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LNG Markets
GDF SUEZ and its LNG activities

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Paris

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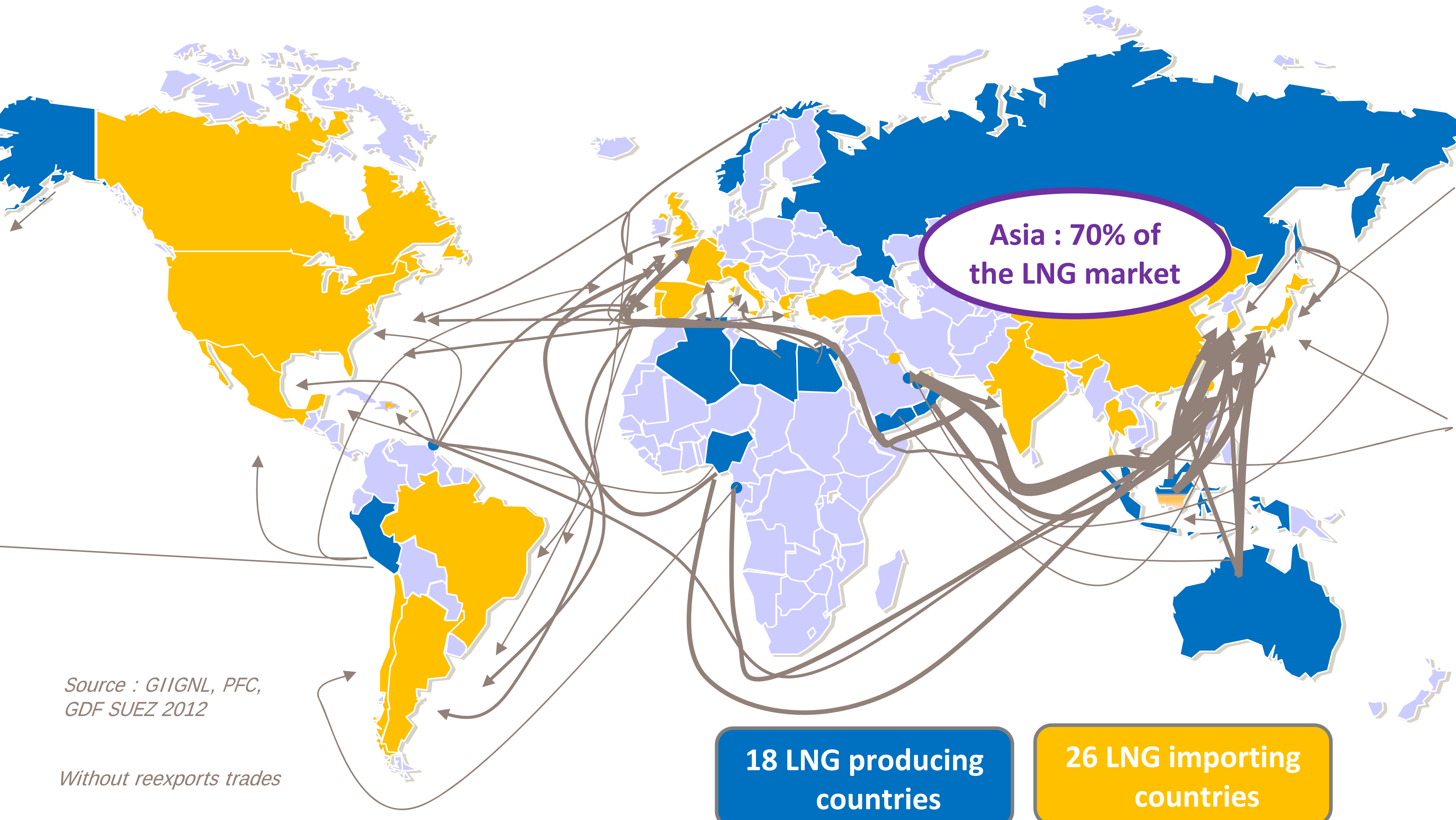
LNG producing and importing countries - main flows in 2012

