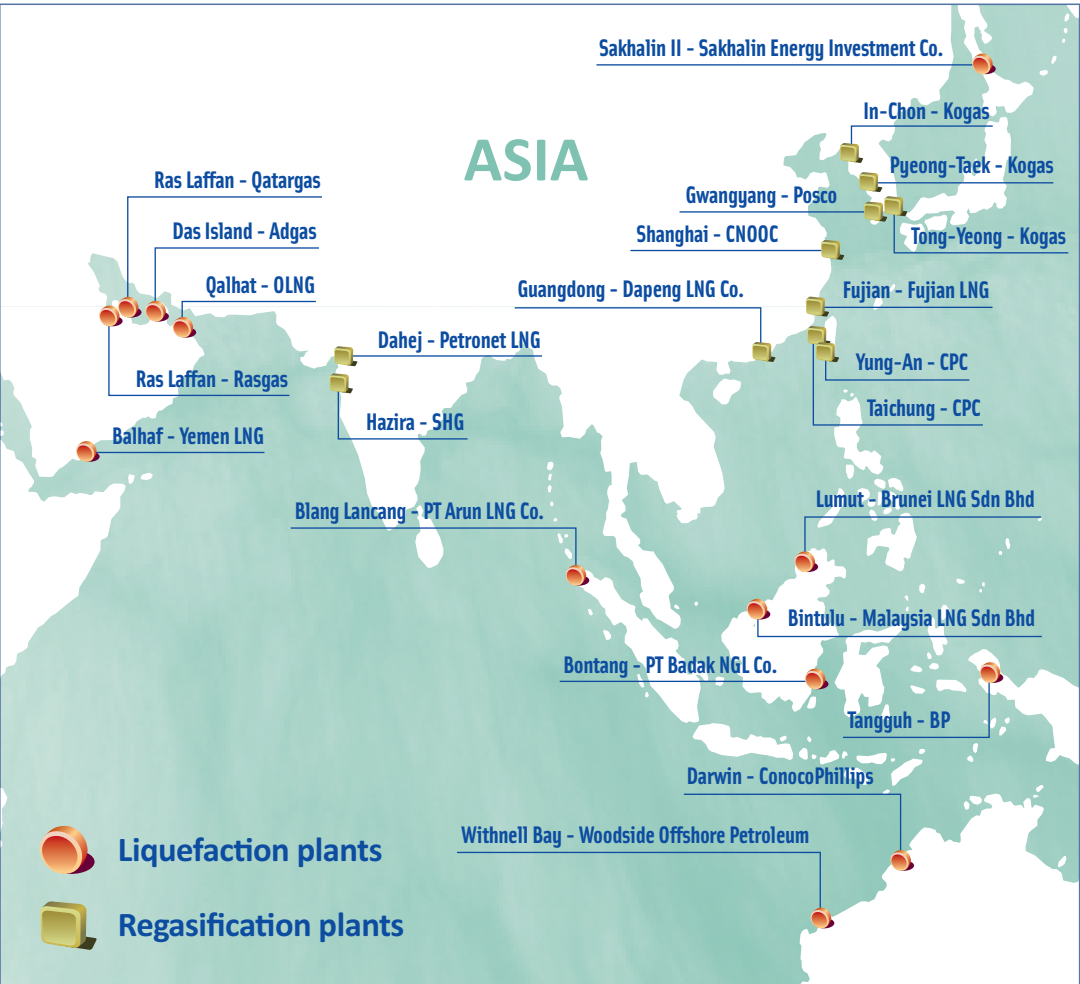
A floating LNG regasification facility at **Mina Al-Ahmadi** port enables Kuwait to import LNG since the end of August 2009.

#### Netherlands:

During 2009, **Gate** made good progress in constructing the regasification terminal in the port of Rotterdam which will be ready for operations in 2H 2011.

#### North America - the U.S.A.:

- Insulation upgrades continued at the **Everett** terminal with the use of aerogel insulation in some areas. There were mechanical upgrades to piping bridges and supports. Other work included tank impingement improvements, utility steam boiler replacement, recoating of LNG storage tanks, replacement of the LNG truck-loading scale and security enhancements. A number of upgrades are planned including the Jetty, Hazard Detection and Fiber Optic Control. A new Terminal Visitor Center is also planned.
- Upgrade to accommodate larger-sized LNG vessels. **Cove Point** began construction in 2009 and work would last about 18 months.
- Lake Charles** (US): In 2006, BGLS signed an agreement with Trunkline LNG, the owner of the Lake Charles terminal, for upgrades to the facility including an ambient air vaporisation system and a natural gas liquids (NGL) extraction plant to remove higher Btu products such as ethane, propane and butane from the LNG. The new system is expected to reduce fuel gas consumption by up to 85%, thus enhancing margins, reducing emissions, and providing an additional revenue stream from NGL sales.
- Elba Island** (US): The terminal has 1.8 Bcf/day of send-out capacity and 7.3 Bcf of storage capacity, which is expected to increase to 11.5 Bcf following the commissioning of a new storage tank in a couple of months. BG has an option to further expand the terminal to 15.7 Bcf of storage and 2.1 Bcf/day of peak send-out capacity.
- Cheniere Energy has in 2009 completed phase II expansion of the **Sabine Pass** LNG terminal, the largest regasification facility in North America. The 1.4 Bcf/d (10.5 mtpa) expansion, completed in mid 2009, boosted the terminal's sendout capacity to 4 Bcf/d and the total LNG storage capacity to 16.8 Bcf. The terminal has pioneered the Ambient Air LNG Vaporizer technology by installing a pilot train in August 2009.



During 2009, Cheniere has also received authorization from both the Federal Energy Regulatory Commission and the Department of Energy allowing its subsidiary Cheniere Marketing to re-export LNG that had previously been imported to the US. Two of Sabine Pass LNG's terminal use customers have started tolling services at the terminal. Total Gas and Power North America, Inc. and Chevron U.S.A., Inc. each have contracted 1 Bcf/d of regasification capacity and contractually commenced Terminal services in April and July 2009, respectively. Cheniere's wholly-owned subsidiary, Cheniere Marketing, Inc., which acquired the remaining 2 Bcf/d of capacity rights at the facility started services in October 2008.

- The opening of the **Golden Pass** terminal with a 2 Bcf/d capacity in the US Gulf Coast will be delayed by hurricane damage which pushed the start-up into 2010 rather than in 2009, as earlier expected. Located on the Sabine-Neches Waterway near Sabine Pass, Texas, the LNG terminal is a joint-venture of ExxonMobil (17.6%), Qatar Petroleum (70%) and ConocoPhillips (12.4%).
- Freeport LNG** terminal on Quintana Island (Texas): Service under the Mitsubishi Global Gas Corporation terminal use agreement commenced on January 1, 2009. Freeport LNG received permit from the U.S. Army Corps of Engineers to expand Port Freeport channel (April). Freeport LNG received permit from the Department of Energy to reexport LNG (May). Between May and August, Freeport LNG constructed and commissioned a boil-off gas reliquefaction unit. The terminal received two LNG "storage" cargoes during summer; one of them was reexported in December. Freeport LNG filed an application with FERC to construct an NGL extraction facility at the terminal (August).
- Cameron LNG** terminal (Sempra): Commercial operations began in Q2 2009.
- The construction of the 1.5 Bcf/d **Gulf LNG** terminal (El Paso) in **Pascagoula**, Mississippi, is underway and the terminal is expected to be operating in 2012. The developers of Gulf LNG - the Crest Group, a group of Houston-based investors - will continue to own 30% of the project, while Angolan state Sonangol will hold 20%. The project includes a ship berth and marine unloading facilities capable of accommodating one LNG tanker, two 160 000 m<sup>3</sup> LNG storage tanks, a 5 mile - 36-inch-diameter natural gas send-out pipeline and associated support facilities.
- Neptune LNG** Terminal (Massachusetts, USA): Shuttle and regasification vessel (SRV) "GDF SUEZ Neptune" delivered in November 2009. Second SRV "GDF SUEZ Cape Ann" delivery in May 2010. Commissioning with first SRV: February-March 2010.





Philippines:

•Energy World Corporation is aiming to start construction on the **Quezon** terminal in March 2010. The facility could be supplied with LNG from several sources such as Papua New Guinea, Australia or the open market. The terminal could be completed by mid-2011.

Portugal:

The foreseen increase in NG consumption in the country for the next 5 years, mainly due to the number of CCGT's licensed or under construction, demands for increased capacity in the terminal.  
An expansion project was launched on the 2<sup>nd</sup> quarter of 2009 and construction began in June 2009. The terminal is now able to receive the new Q-flex ships (up to 215 000 m<sup>3</sup> of LNG).  
By mid-2012 the **Sines** LNG terminal will have a storage capacity of 390 000 m<sup>3</sup> of LNG and a send-out capacity of 1 350 000 m<sup>3</sup> of NG.

Spain:

Expansion of existing terminals

- Barcelona:**  
Commissioned in 2009:  
- 2 new vaporisation units of 150 000 (n) m<sup>3</sup>/h  
Under construction  
- 1 new 150 000 m<sup>3</sup> LNG tank to be commissioned by 2010.  
- 1 new 150 000 m<sup>3</sup> LNG tank to be commissioned by 2011.
- Huelva:**  
Under construction  
- 1 new 150 000 m<sup>3</sup> LNG tank to be commissioned by 2010.  
In planning stage: up to  
- 1 new 150 000 m<sup>3</sup> LNG tank to be commissioned.\*  
- 1 new vaporisation unit of 150 000 (n) m<sup>3</sup>/h to be commissioned by 2011.\*  
- 2 new vaporisation units of 150 000 (n) m<sup>3</sup>/h to be commissioned by 2015.\*
- Cartagena:**  
Under construction  
- 1 new 150 000 m<sup>3</sup> LNG tank to be commissioned by 2010.  
In planning stage:  
- 2 new vaporisation units of 150 000 (n) m<sup>3</sup>/h to be commissioned by 2014.\*
- Gijón (Musel):**  
Under construction  
- 2 new 150 000 m<sup>3</sup> LNG tanks to be commissioned by 2011.  
- 2 new vaporisation units of 150 000 (n) m<sup>3</sup>/h to be commissioned by 2011.

- In planning stage:
- 1 new 150 000 m<sup>3</sup> LNG tank to be commissioned by 2013.
  - 1 new 150 000 m<sup>3</sup> LNG tank to be commissioned by 2015.
  - 1 new vaporisation unit of 150 000 (n) m<sup>3</sup>/h to be commissioned by 2013.
  - 1 new vaporisation unit of 150 000 (n) m<sup>3</sup>/h to be commissioned by 2015.\*
- \* **Note:** This investment is conditional upon the development of certain infrastructures and/or market.
- There are plans to double the capacity of the 2.6 mtpa **Reganosa** regasification plant by 2013.
  - The feasibility study to accept Q-max vessels (with a capacity of 270 000 m<sup>3</sup> of LNG) at **Bilbao** port terminal was finished in 2007. In January 2009, the 1<sup>st</sup> Q-max vessel in commercial operation, the Mozah, was discharged at the BBG terminal. During 2009, the Q-flex, Al Sahla, was also discharged at the terminal.

United Kingdom:

- Isle of Grain** LNG terminal: second expansion due to be operational in winter 2010/11.
- Dragon** LNG regasification terminal in Milford Haven, Wales: in July, construction was completed and the terminal received its 1<sup>st</sup> cargo of LNG that month. The plant commenced commercial operations in August. BG Group has rights to 2.2 mtpa of capacity for 20 years.
- Phase 1 of the **South Hook** LNG terminal (7.5 mtpa to 15 mtpa) at Herbranston near Milford Haven was inaugurated in May 2009. October 2009, complete of commissioning of Phase 1. Commence Phase 1 commercial operations.

Singapore:

In June, an Aggregator Agreement was executed between BG Group and Singapore's Energy Market Authority (EMA). The Agreement is for a term of up to 20 years and it provides for BG Group to supply up to 3 mtpa of LNG. It will replace the Memorandum of Agreement that was executed in April 2008 between BG Group and the EMA.  
The construction of the LNG import terminal, which will be located on **Jurong Island**, should start at the beginning of 2010 and is expected to be completed by 2013.

Taiwan:

**Taichung** LNG receiving terminal and storage facility were officially run in July 2009.

Thailand:

The LNG facility in **Map Ta Phut** port in Rayong province, with a capacity to handle 5 mtpa, will consist of two 160 000 m<sup>3</sup> LNG storage tanks as well as vaporizer and jetty facilities. It will be completed in Q3 2011, with commissioning and test runs slated to start at the same time.  
PTT has sourced 1 mtpa of LNG from Qatargas in a 10-year agreement with delivery starting in 2012.

LONG-TERM AND MEDIUM-TERM CONTRACTS IN FORCE IN 2009\*

Reference	Trade	Export	Seller	Import	Buyer	Nominal quantity ACQ 10 <sup>6</sup> t/year	Duration	Type of contract	Comments
DZ-F 1	Algeria-France	Arzew-Bethioua	Sonatrach	Fos - Montoir	GDF SUEZ	1.3	1992/2013	F.O.B.	Extension 2019
DZ-F 2	"	Skikda	"	Fos	"	2.5	1972/2013	"	
DZ-F 3	"	Bethioua	"	Fos - Montoir	"	3.7	1976/2013	"	
DZ-GR	Algeria-Greece	Arzew-Skikda	"	Revithoussa	DEPA S.A.	0.5	2000/2021	"	
DZ-I 1	Algeria-Italy	Skikda-Bethioua	"	Panigaglia	Eni	1.40	1997/2014	"	Eni LNG portfolio
DZ-I 2	"	"	"	"	Enel	0.9	1999/2022	D.E.S.	Swap GDFSuez/Enel linked with the Nig-F 2 contract
DZ-SP 2	Algeria-Spain	"	"	Ba, H., Cart., Bil.	Endesa	0.75	2002/2017	"	
DZ-SP 3	"	"	"	"	Cepsa	0.45	2002/-	"	
DZ-SP 4	"	Arzew-Bethioua	"	"	Iberdrola SA	1.15	2002/2021	"	
DZ-SP 5	Italy-Spain	Panigaglia	Eni	Spain	Iberdrola S.A	0.92	2002-2018	"	LNG Source: Eni Portfolio
	"	"	"	"	Hidroecantabrico + EDP	0.36	2005-2016	"	"
	"	"	"	"	E.On Espana	0.65	2007/2022	"	"
DZ-TR	Algeria-Turkey	Arzew-Bethioua	"	Marmara Ereğlisi	Botas	3	1994/2014	D.E.S.	
DZ-US	Algeria-USA	"	"	Lake Charles	Duke Energy	3.2	1989/2009	"	
EG-EU	Egypt-Europe	Idku	ELNG	Montoir, Fos	GDF SUEZ	3.6	2005/2025	F.O.B.	
EG-SP	Egypt-Spain	Damietta	EGAS	Spain, other	BPGM	1	2005/2025	"	
EG-SP	"	"	EGAS	Barcelona, Huelva Cartagena, Sagunto	Union Fenosa gas	3.3	2005/2029	"	
EG-USA/UK	Egypt-U.S.A./UK				Petronas	0.72	2005/2010	"	
EG-US	Egypt-U.S.A.	Idku	Egypt LNG T2	Lake Charles, LA	BGGM	3.6	2006/2023	F.O.B.	
EG-US	"	Damietta Petroleum Corporation Egypt Natural Gas Holding Co. (EGAS) PETRONAS	Egyptian General	Lake Charles, LA	BGGM	0.45	2005/2010	"	Extension 2012
EqG-US	Equatorial Guinea - U.S.A.	Equatorial Guinea Train 1, S.A.	Equatorial Guinea	Lake Charles, LA	BGGM	3.4	2007/2023	F.O.B.	
LY-SP	Libya - Spain	Marsa-el-Brega	NOC	Barcelona, Huelva Cartagena, Sagunto	Gas Natural sdg	0.55	1981/2004	F.O.B.	Extension 2012
NIG-F 1	Nigeria-France	Bonny Island	Nigeria LNG	Montoir	GDF SUEZ	0.33	1999/2022	D.E.S.	
NIG-F 2	"	"	"	"	Enel	2.5	"	"	Swap GDFSuez/Enel
NIG I-SP	Nigeria - Spain or USA	"	"	Ba. H.Cart. Bil.	Gas Natural Aprovisionamientos	1.17	1999/2021	"	
NIG II-SP	"	"	"	Ba. H.Cart.	Gas Natural sdg	1.99	2002/2024	"	
NIG III-SP	Nigeria - Spain	"	"	Ba. H.Cart. Bil.Sag.	Endesa	0.75	2005/2025	"	
NIG IV-SP	"	"	"	Ba. H.Cart. Bil.Sag.	Iberdrola	0.38	2005/2025	"	
NIG V-SP	"	"	"	Huelva	Eni	1.15	2006/2028	"	Eni LNG portfolio
	"	Huelva	Transgas	Spain	Eni	0.18	2005-2016	"	Eni LNG portfolio
NIG VII-SP	"	Bonny Island	Gas Natural Aprovisionamientos	Ba. H.Cart. Bil.Sag.	Iberdrola	1	2003	"	
NIG-TR	Nigeria-Turkey	"	"	Marmara Ereğlisi	Botas	0.9	1999/2021	"	
NIG-P	Nigeria-Portugal	"	"	Sines	Transgas S.A.	1.42	2002/2023	"	
NIG-US	Nigeria-USA	"	"	Lake Charles, LA	BGLS	2.3	2004/2023	"	
NIG-US/EU	Nigeria/USA or EU	"	"	US Gulf Coast/ Europe	Total	1.1	2005/2026	"	
NIG- US/MEX	Nigeria-US/Mexico	"	Nigeria LNG	US/GoM	Shell Western LNG	1.13	2007/2026	D.E.S.	
	Nigeria-US/Mexico/Spain	"	Nigeria LNG	Spain/US/GoM	Shell Western LNG	1.51	2009/2028	D.E.S.	
	Nigeria-US/Mexico	"	Nigeria LNG	US/GoM	Shell Western LNG	1.74	2009/2028	D.E.S.	
NO-GoM/EU	Norway - GoM/EU	Hammerfest	Total E&P Norge	Gulf of Mexico / Europe	Total	0.7	2007/2027	"	
NO - EU	Norway-Europe	Hammerfest	GDF SUEZ	Hammerfest	European terminals	0.5	2007/ depletion	F.O.B.	
NO-US	Norway - USA	Hammerfest	StatoilHydro, RWE, Hess, Petoro	Cove Point	Statoil Natural Gas	~1.75	2006/2026	D.E.S.	
NO-SP	Norway - Spain	Hammerfest	StatoilHydro, RWE, Hess, Petoro	Spain	Iberdrola	1.13	2006/2023	D.E.S.	
AE-JP	Abu Dhabi-Japan	Das Island	Adgas Futtsu	Higashi-Ohgishima	Tokyo Electric	4.30	1994/2019	"	
US-JP	U.S.A. - Japan	Kenai	Phillips Marathon Sodegaura	Negishi, Futtsu Tokyo Electric	Tokyo Gas	1.22	1989/2009	"	Extension 2011

\*Duration above four years    \*\*Guangdong Dapeng LNG Company Ltd.

LONG-TERM AND MEDIUM-TERM CONTRACTS IN FORCE IN 2009\* (CONT'D)

Reference	Trade	Export	Seller	Import	Buyer	Nominal quantity ACQ 10 <sup>6</sup> t/year	Duration	Type of contract	Comments
TT-I-SP	T&T - Spain or USA	Point Fortin	Atlantic LNG	Cart.Ba. H. Bil.	Gas Natural Aprovevisionamientos	1.06	1999/2018	F.O.B.	
TT-II-SP	"	Point Fortin	Atlantic 2/3	Cart.Ba. H. Bil.	Gas Natural sdg	0.65	2002/2023	"	
TT-SP	T&T - Spain	Point Fortin	Repsol	Cartagena	Gas Natural sdg	1.13	2006/2023	D.E.S.	
TT-US 1	T&T - U.S.A.	"	Atlantic LNG of T&T	Everett/Penuelas	GDF SUEZ NA	1.63	1999/2018	"	Option to supply
TT-US 2	"	"	Atlantic LNG 2/3	Everett/Penuelas	"	0.34	2000/2020	"	
TT-US 3	"	"	"	USA, Other	BP Gas Marketing	0.8	2002/2021	F.O.B.	
TT-US 4	"	"	PFE, Trinling	Elba Island, GA Lake Charles, LA	BGLS	2.2	2004/2024	"	
TT-US 5	"	"	BP	Elba Island, GA Marketing	Marathon LNG	1.2	2005/2010	D.E.S.	
TT-US	"	"	Atlantic LNG 4	USA, Other	BP	2.5	2006/2025	"	
TT-US	"	"			BG	1.50	2005/2026	"	
TT-US	"	"			NGC	0.58	2006/2026	"	
BR-JP	Brunei-Japan	Lumut	Brunei LNG	Sodegaura, Negishi Senboku, Futtsu Higashi-Ohgishima	Tokyo Gas Osaka Gas Tokyo Electric	6.01	1993/2013	"	
BR-KR	Brunei-Korea	"	"	Pyeong-Taek, In-Chon or Tong-Yeong	Kogas	0.7	1997/2013	"	
MY-JP 1	Malaysia-Japan	Bintulu	Malaysia LNG	Sodegaura Higashi-Ohgishima Futtsu, Negishi	Tokyo Gas Tokyo Electric	7.4	1983/2003	F.O.B./D.E.S.	Extension 2018
MY-JP 2	"	"	"	Niigata	Tohoku Electric	0.50	1996/2016	D.E.S.	Extension 2028
MY-JP 3	"	"	"	Sodeshi	Shizuoka Gas	0.45	1996/2016	"	
MY-JP 6	"	"	"	Fukuoka, Nagasaki	Saibu Gas	0.39	1993/2013	"	
MY-JP 8	"	"	"	Sodegaura Negishi Senboku, Himeji Sakai Chita, Ohgishima	Tokyo Gas Osaka Gas Kansai Electric Toho Gas	2.1	1995/2015	"	
MY-JP 9	"	"	"	Shin-Minato	Gas Bureau, City of Sendai	0.15	1997/2016	"	
MY-JP 10	"	"	Malaysia LNG TIGA	Niigata Explorat <sup>o</sup> Co Ltd	Japan Petroleum	0.48	2002/2021	"	
MY-JP 11	"	"	"	Sodegaura Negishi Ohgishima Chita, Senboku Himeji	Tokyo Gas Toho Gas Osaka Gas	0.68	2004/2024	D.E.S. F.O.B.	
MY-JP 12	"	"	"	Hatsukaichi	Hiroshima Gas 0.032	0.008~0.016	2005/2012 F.O.B.	D.E.S.	
MY-JP 13	"	"	"	Niigata	Tohoku Electric	0.5	2005/2025	"	
MY-JP 14	"	"	"	Chita	Toho Gas	0.52	2007/2027	D.E.S.	
MY-KR 1	Malaysia-Korea	"	Malaysia LNG Dua	Pyeong-Taek In-Chon Tong-Yeong	Kogas	2	1995/2015	F.O.B.	
MY-KR 2	"	"	Malaysia LNG TIGA	"	"	1.5	2003/2010	D.E.S.	
MY-KR 3	"	"	"	"	"	1.5	2008/2028	"	
MY-Ch	Malaysia-China	"	"	Shanghai LNG	Shanghai LNG Co.	3.0	2009/2029	"	
MY-TW	Malaysia-Taiwan	Bintulu	Malaysia LNG Dua	Yung-An	C.P.C.	2.25	1995/2015	"	
ID-JP 1	Indonesia-Japan	Bontang	Pertamina	Senboku Himeji, Chita Tobata, Ohita Sakai Kawagoe Yokkaichi	Kansai Electric Chubu Electric Kyushu Electric Osaka Gas Toho Gas Nippon Steel	8.45	1977/2000	D.E.S.	Extension 2010
ID-JP 2	"	Blang Lancang	"	Higashi-Ohgishima Futtsu, Niigata	Tokyo Electric Tohoku Electric	0.96	2005/2009	F.O.B.	Extension 2011
ID-JP 3	"	Bontang	"	Chita-Senboku Himeji Sakai Yokkaichi Kawagoe	Chubu Electric Kansai Electric Osaka Gas Toho Gas	3.52	1983/2003	"	
ID-JP 8	"	"	"	Senboku Himeji Sodegaura Chita, Ohgishima	Osaka Gas Tokyo Gas Toho Gas	2.31	1994/2013	"	
ID-JP 9	"	"	"	Hatsukaichi Kagoshima Senboku, Himeji	Hiroshima Gas Nippon Gas Osaka Gas	0.39	1996/2015	D.E.S.	
ID-KR 2	"	B L - Bontang	"	"	"	2	1994/2014	F.O.B.	
ID-KR 3	"	Bontang	"	"	"	1	1998/2017	"	
ID-KR 4	"	Tanah Merah	Tangguh PSC Contractor Parties	GwangYang	Posco	0.55	2005/2024	D.E.S.	