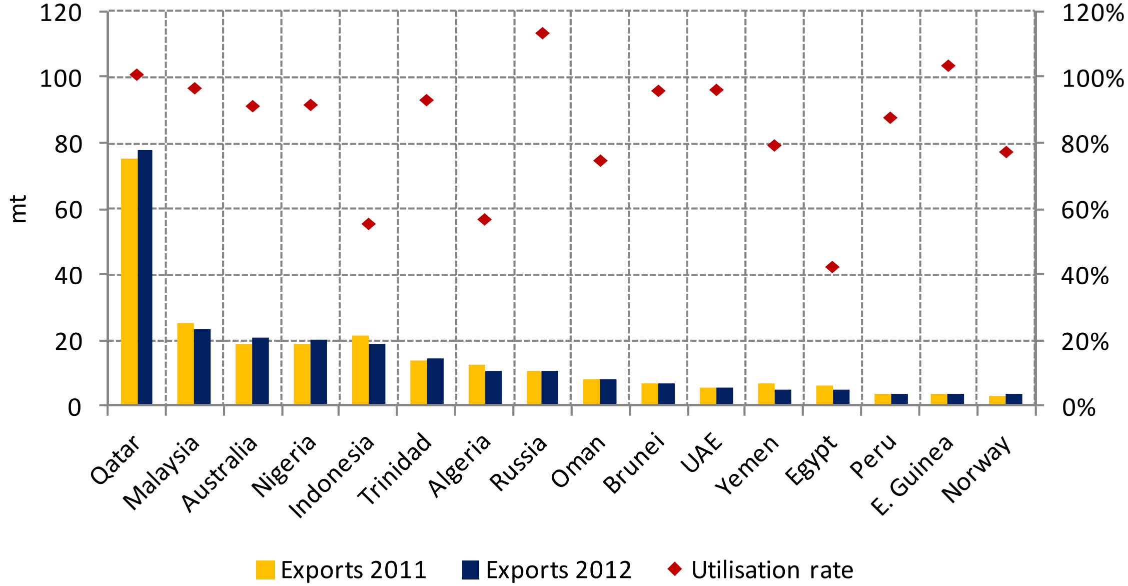
GDF SUEZ

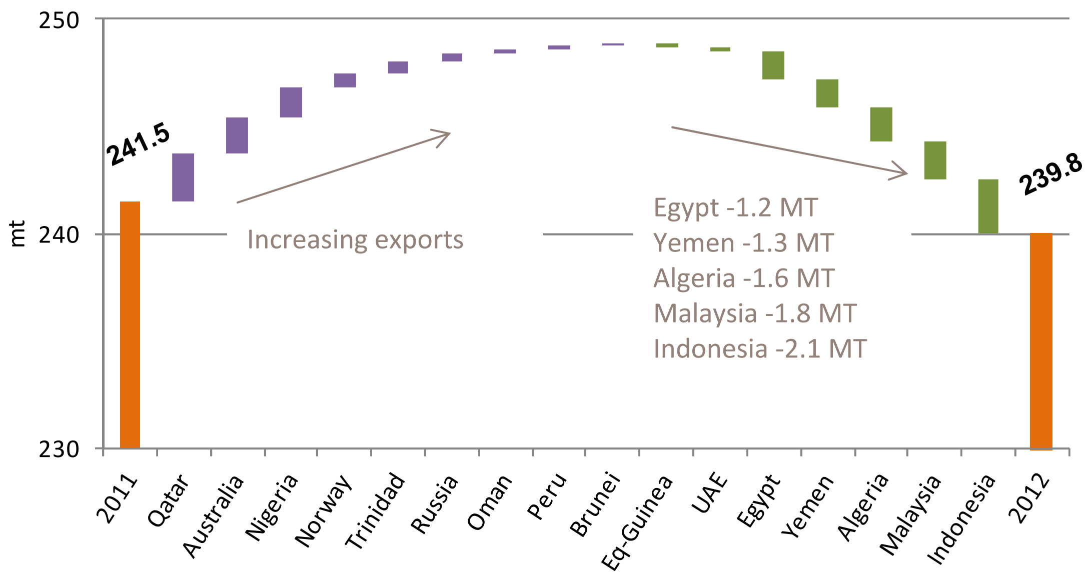


Source : GIIGNL, PFC, GDF SUEZ 2012

Without reexports trades

LNG exports: 2012 vs 2011 Analysis

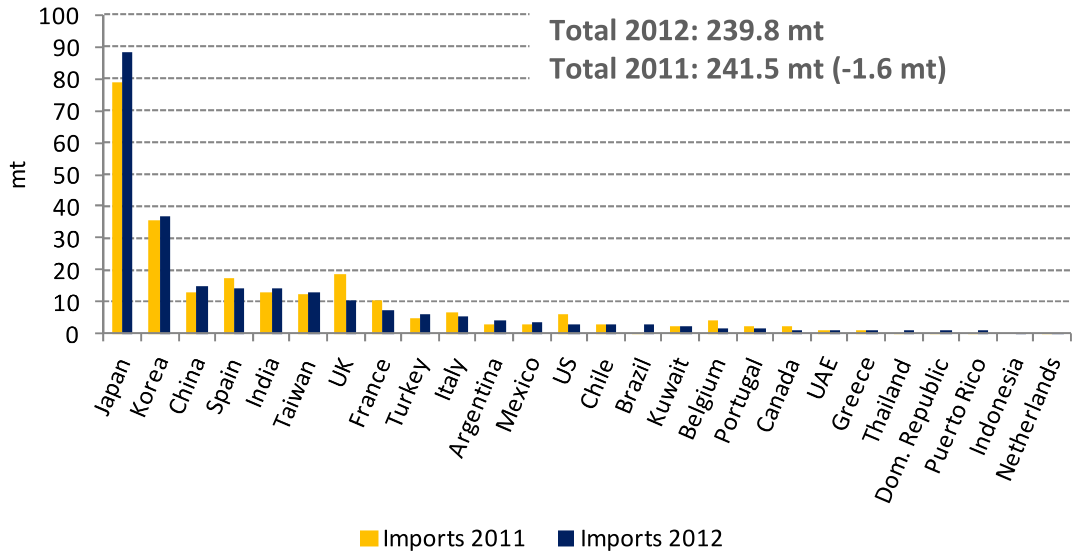


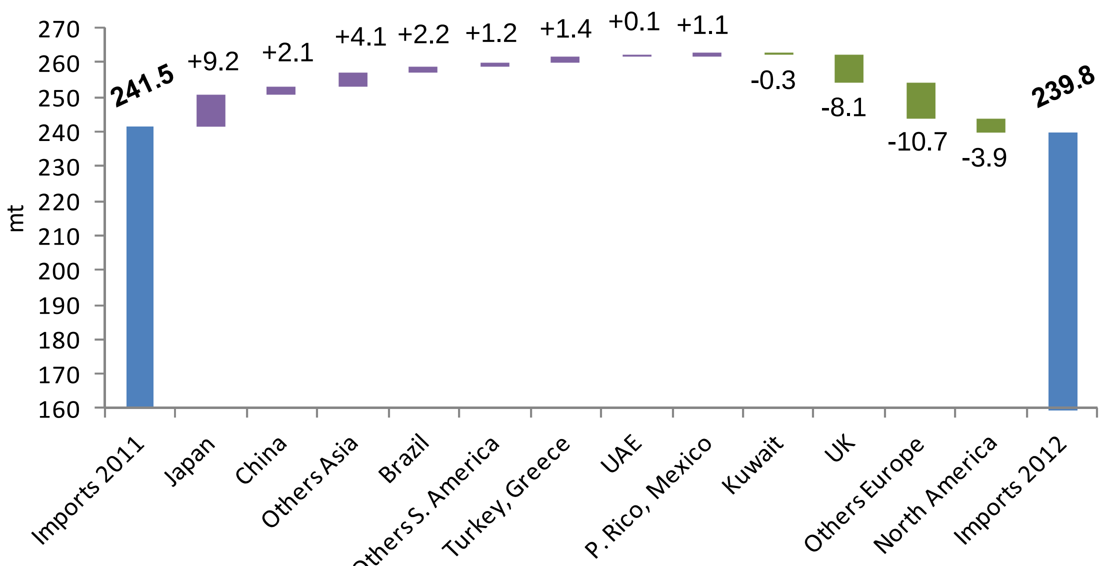


Source: PFC, GDF SUEZ LNG analysis February 2013

- **2012: first year of global decrease since 1981**
- **Qatar supplied 1/3rd of the global market in 2012.**
- **Decreasing LNG volumes available due to:**
  - **Continuous feedgas issues in Egypt, Algeria**
  - **Planned and unplanned maintenance in Indonesia**
  - **Sabotages on feedgas pipelines in Yemen**
  - **Shutdown of MLNG Tiga after a fire**
- **Plant utilization rates reached 43% in Egypt, 56% in Indonesia and 57 % in Algeria in 2012.**
- **Qatar, Russia and Eq. Guinea ran at full capacity and beyond in 2012**