\*Duration above four years    \*\*Guangdong Dapeng LNG Company Ltd.

Reference	Trade	Export	Seller	Import	Buyer	Nominal quantity ACQ 10 <sup>6</sup> t/year	Duration	Type of contract	Comments
ID-KR 5	Indonesia-Japan	Tanah Merah	Tangguh PSC Contractor Parties	GwangYang	K-Power	0.6	2006/2026	D.E.S.	
ID-MX1	Indonesia-Mexico	Tanah Merah	Tangguh PSC Contractor Parties	Energia Costa Azul	Sempre LNG	3.7	2008/2029	D.E.S.	
ID-Ch	Indonesia-China		Tangguh PSC Contractor Parties	Fujian	CNOOC	2.6	2009/2033	F.O.B.	
ID-TW 1	Indonesia-Taiwan	Bontang	Pertamina	Yung-An	C.P.C.	1.57	1990/2009	"	
ID-TW 2	"	"	"	Yung-An	C.P.C.	1.84	1998/2017	"	
Q-B	Qatar - Belgium	Ras Laffan	RasGas RasGas II	Zeebrugge	Distrigas EDF Trading	2.05 3.4	2007/2027 2007/2012	" D.E.S.	
Q-I	Qatar-Italy	Ras Laffan	RasGas	Rovigo	Edison	4.6	2009/2034	D.E.S.	
Q-IN	Qatar -India	"	"	Dahej	Petronet LNG	7.5	2004/2028	F.O.B.	
Q-JP 1	Qatar -Japan	"	Qatargas	Chita/Kawagoe Yokkaichi	Chubu Electric	4	1997/2021	"	
Q-JP 2	"	"	"	Niigata Ohgishima Senboku, Himeji Sakai Sodegaura Futtsu, Chita Yanai, Mizushima Higashi-Ohgishima	Tohoku Electric Tokyo Gas Osaka Gas Kansai Electric Tokyo Electric Toho Gas Chugoku Electric	2	1998/2021	"	
Q-KR1	Qatar-Korea	"	RasGas	Pyeong-Taek In-Chon, Tong-Yeong	Kogas	4.92	1999/2024	F.O.B.	
Q-KR2	"	"	RasGas III	"	"	2.1	2007/2026	D.E.S.	
Q-SP	Qatar - Spain	"	Qatargas	Ba.H.Cart.	Gas Natural sdg	0.66	2001/2009	"	Extension 2012
Q-SP	"	"	"	Ba.H.Cart.	Gas Natural sdg	0.66	2002/2007	D.E.S.	
Q-SP	"	"	"	Ba.H.Cart.Sag.	Gas Natural sdg	0.75	2005/2025	"	
Q-SP	"	"	"	Cartagena, Bilbao	Iberdrola	0.88	2003/2022	"	
Q-SP	"	"	RasGas	Barcelona	ENI	0.75	2004/2023	"	
Q-SP	"	"	RasGas II		Endesa	0.74	2005/2025	"	
Q-UE	Qatar - EU	"	Qatargas	EU	Gas Natural sdg	0.75	2006/2025	F.O.B.	
Q-TW	Qatar-Taiwan	Ras Laffan	RasGas II	Taichung	C.P.C.	3.08	2008/2032	F.O.B.	
Q-UK	Qatar - UK	Ras Laffan	Qatargas II TB	South Hook	Total	1.50	2009/2034	D.E.S.	
Q-US	Qatar-US	Ras Laffan	Qatargas II TB	Sabine Pass	Total	1.15	2009/2034	C.I.F.	
Q-Mex	Qatar - Mexique	Ras Laffan	Qatargas II TB	Altamira	Total	0.70	2009/2021	D.E.S.	
Q-France	Qatar - France	Ras Laffan	Qatargas II TB	Fos Cavaou	Total	1.85	2009/2034	D.E.S.	
OM-JP 1	Oman-Japan	Qalhat	Oman LNG	Senboku, Himeji Yanai, Mizushima	Osaka Gas Itochu Corp. Chugoku Electric	0.66 0.7	2000/2024 2006/2020	" D.E.S.	
OM-JP2	"	"	"						
OM-JP3	Oman-Japan/USA	"	"	USA/Futtsu	Mitsubishi Corp Tokyo Electric	0.8	2006/2020	F.O.B./D.E.S.	
OM-JP4	Oman-Japan	"	Qalhat LNG	Senboku	Osaka Gas	0.8	2009/2026	F.O.B.	
OM-KR 1	Oman-Korea	"	"	Pyeong-Taek In-Chon, Tong-Yeong	Kogas	4.06	2000/2024	F.O.B.	
OM-SP	Oman-Spain	"	"	Spain, Other	BPGM	0.77	2004/2009	D.E.S.	
OM-SP	Oman-Spain		Qalhat LNG	Spanish terminals	Union Fenosa Gas	1.65	2006/2025	"	
AU-Ch	Australia - China	Withnell Bay	Woodside Japan Australia LNG Shell Development Australia BHP Billiton Petroleum BP International Chevron Oil Trading CNOOC	Dapeng, Shenzhen	DPLNG**	3.7	2006/2031	F.O.B.	Started in May 06
AU-JP1	Australia-Japan	"	Woodside Japan Australia LNG Shell Development Australia BHP Billiton Petroleum BP International Chevron Oil Trading	Sodegaura, Futtsu Higashi-Ohgishima Chita, Senboku Yanai, Ohita Negishi, Ohgishima Tobata, Yokkaichi Kawagoe Himeji, Sakai Mizushima	Tokyo Electric Chubu Electric Kansai Electric Chugoku Electric Kyushu Electric Tokyo Gas Osaka Gas Toho Gas	7.33	1989/2009	D.E.S.	
AU-JP2	"	"	Woodside Japan Australia LNG	Yanai, Mizushima	Chugoku Electric	1.43	2009/2021	D.E.S.	



LONG-TERM AND MEDIUM-TERM CONTRACTS IN FORCE IN 2009\* (CONT'D)

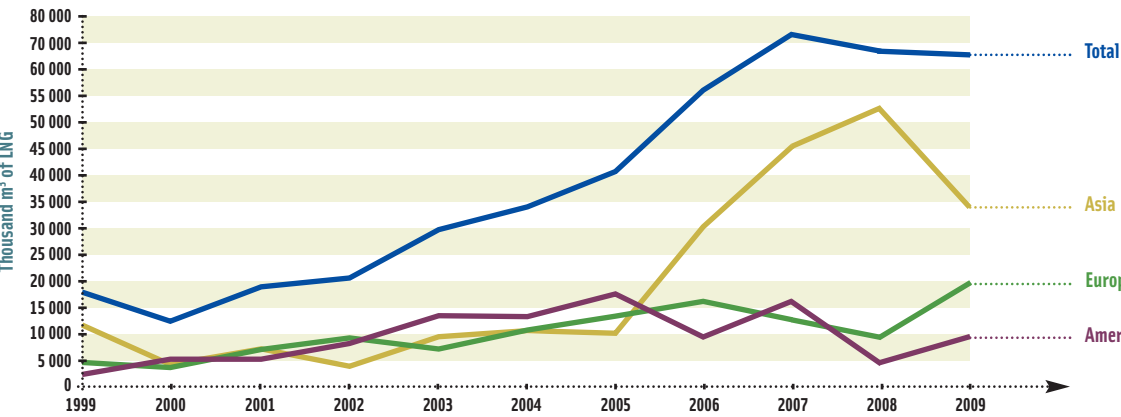
Reference	Trade	Export	Seller	Import	Buyer	Nominal quantity ACQ 10 <sup>6</sup> t/year	Duration	Type of contract	Comments
AU-JP3	Australia-Japan	Withnell Bay	Shell Development Australia BHP Billiton Petroleum	Oita, Tobata	Kyushu Electric	0.7	2009/2017	F.O.B.	
AU-JP4	"	"	BP Development Australia Chevron Oil Trading	Chita, Kawagoe Yokkaichi	Chubu Electric	0.5	2009/2016	D.E.S.	
AU-JP5	"	"	"	Himeji, Sakai	Kansai Electric	0.4	2009/2017	D.E.S.	
AU-JP6	"	"	"	Sodegaura, Futtsu Higashi-Ohgishima	Tokyo Electric	0.3	2009/2017	D.E.S.	
AU-JP7	"	"	"	Chita	Toho Gas	0.76	2009/2019	D.E.S.	
AU-JP8	"	"	"	Sodegaura, Negishi Ohgishima	Tokyo Gas	0.5	2009/2017	D.E.S.	
AU-JP9	"	"	"	Senboku, Himeji	Osaka Gas	0.5	2009/2015	D.E.S.	
AU-JP10	"	"	"	Sodegaura Negishi, Ohgishima Chita	Tokyo Gas Toho Gas	1.37	2004/2029	F.O.B.	
AU-JP11	"	"	"	Himeji Senboku	Osaka Gas	1.00	2004/2033	"	
AU-JP12	"	"	"	Sodeshi	Shizuoka Gas	0.13	2004/2029	"	
AU-JP13	"	"	"	Niigata	Tohoku Electric	0.4	2005/2020	"	
AU-JP14	"	"	"	Oita, Tobata	Kyushu Electric	0.5	2006/2021	D.E.S.	
AU-JP15	"	Darwin	"	Chita	Chubu Electric	0.6	2009/2020	D.E.S.	
AU-JP15	"	Darwin	Conocophillips, ENI Santos, Inpex, TTSR	Himeji, Sakai Futtsu, Sodegaura Negishi, Ohgishima Higashi-Ohgishima	Kansai Electric Tokyo Electric Tokyo Gas	0.5 2 1	2009/2015 2006/2022	D.E.S. F.O.B.	
AU-KR	Australia-Korea	Withnell Bay	Woodside Japan Australia LNG Shell Development Australia BHP Billiton Petroleum BP International Chevron Oil Trading	In-Chon, Tong-Yeong	Kogas	0.5	2003/2010	D.E.S.	
Ru-JP1	Russia-Japan	Prigorodnoye	Sakhalin Energy Investment	Futtsu, Sodegaura Higashi-Ohgishima	Tokyo Electric	1.5	2007/2029	F.O.B.	
Ru-JP2	"	"	"	Sodegaura, Negishi Ohgishima	Tokyo Gas	1.1	2007/2031	F.O.B.	
Ru-JP3	"	"	"	Hatsukaichi	Hiroshima Gas	0.21	2008/2028	F.O.B.	
Ru-JP4	"	"	"	Senboku, Himeji	Osaka Gas	0.2	2008/2031	F.O.B.	
Ru-JP5	"	"	"	Oita, Tobata	Kyushu Electric	0.5	2009/2031	D.E.S.	
Ru-JP5	"	"	"	Chita,	Toho Gas	0.5	2009/2033	D.E.S.	
Ru-KR	Russia-Korea	Sakhalin	Sakhalin Energy	Pyeong-Taek In-Chon, Tong-Yeong	Kogas	1.5	2008/2028	F.O.B.	
Ru-Mex	Russia-Mexico	Sakhalin	SEIC	Energia Costa Azul	Gazprom Global LNG Shell Eastern LNG	1	2009/2028	D.E.S.	
Y-US	Yemen-US	Balhaf	Yemen LNG	Sabine Pass	TGPL	2	2009/2029	D.E.S.	
Y-KR	Yemen-Korea	Balhaf	Yemen LNG	Pyeong-Taek In-Chon, Tong-Yeong	Kogas	2	2008/2028	F.O.B.	
Ptf-KR	Portfolio-Korea	Portfolio including Equatorial Guinea	BG	"	"	1.3	2008/2016	D.E.S.	

\*Duration above four years    \*\*Guangdong Dapeng LNG Company Ltd.

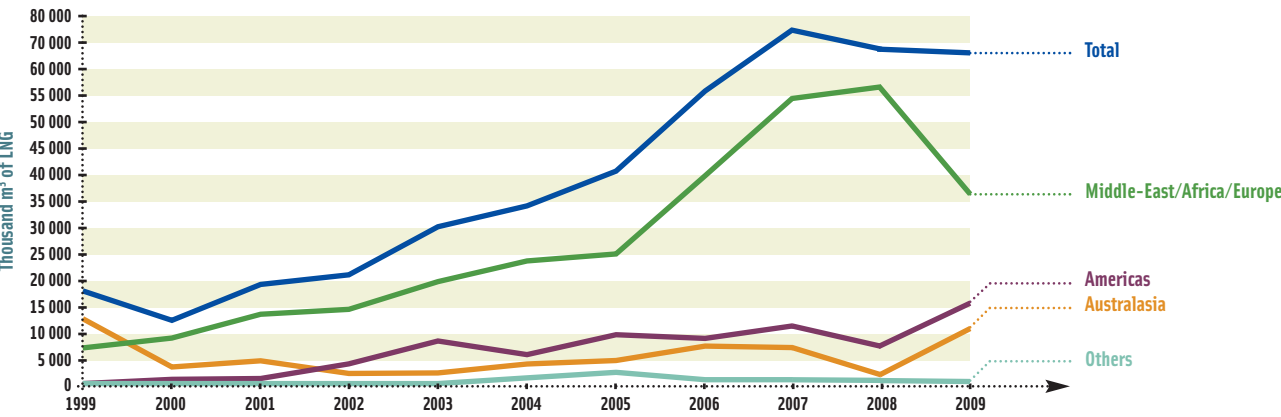
SPOT & SHORT-TERM QUANTITIES (10<sup>3</sup> m<sup>3</sup> liq) RECEIVED IN 2009  
BY THE IMPORTING COUNTRIES FROM THE EXPORTING COUNTRIES

	Algeria	Egypt	Equat. Guin.	Nigeria	Norway	Trinidad & Tobago	Abu Dhabi	Oman	Qatar	Yemen	Australia	U.S.A.	Indonesia	Malaysia	Russia	Other	Total Import
Belgium				143	284	130			287								844
France	101	148	133	140	217	1 209			142		136						2 226
Greece		418				75											493
Italy	232								207								439
Portugal	190		138	143		682	138										1 291
Spain *	681	3 782		1 651	683	901			281							125	8 104
Turkey		140				139		132	150								561
UK		250			143	2 201			3 152		131						5 877
Europe	1 204	4 738	271	2 077	1 327	5 337	138	132	4 219		267					125	19 835
Argentina		275				1 195											1 470
Brazil				126		629											755
Canada		132				137			209								478
Chile			524			255			273								1 052
Domin Rep																	-
Mexico		275				263											538
Puerto Rico						303											303
USA		1 062		119		3 381			385								4 947
Americas		1 744	524	245		6 163			867								9 543
China		135	136	137		134		143			269			534	426	144	2 058
India	257	552	139	514		1 190	266	562	3 008		1 801		138	413	1 098		9 938
Japan		409	2 624	1 324		244	693	419	3 523		271	978		784	1 276		12 545
Korea	136	270		537		1 551		554		146	870			277	1 130		5 471
Taiwan	-	114	1 120	1 509		137		131			689			149	265		4 114
Asia	393	1 480	4 019	4 021		3 256	959	1 809	6 531	146	3 900	978	138	2 157	4 195	144	34 126
Kuwait						391		126			134			138	685	143	1 617
Middle East						391		126			134			138	685	143	1 617
Total export	1 597	7 962	4 814	6 343	1 327	15 147	1 097	2 067	11 617	146	4 301	978	138	2 295	4 880	412	65 121

SPOT & SHORT-TERM LNG IMPORTS OVER THE LAST TEN YEARS (10<sup>3</sup> m<sup>3</sup> liq)



SPOT & SHORT-TERM LNG EXPORTS OVER THE LAST TEN YEARS (10<sup>3</sup> m<sup>3</sup> liq)



SEA TRANSPORTATION ROUTES

Reference	Contracts	Export	Import	Miles
Az-Bn	DZ-SP	Arzew	Barcelona	343
Az-F	DZ-F1	Arzew	Fos Tonkin	530
Az-H	DZ-SP	Arzew	Huelva	691
Ba-Al	DZ-TR2	Bethioua	Aliaga	1 404
Ba-Bn	DZ-SP 1/2/3	Bethioua	Barcelona	343
Ba-Bo	DZ-SP 1	Bethioua	Bilbao	1 118
Ba-Ca	DZ-SP 1/2/3	Bethioua	Cartagena	113
Ba-Dj	DZ-IN	Bethioua	Dahej	4 775
Ba-FC	DZ-F	Bethioua	Fos Cavaou	520
Ba-F	DZ-F 3	Bethioua	Fos Tonkin	530
Ba-Ha	DZ-IN	Bethioua	Hazira	4 791
Ba-H	DZ-SP 1/2/3	Bethioua	Huelva	373
Ba-IG	DZ-UK	Bethioua	Isle of Grain	1 675
Ba-ME	DZ-TR 1	Bethioua	Marmara Ereglisi	1 500
Ba-M	DZ-F 3	Bethioua	Montoir	1 260
Ba-P	DZ-1 1/2/3	Bethioua	Panigaglia	690
Ba-Rg	DZ-SP	Bethioua	Reganosa	945
Ba-Rv	DZ-GR	Bethioua	Revithoussa	1 270
Ba-So	DZ-SP	Bethioua	Sagunto	243
Ba-Si	DZ-P	Bethioua	Sines	568
Sk-Ca	DZ-SP	Skikda	Cartagena	388
Sk-F	DZ-F 2	Skikda	Fos Tonkin	400
Sk-H	DZ-SP	Skikda	Huelva	716
Sk-P	DZ-1 2/3	Skikda	Panigaglia	456
Sk-RV	DZ-GR	Skikda	Revithoussa	920
Da-At	EG-MEX	Damietta	Altamira	6 733
Da-Bn	EG-SP	Damietta	Barcelona	1 554
Da-Bo	EG-SP	Damietta	Bilbao	2 732
Da-Ct	EG-Ca	Damietta	Canaport	4 864
Da-Ca	EG-SP	Damietta	Cartagena	1 662
Da-Ch	EG-JP	Damietta	Chita	7 879
Da-CP	EG-US	Damietta	Cove Point	5 291
Da-Dj	EG-IN	Damietta	Dahej	3 142
Da-El	EG-US	Damietta	Elba Island	5 559
Da-H	EG-SP	Damietta	Huelva	1 984
Da-Kw	EG-JP	Damietta	Kawagoe	7 882
Da-LC	EG-US	Damietta	Lake Charles	6 690
Da-IG	EG-UK	Damietta	Isle of Grain	3 232
Da-Fp	EG-US	Damietta	Port Freeport	4 940
Da-Rg	EG-SP	Damietta	Reganosa	2 581
Da-SP	EG-US	Damietta	Sabine Pass	6 608
Da-So	EG-SP	Damietta	Sagunto	1 645
Da-Ta	EG-TW	Damietta	Taichung	7 132
Da-TY	EG-KR	Damietta	Tong-Yeong	7 617
Ik-At	EG-MEX	Idku	Altamira	6 612
Ik-BB	EG-ARG	Idku	Bahia Blanca	7 415
Ik-Bn	EG-SP	Idku	Barcelona	1 491
Ik-Bo	EG-SP	Idku	Bilbao	2 668
Ik-Ca	EG-SP	Idku	Cartagena	1 595
Ik-Dj	EG-IN	Idku	Dahej	3 273
Ik-Dg	EG-CN	Idku	Dapeng, Shenzhen	6 665
Ik-El	EG-US	Idku	Elba Island	5 495
Ik-E	EG-US	Idku	Everett	4 867
Ik-FC	EG-F	Idku	Fos Cavaou	1 430
Ik-F	EG-F	Idku	Fos Tonkin	1 435
Ik--GG	EG-US	Idku	Gulf Gateway	6 495
Ik-Hj	EG-JP	Idku	Himeji	7 911
Ik-H	EG-SP	Idku	Huelva	1 920
Ik-IC	EG-KR	Idku	In-Chon	7 768
Ik-IG	EG-UK	Idku	Isle of Grain	3 232
Ik-LC	EG-US	Idku	Lake Charles	6 514
Ik-ME	EG-TR	Idku	Marmara Ereglisi	748
Ik-M	EG-F	Idku	Montoir	2 771
Ik--NG	EG-US	Idku	North East Gateway	4 852
Ik-PT	EG-KR	Idku	Pyeong-Taek	7 764
Ik-RV	EG-GR	Idku	Revithoussa	540
Ik-So	EG-SP	Idku	Sagunto	1 571
Bk-Dg	EqG-CN	Bioko Island	Dapeng, Shenzhen	9 516
BK-Hj	EqG-JP	Bioko Island	Himeji	10 781
Bk-IC	EqG-KR	Bioko Island	In-Chon	10 651
BK-M	EqG-F	Bioko Island	Montoir	4 137
BK-Nt	EqG-JP	Bioko Island	Niigata	11 058
Bk-Og	EqG-JP	Bioko Island	Ohgishima	10 897
Bk-PT	EqG-KR	Bioko Island	Pyeong-Taek	10 648
Bk-Qr	EqG-CL	Bioko Island	Quintero	6 752
Bk-Sa	EqG-JP	Bioko Island	Sakai	10 758
Bk-Si	EqG-P	Bioko Island	Sines	3 449
Bk-Ta	EqG-TW	Bioko Island	Taichung	10 032
Bk-Tb	EqG-JP	Bioko Island	Tobata	10 591
Bk-TY	EqG-KR	Bioko Island	Tong-Yeong	10 578
Bk-Yg	EqG-TW	Bioko Island	Yung-An	9 657
Bi-At	NIG-MEX	Bonny Island	Altamira	6 214
Bi-Bn	NIG-SP	Bonny Island	Barcelona	3 824
Bi-Bo	NIG-SP	Bonny Island	Bilbao	3 914
Bi-Ca	NIG-SP	Bonny Island	Cartagena	3 574
Bi-Ch	NIG-JP	Bonny Island	Chita	10 602
Bi-CP	NIG-US	Bonny Island	Cove Point	5 256
Bi-Dj	NIG-IN	Bonny Island	Dahej	7 136
Bi-Dg	NIG-CN	Bonny Island	Dapeng, Shenzhen	9 328
Bi-Gy	NIG-KR	Bonny Island	Gwangyang	10 542
Bi-Ha	NIG-IN	Bonny Island	Hazira	7 053
Bi-Hj	NIG-JP	Bonny Island	Himeji	10 790