LNG imports: 2012 vs 2011 Analysis

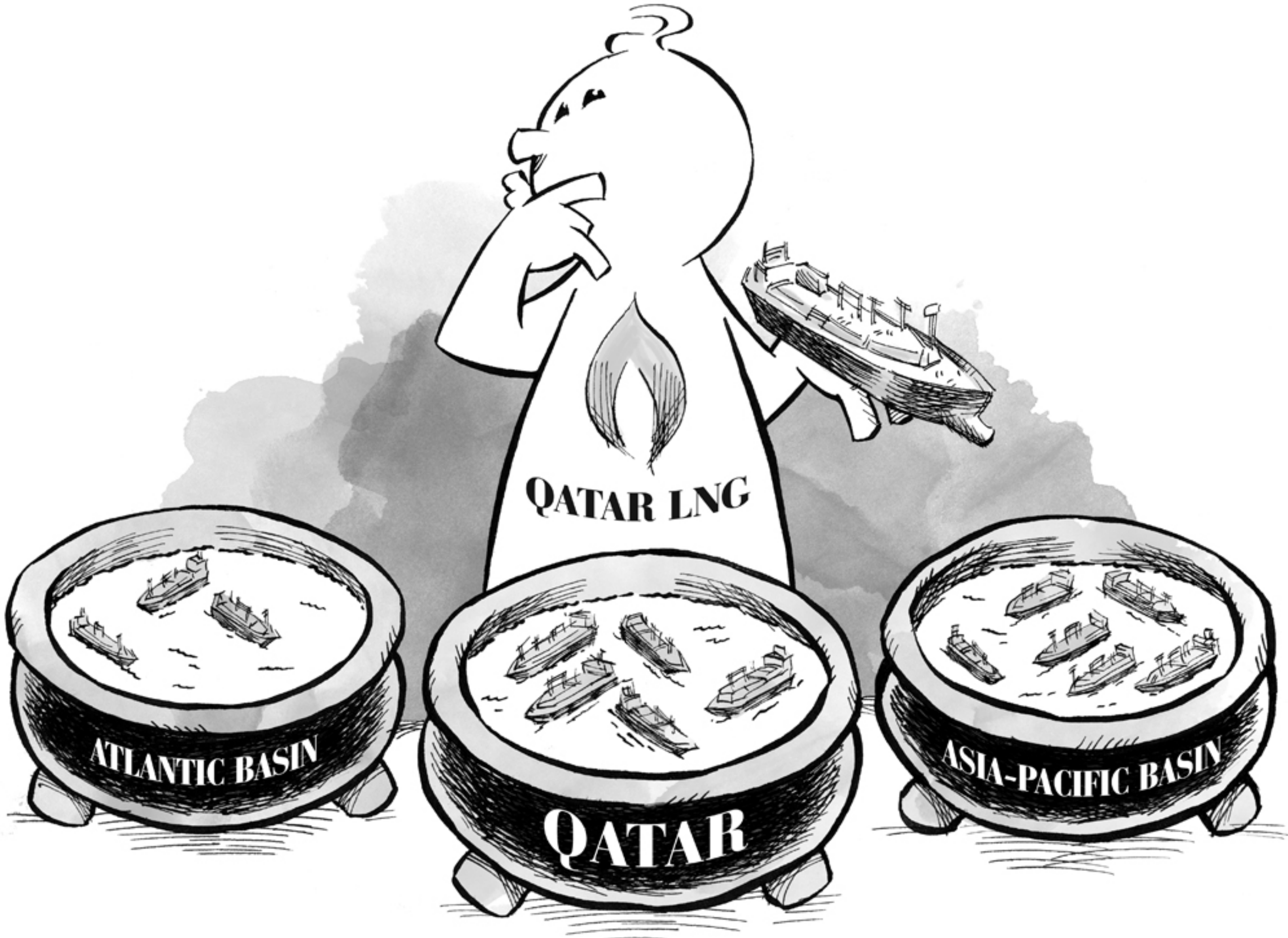




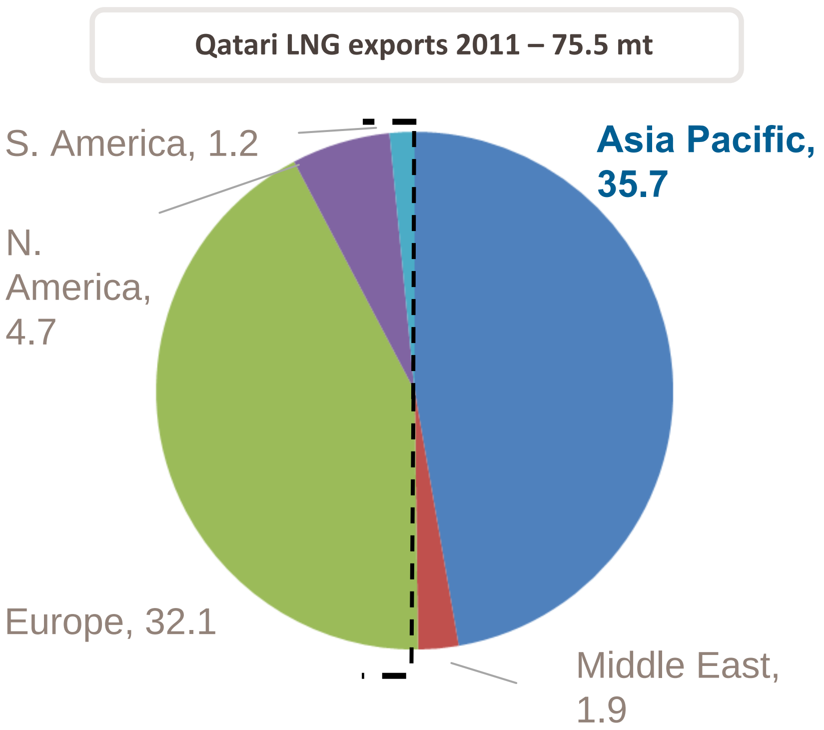
Source: PFC, GDF SUEZ LNG analysis February 2013

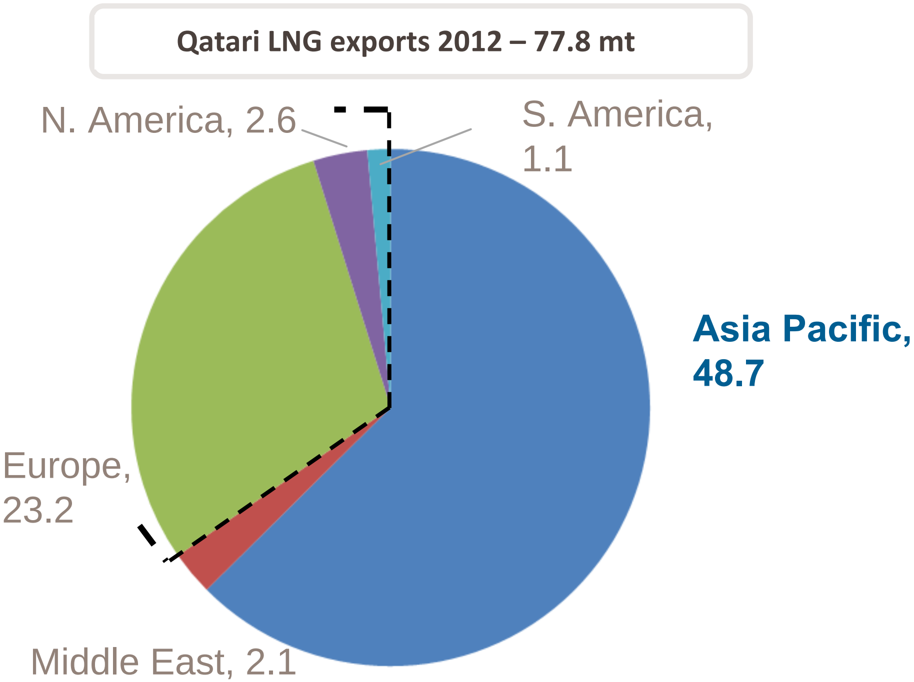
- Asia (+15.4 mt) and Latin America (+3.4mt) attracted flexible LNG, out of Europe (-17.4 mt). Asia increased its market share from 63% to 70%.
- China and India became the 3rd and the 5th LNG importers respectively in 2012 (the 5th and the 6th in 2011).
- High terminal utilisation rate in Asia 50% (47% in 2011) compared to Europe 33% (48% in 2011).
- Decreasing imports in the UK: -8.1mt. The country is now the 7th LNG importer (3rd in 2011). Though imports from Qatar fell by 5 mt, they represented 97% of UK imports in 2012 vs. 86% in 2011.