Reference	Contracts	Export	Import	Miles
Bi-H	NIG-SP	Bonny Island	Huelva	3 359
Bi-IC	NIG-KR	Bonny Island	In-Chon	10 390
Bi-LC	NIG-US	Bonny Island	Lake Charles	6 111
Bi-ME	NIG-TR	Bonny Island	Marmara Ereglisi	5 059
Bi-M	NIG-F	Bonny Island	Montoir	3 980
Bi-Ni	NIG-JP	Bonny Island	Niigata	11 014
Bi-Pc	NIG-BR	Bonny Island	Pecem	2 811
Bi-Rg	NIG-SP	Bonny Island	Reganosa	3 746
Bi-SO	NIG-SP	Bonny Island	Sagunto	3 686
Bi-SP	NIG-US	Bonny Island	Sabine Pass	6 227
Bi-Sa	NIG-JP	Bonny Island	Sakai	10 767
Bi-Sb	NIG-JP	Bonny Island	Senboku	10 767
Bi-Si	NIG-P	Bonny Island	Sines	3 417
Bi-TY	NIG-KR	Bonny Island	Tong-Yeong	10 354
Bi-Yg	NIG-TW	Bonny Island	Yung-An	9 440
Hm-At	NO-MEX	Hammerfest	Altamira	5 571
Hm-Ba	NO-SP	Hammerfest	Barcelona	3 155
Hm-Ca	NO-SP	Hammerfest	Cartagena	2 885
Hm-Bo	NO-SP	Hammerfest	Bilbao	2 045
Hm-CP	NO-US	Hammerfest	Cove Point	3 975
Hm-Dn	NO-UK	Hammerfest	Dragon	1 599
Hm-H	NO-SP	Hammerfest	Huelva	2 594
Hm-IG	NO-IG	Hammerfest	Isle of Grain	1 423
Hm-M	NO-F	Hammerfest	Montoir	1 889
MB-Bn	LY-SP	Marsa-el-Brega	Barcelona	1 068
MB-Ca	LY-SP	Marsa-el-Brega	Cartagena	1 175
MB-H	LY-SP	Marsa-el-Brega	Huelva	1 496
MB-So	LY-SP	Marsa-el-Brega	Sagunto	1 139
DI-Dj	AE-IN	Das Island	Dahej	1 227
DI-Fu	AE-JP	Das Island	Futtsu	6 290
DI-Ha	AE-IN	Das Island	Hazira	1 188
DI-HO	AE-JP	Das Island	Higashi-Ohgishima	6 310
DI-Si	AE-P	Das Island	Sines	5 237
K-Ni	US-JP	Kenai	Negishi	3 290
K-Sd	US-JP	Kenai	Sodegaura	3 300
PF-At	TT-MEX	Point Fortin	Altamira	2 220
PF-BB	TT-ARG	Point Fortin	Bahia Blanca	4 628
PF-Bn	TT-SP	Point Fortin	Barcelona	3 976
PF-Bo	TT-SP	Point Fortin	Bilbao	3 669
PF-Cr	TT-US	Point Fortin	Cameron	2 201
PF-Ct	TT-Ca	Point Fortin	Canaport	2 150
PF-Ca	TT-SP	Point Fortin	Cartagena	3 701
PF-Dj	TT-IN	Point Fortin	Dahej	8 463
PF-CP	TT-US	Point Fortin	Cove Point	1 879
PF-Dn	TT-UK	Point Fortin	Dragon	3 734
PF-El	TT-US	Point Fortin	Elba Island	1 690
PF-E	TT-US	Point Fortin	Everett	2 032
PF-Fj	TT-CN	Point Fortin	Fujian	13 007
PF-Fu	TT-JP	Point Fortin	Futtsu	13 919
PF-GB	TT-BR	Point Fortin	Guanabara Bay	3 245
PF-GG	TT-US	Point Fortin	Gulf Gateway	2 133
PF-Gy	TT-KR	Point Fortin	Gwangyang	9 452
PF-Ha	TT-IN	Point Fortin	Hazira	8 428
PF-H	TT-SP	Point Fortin	Huelva	3 417
PF-IC	TT-KR	Point Fortin	In-Chon	9 685
PF-IG	TT-UK	Point Fortin	Isle of Grain	4 064
PF-LC	TT-US	Point Fortin	Lake Charles	2 251
PF-ME	TT-TR	Point Fortin	Marmara Ereglisi	5 232
PF-MA	TT-KW	Point Fortin	Mina Al Ahmadi	10 541
PF-M	TT-F	Point Fortin	Montoir	1 618
PF-Pc	TT-BR	Point Fortin	Pecem	1 732
PF-Pn	TT-PR	Point Fortin	Penuelas	560
PF-Fp	TT-US	Point Fortin	Port Freeport	2 280
PF-PC	TT-DR	Point Fortin	Punta Caucedo	679
PF-PT	TT-KR	Point Fortin	Pyeong-Taek	9 685
PF-Or	TT-CL	Point Fortin	Quintero	7 051
PF-Rg	TT-SP	Point Fortin	Reganosa	3 452
PF-RV	TT-GR	Point Fortin	Revithoussa	4 965
PF-SP	TT-US	Point Fortin	Sabine Pass	2 248
PF-So	TT-SP	Point Fortin	Sagunto	3 858
PF-Sa	TT-JP	Point Fortin	Sakai	13 721
PF-Si	TT-P	Point Fortin	Sines	3 315
PF-Ts	TT-UK	Point Fortin	Teeside	4 195
PF-TY	TT-KR	Point Fortin	Tong-Yeong	9 303
PF-Yg	TT-TW	Point Fortin	Yung-An	10 174
PF-Z	TT-B	Point Fortin	Zeebrugge	3 985
Lu-Fu	BR-JP	Lumut	Futtsu	2 390
Lu-HO	BR-JP	Lumut	Higashi-Ohgishima	2 423
Lu-Hj	BR-JP	Lumut	Himeji	2 999
Lu-IC	Br-KR	Lumut	In-Chon	2 850
Lu-Ni	BR-JP	Lumut	Negishi	2 416
Lu-PT	BR-KR	Lumut	Pyeong-Taek	2 850
Lu-Sb	BR-JP	Lumut	Senboku	2 405
Lu-Sd	BR-JP	Lumut	Sodegaura	2 430
Lu-TY	BR-KR	Lumut	Tong-Yeong	2 014
Bu-Ch	MY-JP 8	Bintulu	Chita	2 395
Bu-Dj	MY-IN	Bintulu	Dahej	3 337
Bu-Dg	MY-CN	Bintulu	Dapeng, Shenzhen	1 256
Bu-Fk	MY-JP 6	Bintulu	Fukuoka	2 160
Bu-Fu	MY-JP 1	Bintulu	Futtsu	2 505
Bu-Gy	MY-KR	Bintulu	Gwangyang	2 152
Bu-Hk	MY-JP 1	Bintulu	Hatsukaichi	2 208

Reference	Contracts	Export	Import	Miles
Bu-HO	MY-JP 1	Bintulu	Higashi-Ohgishima	2 530
Bu-Hj	MY-JP	Bintulu	Himeji	2 400
Bu-IC	MY-KR	Bintulu	In-Chon	2 124
Bu-MA	MY-KW	Bintulu	Mina Al Ahmadi	4 479
Bu-Mz	MY-JP	Bintulu	Mizushima	2 335
Bu-Nk	MY-JP 6	Bintulu	Nagasaki	2 151
Bu-Ni	MY-JP 1/8	Bintulu	Negishi	2 513
Bu-Nt	MY-JP 2	Bintulu	Niigata	2 511
Bu-Og	MY-JP 1/8	Bintulu	Ohgishima	2 530
Bu-PT	MY-KR	Bintulu	Pyeong-Taek	2 124
Bu-Sa	MY-JP 8	Bintulu	Sakai	2 376
Bu-Sb	MY-JP 8	Bintulu	Senboku	2 376
Bu-St	MY-CN	Bintulu	Shanghai Mengtougou	1 942
Bu-SG	MY-CN	Bintulu	Shanghai	1 942
Bu-Sd	MY-JP 1/8	Bintulu	Sodegaura	2 515
Bu-Sh	MY-JP 3	Bintulu	Sodeshi	2 378
Bu-SM	MY-JP 9	Bintulu	Shin-Minato	2 603
Bu-TY	MY-KR	Bintulu	Tong-Yeong	1 674
Bu-Yg	MY-TW	Bintulu	Yung-An	1 350
Bt-Ch	ID-JP1/3/8/12	Bontang (Badak)	Chita	2 500
Bt-Fj	ID-CN	Bontang (Badak)	Fujian	1 856
Bt-Gy	ID-KR	Bontang (Badak)	Gwangyang	2 331
Bt-Hk	ID-JP 9	Bontang (Badak)	Hatsukaichi	2 412
Bt-Ha	ID-IN	Bontang (Badak)	Hazira	4 003
Bt-Hj	ID-JP 1/3/8	Bontang (Badak)	Himeji	2 400
Bt-IC	ID-KR 1/2/7	Bontang (Badak)	In-Chon	2 493
Bt-Kg	ID-JP 9	Bontang (Badak)	Kagoshima	2 211
Bt-Kw	ID-JP 1/3/11	Bontang (Badak)	Kawagoe	2 510
Bt-Ni	ID-JP 1/3/8	Bontang (Badak)	Negishi	2 573
Bt-Og	ID-JP 8	Bontang (Badak)	Ohgishima	2 560
Bt-Or	ID-JP 1	Bontang (Badak)	Oita	2 413
Bt-PT	ID-KR 1/2/7	Bontang (Badak)	Pyeong-Taek	2 493
Bt-Sa	ID-JP	Bontang (Badak)	Sakai	2 385
Bt-Sb	ID-JP 1/3/8	Bontang (Badak)	Senboku 2	2 385
Bt-Sd	ID-JP 8	Bontang (Badak)	Sodegaura	2 566
Bt-Sh	ID-JP	Bontang (Badak)	Sodeshi	6 465
Bt-Tb	ID-JP 1	Bontang (Badak)	Tobata	2 370
Bt-TY	ID-KR 1/2/7	Bontang (Badak)	Tong-Yeong	2 043
Bt-Yk	ID-JP 1/3	Bontang (Badak)	Yokkaichi	2 510
Bt-Yg	ID-TW	Bontang (Badak)	Yung-An	1 455
BL-Fj	ID-CN	Blang Lancang (Arun)	Fujian	2 489
BL-Gy	ID-KR	Blang Lancang (Arun)	Gwangyang	2 548
BL-HO	ID-JP 2	Blang Lancang (Arun)	Higashi-Ohgishima	3 456
BL-Nt	ID-JP 2	Blang Lancang (Arun)	Niigata	3 496
BL-IC	ID-KR 1/2/7	Blang Lancang (Arun)	In-Chon	3 149
BL-PT	ID-KR 1/2/7	Blang Lancang (Arun)	Pyeong-Taek	3 149
BL-TY	ID-KR 1/2/7	Blang Lancang (Arun)	Tong-Yeong	2 699
Tg-EC	ID-MEX	Tangguh	Energia Costa Azul	6 850
Tg-Fj	ID-CN	Tangguh	Fujian	2 227
Tg-Gy	ID-KR	Tangguh	Gwangyang	2 548
RL-Al	Q-TR	Ras Laffan	Aliaga	3 722
RL-At	Q-MEX	Ras Laffan	Altamira	9 922
RL-Bn	Q-SP	Ras Laffan	Barcelona	4 710
RL-Bo	Q-SP	Ras Laffan	Bilbao	5 925
RL-Cr	Q-US	Ras Laffan	Cameron	9 680
RL-Ct	Q-Ca	Ras Laffan	Canaport	8 007
RL-Ca	Q-SP	Ras Laffan	Cartagena	4 817
RL-Ch	Q-JP 1	Ras Laffan	Chita	6 446
RL-Dj	Q-IN	Ras Laffan	Dahej	1 290
RL-Dg	Q-CH	Ras Laffan	Dapeng, Shenzhen	5 098
RL-Fu	Q-JP 1	Ras Laffan	Futtsu	6 508
RL-Ha	Q-IN	Ras Laffan	Hazira	1 236
RL-HO	Q-JP	Ras Laffan	Higashi-Ohgishima	6 544
RL-Hj	Q-JP 2	Ras Laffan	Himeji	6 350
RL-H	Q-SP	Ras Laffan	Huelva	5 134
RL-IC	Q-KR	Ras Laffan	In-Chon	6 156
RL-IG	Q-UK	Ras Laffan	Isle of Grain	6 428
RL-Kw	Q-JP 1	Ras Laffan	Kawagoe	6 448
RL-Mz	Q-JP 1	Ras Laffan	Mizushima	6 428
RL-M	Q-F	Ras Laffan	Montoir	6 015
RL-Nt	Q-JP 2	Ras Laffan	Niigata	6 640
RL-P	Q-I	Ras Laffan	Panigaglia	4 774
RL-PT	Q-KR	Ras Laffan	Pyeong-Taek	6 156
RL-Rg	Q-SP	Ras Laffan	Reganosa	5 689
RL-Qr	Q-CL	Ras Laffan	Quintero	10 040
RL-Ro	Q-I	Ras Laffan	Rovigo	4 438
RL-SP	Q-US	Ras Laffan	Sabine Pass	9 796
RL-So	Q-SP	Ras Laffan	Sagunto	4 719
RL-Sa	Q-JP	Ras Laffan	Sakai	6 347
RL-Sb	Q-JP 2	Ras Laffan	Senboku	6 347
RL-Sd	Q-JP 2	Ras Laffan	Sodegaura	6 576
RL-Su	Q-UK	Ras Laffan	South Hook	6 137
RL-Ta	Q-TW	Ras Laffan	Taichung	5 229
RL-TY	Q-KR	Ras Laffan	Tong-Yeong	5 706
RL-Ya	Q-JP 2	Ras Laffan	Yanai	6 170
RL-Yg	Q-TW	Ras Laffan	Yung-An	5 230
RL-Yk	Q-JP 1	Ras Laffan	Yokkaichi	6 448
RL-Z	Q-B	Ras Laffan	Zeebrugge	6 277
Qt-Al	Om-TR	Qalhat	Aliaga	3 185
Qt-Bn	Om-SP	Qalhat	Barcelona	4 159
Qt-Bo	Om-SP	Qalhat	Bilbao	5 429
Qt-Ca	Om-SP	Qalhat	Cartagena	4 260