Shift of Qatari flows to Asia Pacific



Shift of Qatari flows to Asia Pacific

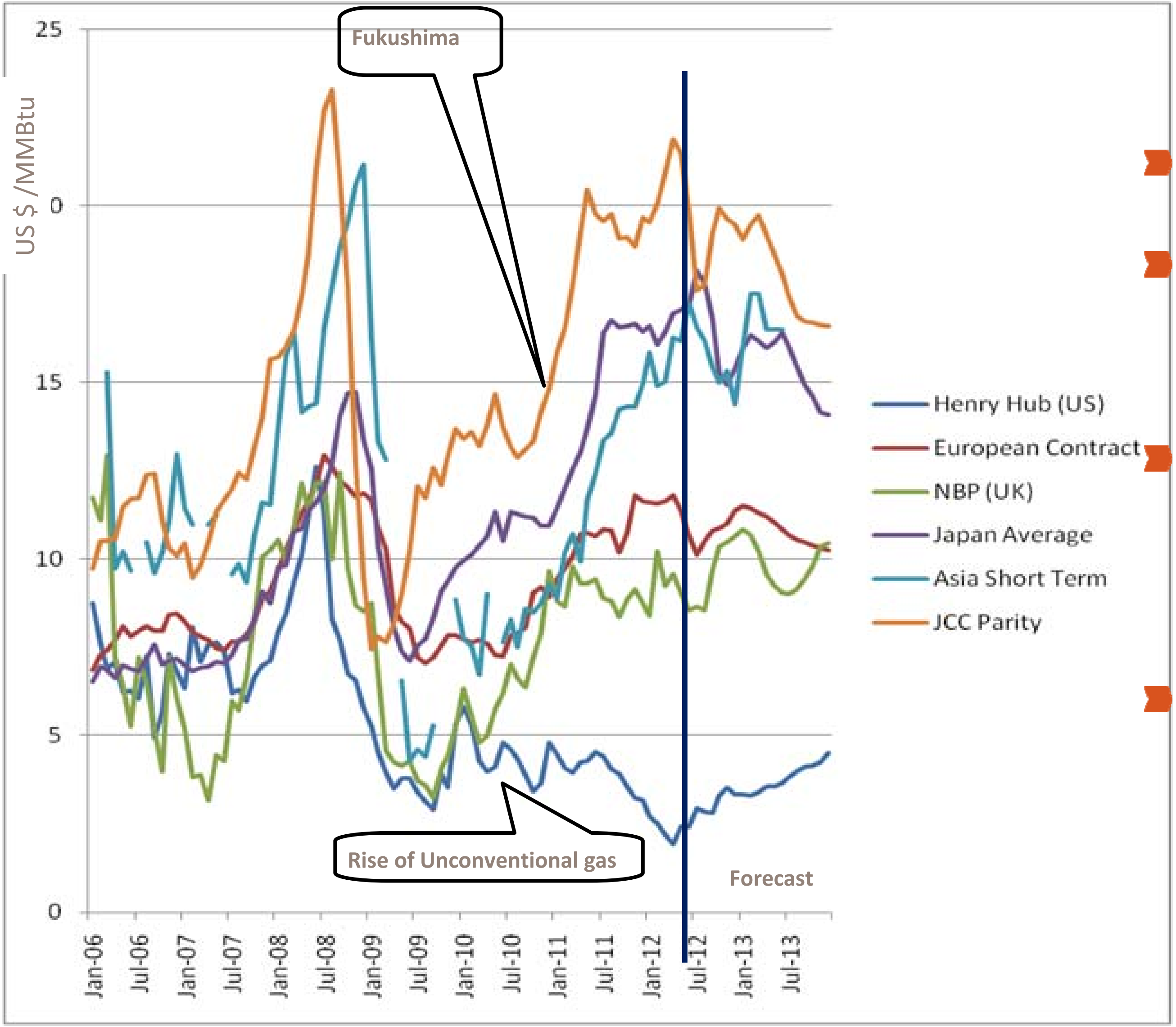




Source: PFC, GDF SUEZ LNG analysis February 2013

- **In 2012, Qatar diverted volumes from Europe and N. America to supply Asia Pacific markets : Qatari exports to Asia Pacific have increased by +13 mt**