# LIQUEFACTION PLANTS



Idku by night

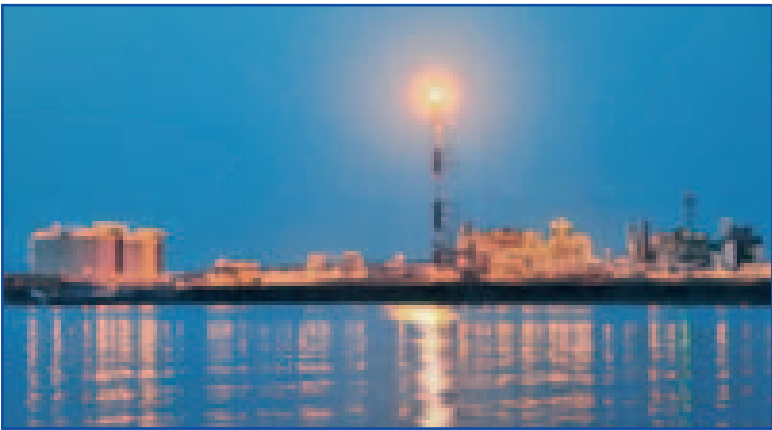
Country	Site	Liquefaction		Storage		Owner	Operator	Buyer	Start-up date
		Number of trains	Nominal capacity 10 <sup>6</sup> t per year	Number of tanks	Total capacity m <sup>3</sup>				
ATLANTIC BASIN									
Algeria	Arzew GL 4Z	3	0.93	3	33 000	Sonatrach	Sonatrach	DEPA GDF SUEZ	1964
	Arzew (Bethioua) GL 1Z	6	8.19	3	300 000	"	"	GDF SUEZ Botas Eni Gas & Power Edison Gas Shell Statoil Endesa DEPA CEPSA NA...	1978
	GL 2Z	6	7.98	3	300 000	"	"		1981
	Skikda GL 1K	3	3.13	5	308 000	"	"	GDF SUEZ DEPA Eni Gas & Power	1972
Egypt	Damietta	1	5.00	2	300 000	SEGAS	SEGAS SERVICES	Union Fenosa Gas EGAS (BP, BG& Petronas)	2005
	Idku	2	7.20	2	280 000	Egyptian LNG EGPC, EGAS, BG GDF SUEZ, Petronas	Egyptian LNG EGPC, EGAS, BG GDF SUEZ, Petronas	GDF SUEZ BGGM-BGLT	2005
Equatorial Guinea	Bioko Island	1	3.70	2	272 000	Marathon, Sonagas, Mitsui, Marubeni	Marathon	BG Gas Marketing	2007
Libya	Marsa-el-Brega	3	0.60	2	96 000	Sirte Oil Co.	Sirte Oil Co.	Gas Natural	1970
Nigeria	Bonny Island	3	9.60	3	252 600	Nigeria LNG (NNPC, Shell, Total, ENI)	Nigeria LNG Ltd	Enel Gas Natural Botas GDF SUEZ Ren Atlantico	1999
		2	8.10			"	"	BGLT -BGGM Shell Iberdrola Endesa Ren Atlantico Total Eni Gas & Power	2000 2006
		1	4.00	1	84 200	"	"	Total, Shell	2008
Norway	Hammerfest	1	4.30	2	250 000	StatoilHydro, Petoro, Total, GDF SUEZ, RWE-DEA, Hess	StatoilHydro	Total, StatoilHydro, GDF SUEZ, Iberdrola	2007
Trinidad & Tobago	Point Fortin	4	15.10	4	520 000	BP, BG, Repsol, GDF SUEZ	Atlantic LNG	DOMAC Marathon LNG Marketing EcoElectrica BP Energy AES Shell North America LNG Statoil Gas Natural Distrigas Excelerate Energy	1999

Country	Site	Liquefaction		Storage		Owner	Operator	Buyer	Start-up date
		Number of trains	Nominal capacity 10 <sup>6</sup> t per year	Number of tanks	Total capacity m <sup>3</sup>				
MIDDLE - EAST									
Abu Dhabi	Das Island	3	5.60	3	240 000	Adgas (ADNOC, BP, Total, Mitsui)	Adgas	Tokyo Electric Power	1977
Oman	Qalhat	2	7.10	2	240 000	Oman LNG (Oman Govt, Shell, Total, Korea LNG, Mitsubishi Mitsui, Partex, Itochu)	Oman LNG	Kogas Itochu Osaka Gas BP	2000
		1	3.60			Qalhat LNG (Omani Government, Oman LNG, Itochu, Mitsubishi, Union Fenosa Gas, Osaka Gas)	Oman LNG	Mitsubishi Osaka Gas Union Fenosa Gas	2006
Qatar	Ras Laffan Train 1-2 Train 3	2 1	9.90	4	340 000	Qatargas (QP, ExxonMobil, Total, Marubeni, Mitsui)	Qatargas I	Chubu Electric Osaka Gas Tokyo Gas Toho Gas Tohoku Electric Tokyo Electric Kansai Electric Chugoku Electric Gas Natural	1997-1998 1999
	Train 4 (Qatargas II TA) Train 5 (Qatargas II TB)	1	7.80	5	725 000	(Qatar Petroleum, Exxon Mobil)	Qatargas II	South Hook Gas	2009
		1	7.80			(Qatar Petroleum, Total, Exxon Mobil)	Qatargas II	TGPL South Hook Gas	2009
		2	6.60	2	280 000	RasGas (QP, ExxonMobil, Koras, Itochu, Nissho Iwai) LNG Japan)	RasGas I	Kogas Others (non-members) Distrigas	1999-2000
		1 1 1 1	4.70 4.70 4.70 7.80				RasGas II RasGas III	Petronet LNG	2004 2005 March 2007 August 2009
Yemen	Balhaf	1	3.35	2	140 000	Yemen LNG (Total, Kogas, Yemen Gas Co, Hunt Oil Co., SK Corporation, Hyundai, GASSP1)	Yemen LNG	Kogas GDF Suez TGPL	November 2009

PACIFIC BASIN									
Australia	Withnell Bay	4	11.50	4	260 000	NWS LNG JV (Woodside, Shell, BHP BP Australia, Chevron Mitsubishi/Mitsui)	Woodside	Tokyo Electric Chubu Electric Kansai Electric Chugoku Electric Kyushu Electric Tokyo Gas Osaka Gas Shizuoka Gas Tohoku Electric Nippon Gas Kogas Shell Hazira Gas DPLNG	1989
		1	4.30	1	65 000	Woodside, Shell, BHP, BP, Chevron, Australia Japan LNG (MiMi) 16.67% each			2008
	Darwin	1	3.00	1	188 000	Darwin LNG (ConocoPhillips, Eni, Santos, Inpex TEPCO, TG)	ConocoPhillips	Tokyo Electric Tokyo Gas	2006
Brunei	Lumut	5	7.20	3	195 000	Brunei LNG (Brunei Govt, Shell, Mitsubishi)	Brunei LNG Sdn Bhd	Tokyo Gas Tokyo Electric Osaka Gas Kogas	1973 1997
U.S.A.	Kenai	2	1.40	3	108 000	ConocoPhillips Marathon	ConocoPhillips Marathon	Tokyo Gas Tokyo Electric	1969
Indonesia	Blang Lancang Arun	3	4.75	4	508 800	Pertamina	PT Arun NGL Co. (Pertamina, ExxonMobil JILCO)	Tokyo Electric Kogas	1978- 1979 1984 1986
	Bontang Badak Badak A B	8	22.20	6	630 000	Pertamina	PT Badak NGL Co. (Pertamina, VICO, Total, JILCO)	Kansai Electric Chubu Electric Kyushu Electric Osaka Gas Toho Gas Nippon Steel Co.	1977

LIQUEFACTION PLANTS (CONT'D)

Country	Site	Liquefaction		Storage		Owner	Operator	Buyer	Start-up date
		Number of trains	Nominal capacity 10 <sup>6</sup> t per year	Number of tanks	Total capacity m <sup>3</sup>				
PACIFIC BASIN (CONT'D)									
Indonesia	Badak C D							Kansai Electric Chubu Electric Osaka Gas Toho Gas	1983
	Badak E							C.P.C.	1990
	Badak F							Tokyo Gas Osaka Gas Toho Gas Hiroshima Gas Nippon Gas	1994
	Badak G							Kogas	1998
	Badak H							C.P.C.	1998
	Tangguh	2	7.60	2	340 000	Government of Indonesia	BP	Posco K-Power Semptra LNG CNOOC Fujian LNG Tohoku Electric	2009
Malaysia	Bintulu MLNG 1	3	8.10			Malaysia LNG Sdn Bhd: (Petronas, Shell, Mitsubishi)	Malaysia LNG Sdn Bhd	Tokyo Gas Tokyo Electric Saibu Gas	1983
	Bintulu MLNG 2	3	7.80	Satu +Dua +Tiga 6	Satu +Dua +Tiga 445 000	Malaysia LNG Dua (Petronas, Shell, Mitsubishi, Sarawak State Gov.)	Malaysia LNG Dua	Tokyo Gas Osaka Gas Kansai Electric Toho Gas Shizuoka Gas Tohoku Electric Gas Bureau, City of Sendai Saibu Gas Kogas C.P.C.	1995
	Bintulu MLNG 3	2	6.80			Malaysia LNG Tiga (Petronas, Shell, Nippon oil, Diamond Gas, Sarawak State Gov.)	Malaysia LNG Tiga	Tokyo Gas Osaka Gas Toho Gas Tohoku Electric Japex Hiroshima Gas Kogas C.P.C.	2003
Russia	Sakhalin II	2	9.55	2	200 000	Sakhalin Energy Investment Company (Gazprom, Shell, Mitsui, Mitsubishi)	Sakhalin Energy Investment Company	Gazprom Global LNG Shell Eastern Trading Kogas Chubu Electric Hiroshima Gas Kyushu Electric Osaka Gas Saibu Gas Toho Gas Tohoku Electric Tokyo Electric Tokyo Gas	2009
Total		90	245.68	82	7 900 600				



^ Sakhalin by night

REGASIFICATION PLANTS



^ In-Chon Receiving Terminal

Country	Site	Storage		Send out		Owner	Operator	T.P.A.	Source of import	Start-up date
		Number of tanks	Total capacity m <sup>3</sup>	Number of vaporizers (*)	Nominal capacity billion Nm <sup>3</sup> NG/year					
France	Fos-sur-Mer	3	150 000	15	7.00	Elengy	Elengy	Yes	Algeria, Egypt	1972
	Montoir-de-Bretagne	3	360 000	11	10.00	Elengy	Elengy	Yes	Algeria, Nigeria, Egypt, T&T, Norway, Qatar	1980
	Fos-Cavaou	3	330 000	4	8.25	Société du Terminal Méthanier de Fos-Cavaou	"	"	Algeria, Egypt Qatar	2009 Commercial operation in 2010
Spain	Barcelona	6	540 000	13	17.08	Enagas S.A.	Enagas S.A.	"	Algeria, Libya, Qatar Nigeria, T&T, Egypt, Norway, Oman	1969
	Huelva	4	460 000	9	11.8	Enagas S.A.	Enagas S.A.	"	Algeria, Libya, Norway, Oman, Yemen, T&T, Nigeria, Qatar, Egypt	1988
	Cartagena	4	437 000	9	11.8	Enagas S.A.	Enagas S.A.	"	Algeria, Libya, Qatar, Oman, Nigeria, T&T, Egypt, Norway	1989
	Bilbao	2	300 000	4	7.00	Enagas, Repsol Deutsche Bank, EVE	Bahia de Bizkaia Gas, SL (BBG)	"	Algeria, Egypt, Nigeria Norway, T&T, Qatar, Oman	2003
	Reganosa	2	300 000	3	3.60	Union Fenosa Gas, Gas Natural-Union Fenosa Endesa, Xunta Galicia, Sonatrach, Tojeiro Group Galician Government Caixa Galicia, Banco Pastor Caixanova	Reganosa	Regulated T.P.A.	Algeria, Nigeria, T&T Oman, Qatar,	2007
	Sagunto	3	450 000	5	8.76	Union Fenosa gas RREEF Alternative Investments Endesa Oman oil holding Spain	Saggas	Regulated T.P.A.	Algeria, Libya, Qatar, T&T Nigeria, Oman, Egypt	2006
Italy	Panigaglia	2	100 000	4	3.32	GNL Italia S.p.A.**	GNL Italia S.p.A.**	Yes	Algeria, Qatar	1969
	Rovigo (Atlantic LNG)			5	8.0	Adriatic LNG	Adriatic LNG	Yes - 20%	Qatar	2009
Belgium	Zeebrugge	4	380 000	11	9.00	Fluxys LNG	Fluxys LNG	Yes	Qatar, Egypt, Norway, T&T, Nigeria	1987
Turkey	Marmara Ereglisi	3	255 000	7	6.20	Botas	Botas	No	Algeria, Nigeria	1994
	Aliaga/Izmir	2	280 000	5	6.00	Egegaz	Egegaz	No	Algeria	2006
Greece	Revithoussa	2	130 000	6	5.00	Depa S.A.	Depa S.A.	No	Algeria	2000
Portugal	Sines	2	240 000	5	5.20	Ren Atlantico	Ren Atlantico	Yes	Nigeria, T&T, Equatorial Guinea	2004

\*Not including back-up capacity      \*\*Floating Storage Regasification Vessel      \*\*\*GNL Italia is a wholly-owned subsidiary of Snam Rete Gas



REGASIFICATION PLANTS (CONT'D)

Country	Site	Storage		Send out		Owner	Operator	T.P.A.	Source of import	Start-up date
		Number of tanks	Total capacity m³	Number of vaporizers (*)	Nominal capacity billion Nm³ NG/year					
United-Kingdom	Isle of Grain	7	800 000	10	13.50	National Grid	Grain LNG	Yes (but not RTPA)	Algeria, Egypt, Qatar, Trinidad & Tobago, Norway, Australia, Trinidad & Tobago	2005
	Teesside				4.60	Excelerate Energy				2007
	Dragon	2	320 000	6	6.00	Dragon LNG	Dragon LNG	Yes	Various	2009
	South Hook	5	775 000	15	21.00	Qatar Petroleum LNG Services (QG II) Ltd. (QP)	South Hook LNG Terminal Company Ltd	yes	Qatar	2009
Canada	Canaport LNG	3	160 000	8	10.00	Repsol Energy Canada Ltd (74.25%) Irving Canaport LP Company Limited (24.75%) Repsol Canada Ltd (0.75%) Irving Canaport GP Company Limited (0.25%)	Repsol Canada Ltd	Yes non-regulated		2009
U.S.A.	Everett	2	155 000	4	6.90	Distrigas of Mass. Co.	GDF SUEZ LNG North America	Yes	Trinidad & Tobago	1971
	Lake Charles	4	425 000	14	18.60	Trunkline LNG	Trunkline LNG	Yes	Nigeria, Egypt	1982
	Elba Island	5	550 000	11	39.90	Southern LNG	El Paso	Yes	T&T, Egypt	1978 restarted 2001 expanded 2006
	Cove Point	5	380 000	10	10.74	Dominion Cove Point LNG	Dominion Cove Point LNG	Shell, BP, Statoil, Peakers 1/4 each	Trinidad & Tobago, Egypt	1978 restarted 2003
	Cove Point Expansion	2	320 000	15	8.00	Dominion Cove Point LNG	Dominion Cove Point LNG	Statoil-Hydro	Norway	2008
	Gulf Gateway				4.60	Excelerate Energy			Trinidad & Tobago	2005
	Northeast Gateway				4.60	Excelerate Energy			Trinidad & Tobago	2008
	Sabine Pass	3	480 000	16	27.00	Cheniere Energy	Cheniere Energy	Total, Chevron, CMI	Qatar, Nigeria	2008
	Freeport LNG	2	330 694	7	18.00	Freeport LNG Development, L.P.	Freeport LNG Development, L.P.	Yes	Trinidad & Tobago, Egypt	2008
	Cameron LNG	3	480 000	10	15.50	Sempra	Sempra	Yes	Qatar, Trinidad & Tobago	2009
Dominican Rep.	Punta Caucedo	1	160 000	2	2.32	AES Andres	AES Andres	No	Trinidad & Tobago	2003
Mexico	Altamira	2	300 000	5	7.80	Terminal de LNG de Altamira (50% Shell, 25% Total, 25% Mitsui)	Terminal de LNG de Altamira	No	Nigeria, Egypt, Qatar, T&T	August 2006
	Energia Costa Azul	2	320 000	6	10.33	Energia Costa Azul (100% Sempra LNG)	Energia Costa Azul	Yes	Qatar, Trinidad & Tobago	May 2008
Puerto Rico	Penuelas	1	160 000	2	3.75	EcoElectrica	EcoElectrica		Trinidad & Tobago	2000
Argentina	Bahia Blanca (floating terminal)			6	3.00	Repsol YPF	YPF		Trinidad & Tobago, Egypt	June 2008
Brazil	Pecem**			2	2.50	Petrobras	Transpetro	No	Trinidad & Tobago, Nigeria	2009
	Guanabara Bay**			2	5.00	Petrobras	Transpetro	No	Trinidad & Tobago, Nigeria	2009
Chile	Quintero	3	344 000	3	3.65	GNL Quintero S.A.	GNL Quintero S.A.	No	Trinidad & Tobago, Qatar, Equatorial Guinea	2009
Kuwait	Mina Al Ahmadi **				7.07	KNPC	Excelerate Energy, KNPC		Australia, Malaysia, Russia, Trinidad & Tobago, Oman	2009
China	Dapeng, Shenzhen	3	480 000	7	4.90	GDLNG	GDLNG	No	Australia, Qatar, Egypt, Nigeria, Equatorial Guinea, Malaysia, Sakhalin, Oman	2006
	Fujian	2	320 000		3.70	Fujian LNG (CNOOC 60%, Fujian nv. & Dev. Corp; 40%)	Fujian LNG	No	Egypt , Equatorial Guinea	2008
	Shanghai, Yangshan (Ximentang Isle)	3	495 000		1.50	Shanghai LNG (CNOOC 45%, Shenergy Group Ltd 55%)	Shanghai LNG		Malaysia	2009
	Shanghai, Mengtougou	3	120 000			Shangai Gas Group	Shangai Gas Group		Malaysia	2008

\*Not including back-up capacity      \*\*Floating Storage Regasification Vessel      \*\*\*GNL Italia is a wholly-owned subsidiary of Snam Rete Gas

Country	Site	Storage		Send out		Owner	Operator	T.P.A.	Source of import	Start-up date
		Number of tanks	Total capacity m³	Number of vaporizers (*)	Nominal capacity billion Nm³ NG/year					
India	Dahej	4	592 000	19	12.50	Petronet LNG	Petronet LNG	Yes (on cargo by cargo basis)	Qatar, Algeria, Egypt, Australia, Oman, T&T	2004 Expansion in July 2009
	Hazira	2	320 000	5	3.40	Hazira LNG Private Ltd (74% Shell, 26% Total)	Hazira LNG Private Ltd	No	Nigeria, Egypt, Algeria, Oman, Qatar, Qatar/Belgium, Australia, T&T, Abu Dhabi, Norway, Equatorial Guinea	April 2005
Japan	Niigata	8	720 000	14	11.60	Nihonkai LNG	Nihonkai LNG	Yes	Indonesia, Malaysia, Qatar, Australia	1984
	Higashi-Ohgishima	9	540 000	9	18.00	Tokyo Electric	Tokyo Electric	"	Indonesia, Malaysia, Qatar, Australia, Oman, Abu Dhabi, Brunei, Darwin, Russia	1984
	Futtsu	10	1 110 000	13	26.00	"	"	"	Indonesia, Malaysia, Qatar, Australia, Oman, Abu Dhabi, Brunei, Darwin, Russia	1985
	Chita Kyodo	4	300 000	14	9.89	Toho Gas Chubu Elec	Toho Gas	"	Indonesia, Malaysia, Australia, Qatar	1978
	Chita-Midorihamama Works	2	400 000	7	9.20	Toho Gas	Toho Gas	"	Indonesia, Malaysia, Australia, Qatar	2001
	Chita	7	640 000	11	15.70	Chita LNG	Chita LNG	"	Indonesia, Malaysia, Australia, Qatar, Algeria	1983
	Himeji	8	740 000	6	6.40	Osaka Gas	Osaka Gas	"	Indonesia, Malaysia, Australia, Qatar, Oman, Brunei	1984
	Himeji LNG	7	520 000	8	11.00	Kansai Electric	Kansai Electric	"	Indonesia, Malaysia, Qatar, Australia	1979
	Yanai	6	480 000	5	3.10	Chugoku Elec	Chugoku Electric	"	Australia, Qatar, Oman	1990
	Mizushima	1	160 000	3	1.30	Mizushima LNG	Mizushima LNG	Yes	Australia, Qatar, Oman	2006
	Oita	5	460 000	6	6.27	Oita LNG	Oita LNG	"	Indonesia, Australia, Russia, Algeria	1990
	Sakai	3	420 000	6	8.70	Kansai Electric	Kansai Electric	Yes	Indonesia, Malaysia, Australia, Qatar	2006
	Senboku I	4	180 000	5	2.94	Osaka Gas	Osaka Gas	Yes	Brunei	1972
	Senboku II	18	1 585 000	15	15.70	"	"	"	Indonesia, Malaysia, Australia, Qatar, Oman, Brunei, Russia	1977
	Tobata	8	480 000	9	10.28	Kita Kyushu	Kita Kyushu LNG	No	Indonesia, Australia, Sakhalin, Equatorial Guinea, Qatar	1977
	Yokkaichi LNG Centre	4	320 000	8	9.20	Chubu Electric	Chubu Electric	Yes	Indonesia, Qatar, Australia	1988
	Yokkaichi Works	2	160 000	3	0.88	Toho Gas	Toho Gas	"	Indonesia	1991
	Negishi	14	1 180 000	16	15.40	Tokyo Gas, Tokyo Electric	Tokyo Gas, Tokyo Electric	Negotiated TPA	Indonesia, Malaysia, Australia, Qatar, USA, Brunei, Russia	1969
	Sodegaura	35	2 660 000	36	41.60	"	"	Negotiated TPA	Indonesia, Malaysia, Australia, Qatar, USA, Brunei, Russia	1973
	Ohgishima	3	600 000	10	12.40	Tokyo Gas	Tokyo Gas	Negotiated TPA	Indonesia, Malaysia, Australia, Qatar	1998
	Fukuoka	2	70 000	7	1.10	Saibu Gas	Saibu Gas	"	Malaysia	1993
	Sodeshi	3	337 200	8	3.90	Shimizu LNG	Shimizu LNG	No	Malaysia, Australia, Qatar, Nigeria, Indonesia	1996
	Hatsukaichi	2	170 000	4	1.15	Hiroshima Gas	Hiroshima Gas	"	Indonesia, Malaysia, Russia	1996
	Kagoshima	2	86 000	3	0.30	Nippon Gas	Nippon Gas	"	Indonesia, Australia	1996
	Kawagoe	4	480 000	4	7.10	Chubu Electric	Chubu Electric	Yes	Indonesia, Australia, Qatar	1997
	Shin-Minato	1	80 000	3	0.38	Gas Bureau	Gas Bureau, City of Sendai	No	Malaysia	1997
	Nagasaki	1	35 000	3	0.20	Saibu Gas	Saibu Gas	Yes	"	2003
Korea	Pyeong-Taek	14	1 560 000	31	40.28	Kogas	Kogas	No	Indonesia, Malaysia, T&T, Brunei, Qatar, Oman, Egypt, Australia, Algeria, Nigeria, Equatorial Guinea	1986
	Incheon	20	2 680 000	33	40.99	"	"	"	"	1996
	Tong-Yeong	12	1 680 000	12	20.72	"	"	"	"	2002
	Gwangyang	2	200 000	2	2.30	Posco	Posco	"	Nigeria, Oman, Malaysia, Australia, Indonesia	2005
Taiwan	Yung-An	6	690 000	16	23.00	C.P.C.	C.P.C.	No	Indonesia, Malaysia	1990
	Taichung	3	480 000	6	9.00	C.P.C.	C.P.C.	No	Qatar	2009
TOTAL		344	35 701 894	637	784.05					