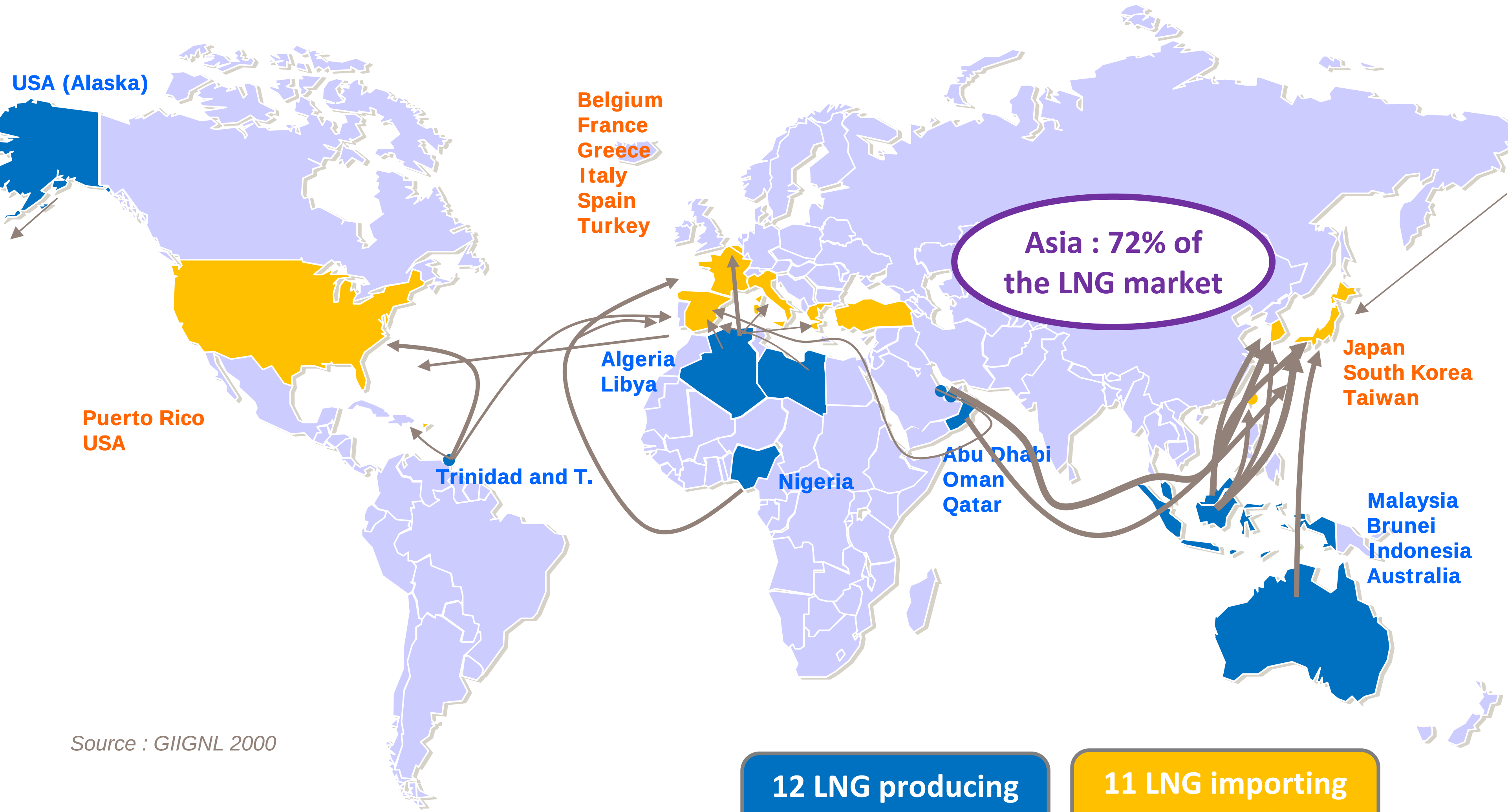
LNG Prices: history and forecasts



Source: CERA December 2012

- Asian prices are following the path of JCC parity evolution.
- Lower production is expected to lead to a rationalization of Henry Hub prices over the next two years.
- The Average Asian spot price will rise in first quarter 2013 on the back of a deep winter and competing demand from Latin America for spot cargoes.
- Due to a tight LNG market until 2015, significant spreads between Asia and Europe expected to remain