\*Not including back-up capacity      \*\*Floating Storage Regasification Vessel      \*\*\*GNL Italia is a wholly-owned subsidiary of Snam Rete Gas

# DELIVERY DATE

# OF THE LNG TANKERS

## 1969

- LNG Palmaria
- SCF Arctic (ex Methane Arctic)
- SCF Polar (ex Methane Polar)

## 1970

- LNG Elba

## 1971

- Mel (ex Hassi R'Mel)

## 1972

- Bebatik

## 1973

- Bekalang
- Bekulan
- Norman Lady

## 1974

- Belais
- Margaret Hill  
(ex Hoegh Galleon)
- Tellier

## 1975

- Annabella
- Belanak
- Bilis
- Bubuk
- Hilli
- Isabella

## 1976

- Gimi
- Mostefa Ben Boulaid

## 1977

- Gandria (ex Hoegh Gandria)
- Golar Freeze
- Larbi Ben M'Hidi
- LNG Aquarius
- LNG Aries
- LNG Lagos (ex Gastor)
- LNG Port Harcourt
- Transgas (ex Edouard L.D.)

## 1978

- Galeomma (ex Arzew)
- LNG Capricorn
- LNG Delta (ex Southern)
- LNG Gemini
- LNG Leo
- Methania

## 1979

- Bachir Chihani
- LNG Libra
- LNG Taurus
- LNG Virgo
- Matthew (ex Gamma)

## 1980

- LNG Abuja (ex Louisiana)
- LNG Edo (ex Lake Charles)
- Mourad Didouche

## 1981

- Golar Spirit
- LNG Bonny
- Ramdane Abane
- Tenaga Dua
- Tenaga Empat
- Tenaga Lima

## 1982

- Tenaga Satu
- Tenaga Tiga

## 1983

- Banshu Maru
- Bishu Maru
- Echigo Maru

## 1984

- Dewa Maru
- Kotowaka Maru
- LNG Finima
- Senshu Maru

## 1985

- Wakaba Maru

## 1989

- Ekaputra
- NW Sanderling
- NW Swallow
- NW Swift

## 1990

- NW Snipe

## 1991

- NW Shearwater

## 1992

- NW Seaeagle

## 1993

- Aman Bintulu
- Arctic Spirit (ex Arctic Sun)
- LNG Flora
- NW Sandpiper
- Polar Spirit (ex Polar Eagle)

## 1994

- Al Khaznah
- Dwiputra
- Hyundai Utopia
- LNG Vesta
- NW Stormpetrel
- Puteri Intan
- Shahamah
- YK Sovereign

## 1995

- Ghasha
- Hanjin Pyeong-Taek
- Ish
- Puteri Delima
- Puteri Nilam

## 1996

- Al Zubarah
- Hyundai Greenpia
- Mraweh
- Mubaraz
- Puteri Zamrud
- Surya Aki
- Hispania Spirit  
(ex Fernando Tapias)
- LNG Rivers
- LNG Sokoto
- Puteri Delima Satu
- Puteri Intan Satu

## 1997

- Al Hamra
- Al Khor
- Al Rayyan
- Al Wajbah
- Aman Sendai
- LNG Portovenere
- Puteri Firus
- Umm Al Ashtan
- British Innovator
- British Merchant
- BW Suez Boston  
(ex Berge Boston)
- BW Suez Everett  
(ex Berge Everett)
- Castillo de Villalba  
(ex Inigo Tapias)
- Catalunya Spirit  
(ex Inigo Tapias)
- Energy Frontier

## 1998

- Al Wakrah
- Aman Hakata
- Broog
- LNG Lerici
- Zekreet
- Al Wakrah
- Arctic Discoverer
- Arctic Lady
- Arctic Princess
- Arctic Voyager
- Bluesky
- Energy Progress
- Excelerate
- GDF SUEZ Global Energy  
(ex Gaz de France Energy)
- Golar Maria (ex Granosa)
- Iberica Knutsen

## 1999

- Al Bidda
- Doha
- Hanjin Muscat
- Hyundai Technopia
- SK Summit

## 2000

- Al Jasra
- Golar Mazo
- Hanjin Ras Laffan
- Hanjin Sur
- Hyundai Aquapia
- Hyundai Cosmopia
- Hyundai Oceanpia
- K Acacia
- K Freesia
- LNG Jamal
- SK Splendor
- SK Stellar
- SK Supreme
- Surya Satsuma

## 2001

- Sohar LNG (ex Lakshimi)

## 2002

- Abadi
- British Trader
- Excalibur
- Galea
- Gallina
- Hispania Spirit  
(ex Fernando Tapias)
- LNG Rivers
- LNG Sokoto
- Puteri Delima Satu
- Puteri Intan Satu

## 2003

- British Innovator
- British Merchant
- BW Suez Boston  
(ex Berge Boston)
- BW Suez Everett  
(ex Berge Everett)
- Castillo de Villalba  
(ex Inigo Tapias)
- Catalunya Spirit  
(ex Inigo Tapias)
- Energy Frontier
- Excel
- Granatina
- LNG Bayelsa
- Methane Princess
- Pacific Notus
- Puteri Nilam Satu
- SK Sunrise

## 2004

- Berge Arzew
- Bilbao Knutsen
- Cadiz Knutsen
- Disha
- Dukhan
- Fuwairit
- Galicia Spirit
- Gemmata
- Golar Winter
- Lala Fatma N'Soumer
- LNG Akwa Ibom
- LNG River Orashi
- Madrid Spirit
- Maersk Ras Laffan
- Methane Kari Elin
- Muscat LNG
- NW Swan
- Puteri Firus Satu
- Puteri Zamrud Satu
- Raahi
- Ibra LNG
- Ibri LNG
- LNG Benue
- LNG Berge Oyo
- LNG Dream
- LNG Lokoja
- LNG River Niger
- Maersk Qatar
- Methane Jane Elizabeth
- Methane Lydon Volney
- Methane Rita Andrea
- Pacific Eurus
- Provalys
- Seri Amanah
- Seri Anggun
- Seri Angkasa
- Simaisma

## 2005

- Al Deebeel
- Al Thakhira
- Energy Advance
- Excellence
- Excelsior
- Gracilis (ex Golar Viking)
- Grandis (ex Golar Mist)
- LNG Adamawa
- LNG Cross River
- LNG Enugu
- LNG Pioneer
- Lusail
- Maran Gas Asclepius
- Nizwa LNG
- Puteri Mutiara Satu
- Salalah LNG
- Seri Alam
- Umm Bab

## 2006

- Al Marrouna
- Arctic Discoverer
- Arctic Lady
- Arctic Princess
- Arctic Voyager
- Bluesky
- Energy Progress
- Excelerate
- GDF SUEZ Global Energy  
(ex Gaz de France Energy)
- Golar Maria (ex Granosa)
- Iberica Knutsen
- Al Deebeel
- Al Thakhira
- Energy Advance
- Excellence
- Excelsior
- Gracilis (ex Golar Viking)
- Grandis (ex Golar Mist)
- LNG Adamawa
- LNG Cross River
- LNG Enugu
- LNG Pioneer
- Lusail
- Maran Gas Asclepius
- Nizwa LNG
- Puteri Mutiara Satu
- Salalah LNG
- Seri Alam
- Umm Bab

## 2007

- Al Areesh
- Al Daayen
- Al Gattara
- Al Gharrafa
- Al Ghariya
- Al Jassasiya
- Al Ruwais
- Al Safliya
- British Emerald
- Celestine River
- Cheikh El Mokrani
- Clean Energy
- Clean Power
- Duhail
- Ejnan
- Gaselys
- Grace Acacia
- Grace Barleria
- Grand Elena
- LNG Borno
- LNG Kano
- LNG Ogun
- LNG Ondo
- Maran Gas Coronis
- Methane Alison Victoria
- Methane Heather Sally
- Methane Nile Eagle
- Methane Shirley Elisabeth
- Neo Energy
- Seri Ayu
- Seri Bakti
- Seri Begawan
- Sestao Knutsen
- Sun Arrows
- Tembek

## 2008

- Al Aamniya
- Al Ghuwairiya
- Al Hamla
- Al Huwaila
- Al Kharsaah
- Al Khuwair
- Al Oraiq
- Al Sahla
- Al Shamal
- Al Thumama
- Al Utouriya
- Alto Acrux
- British Diamond
- British Ruby
- British Sapphire
- Bu Samra
- Cheikh Bouamara
- Clean Force
- Dapeng Moon
- Dapeng Sun
- Ebisu
- Energy Navigator
- Explorer
- Fraiha
- Grace Cosmos
- Grand Aniva
- Grand Mereya
- Hyundai Ecopia
- K Jasmine
- K Mugungwha
- LNG Barka
- LNG Imo
- Maersk Arwa
- Maersk Marib
- Maersk Methane
- Mozah
- Murwab
- Seri Balhaf
- Seri Bijaksana
- STX Colt
- Tangguh Batur
- Tangguh Foja
- Tangguh Hiri
- Tangguh Jaya
- Tangguh Towuti
- Trinity Arrow
- Umm Al Amad
- Umm Slal
- Abdel Kader
- Al Dafna
- Al Ghashamiya
- Al Kharaana
- Al Kharaitiyat
- Al Khattiya
- Al Mafyar
- Al Mayeda
- Al Nuaman
- Al Rekayyat
- Al Sadd
- Al Samriya
- Al Sheehaniya
- Aseem
- Ben Badis
- BW GDF SUEZ Brussels
- BW GDF SUEZ Paris
- Cygnus Passage
- Dapeng Star
- Energy Confidence
- Express
- Exquisite
- GDF SUEZ Neptune
- Lijmiliya
- LNG Jupiter
- Maersk Magellan
- Mekaines
- Mesaimmer
- Min Lu
- Min Rong
- Onaiza
- Pacific Enlighten
- Seri Balqis
- Shagra
- Taitar n° 1
- Taitar n°2
- Tangguh Palung
- Tangguh Sago
- Trinity Glory
- Woodside Donaldson

## 2009

- Abdel Kader
- Al Dafna
- Al Ghashamiya
- Al Kharaana
- Al Kharaitiyat
- Al Khattiya
- Al Mafyar
- Al Mayeda
- Al Nuaman
- Al Rekayyat
- Al Sadd
- Al Samriya
- Al Sheehaniya
- Aseem
- Ben Badis
- BW GDF SUEZ Brussels
- BW GDF SUEZ Paris
- Cygnus Passage
- Dapeng Star
- Energy Confidence
- Express
- Exquisite
- GDF SUEZ Neptune
- Lijmiliya
- LNG Jupiter
- Maersk Magellan
- Mekaines
- Mesaimmer
- Min Lu
- Min Rong
- Onaiza
- Pacific Enlighten
- Seri Balqis
- Shagra
- Taitar n° 1
- Taitar n°2
- Tangguh Palung
- Tangguh Sago
- Trinity Glory
- Woodside Donaldson





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