LNG producing and importing countries - main flows in 2000

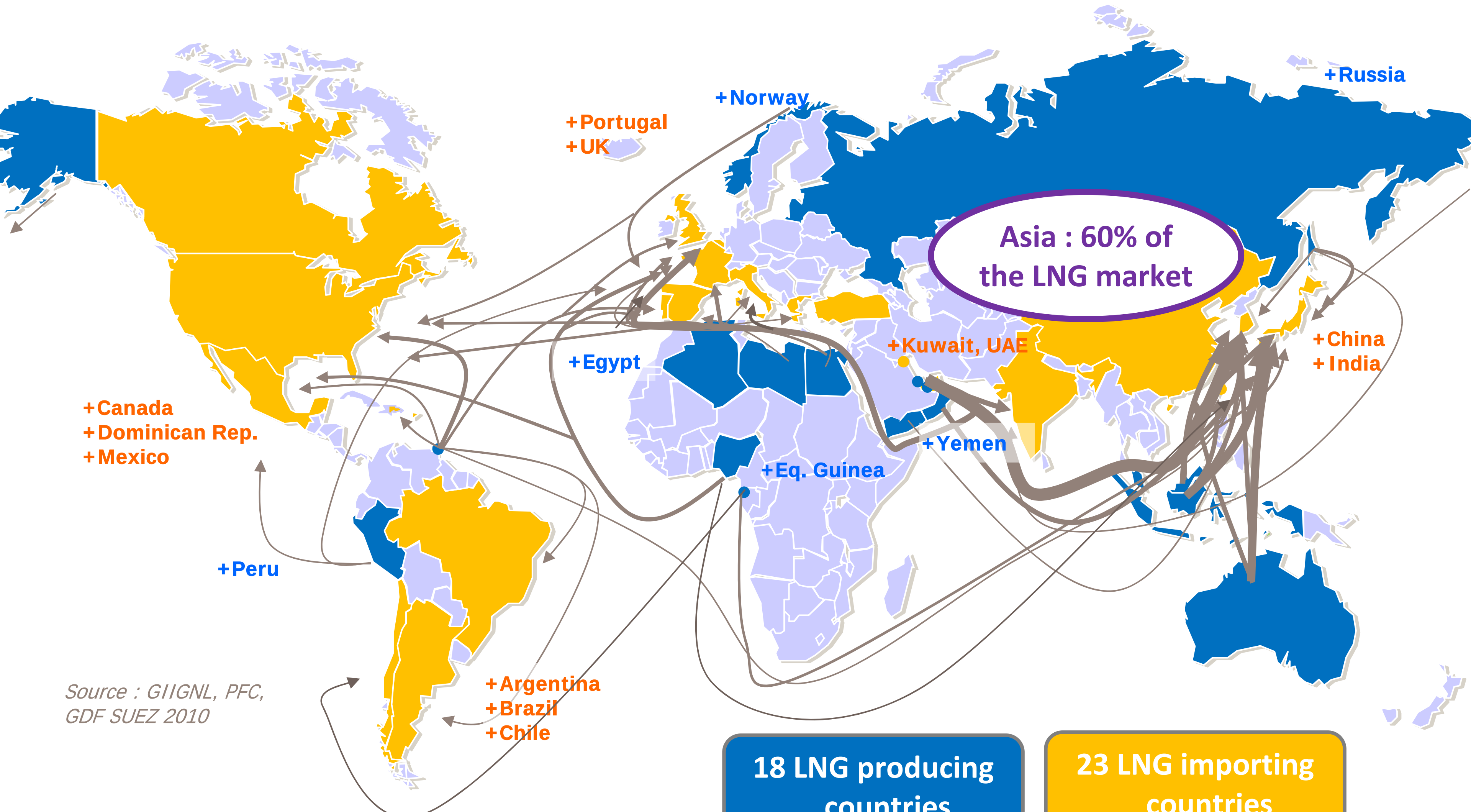


Source : GIIGNL 2000

12 LNG producing countries

11 LNG importing countries

LNG producing and importing countries - main flows in 2010

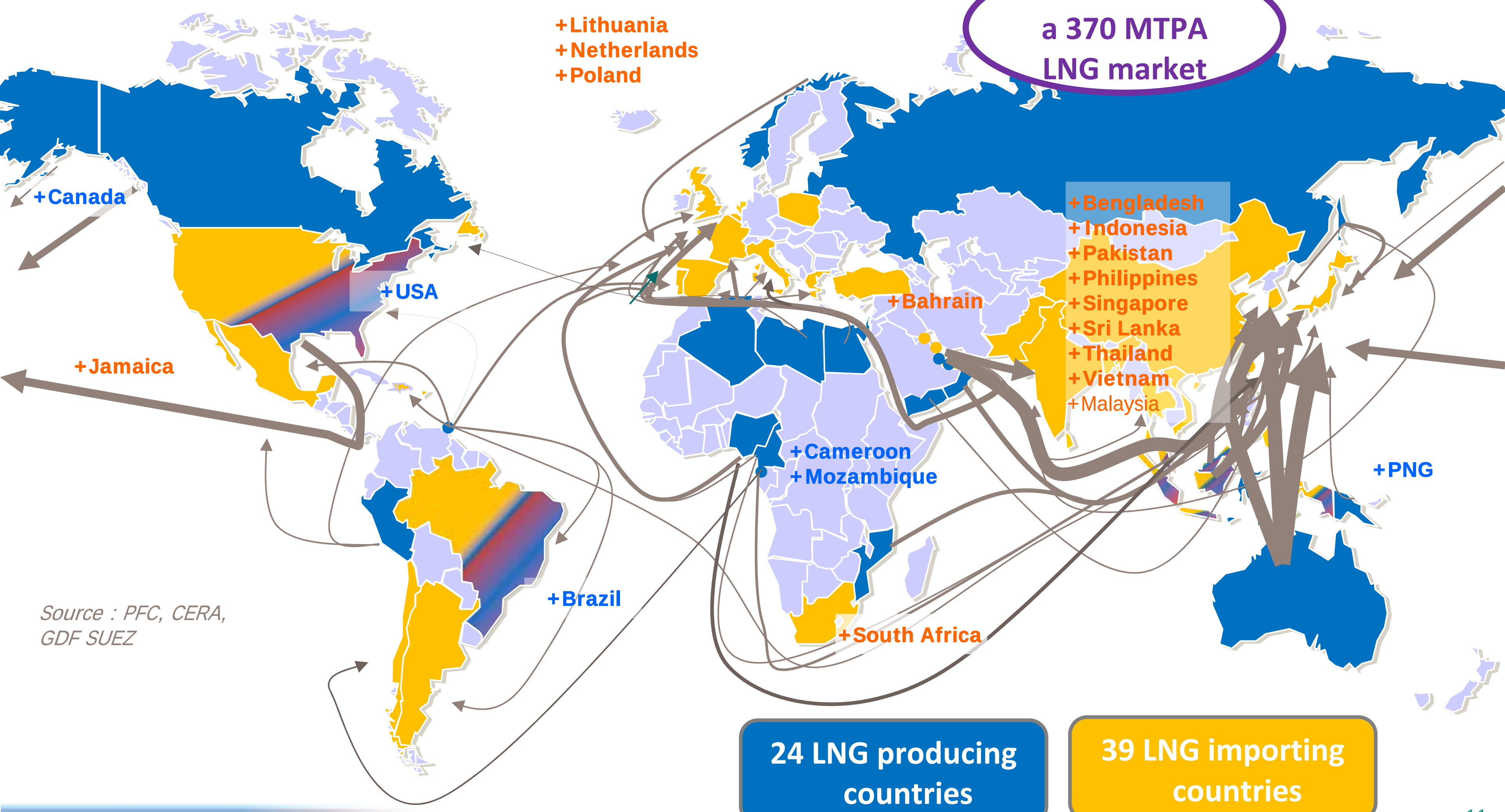


Source : GIIGNL, PFC, GDF SUEZ 2010

18 LNG producing countries

23 LNG importing countries

LNG producing and importing countries - main flows in 2020, a prospective view



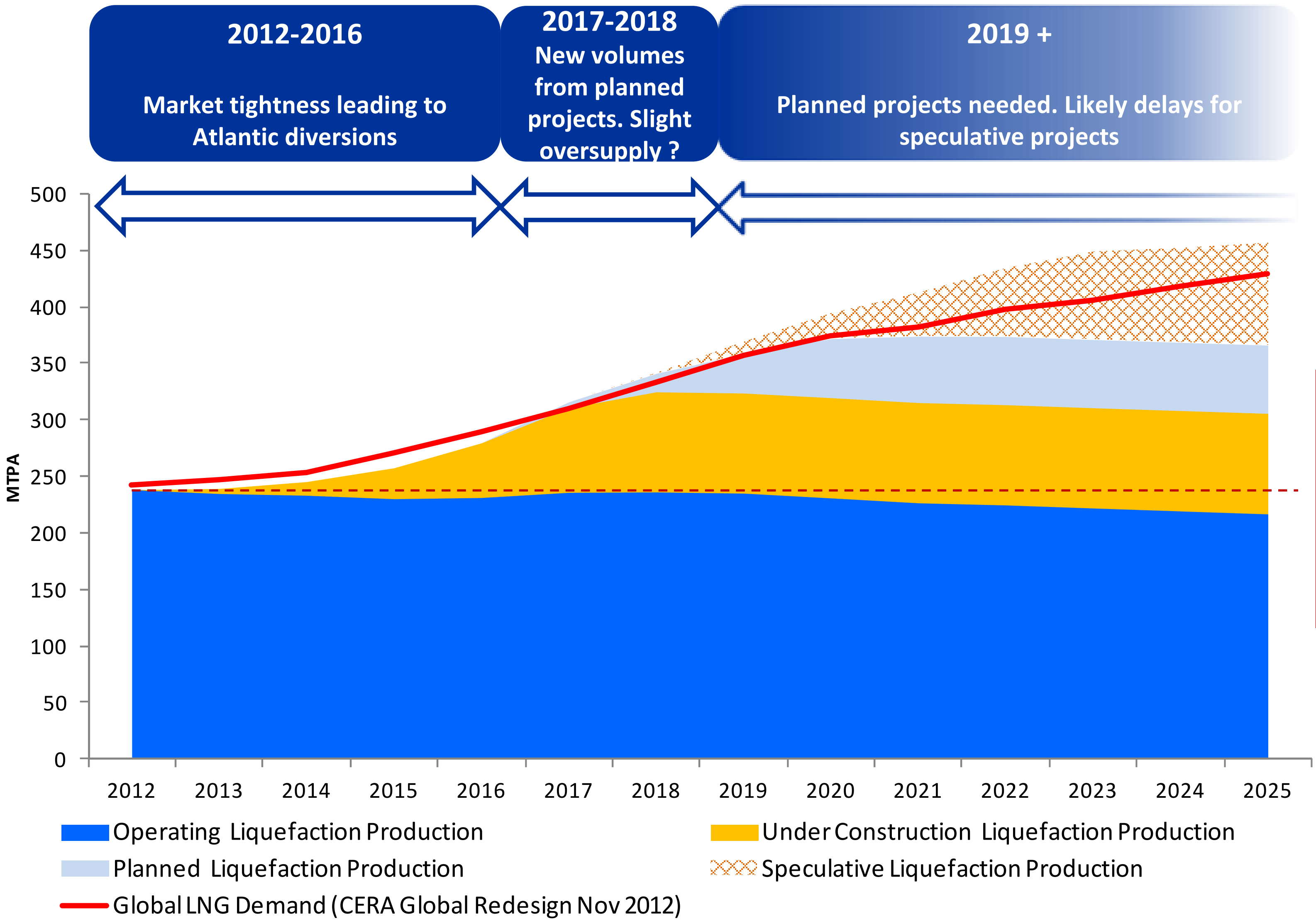
Source : PFC, CERA, GDF SUEZ

24 LNG producing countries

39 LNG importing countries

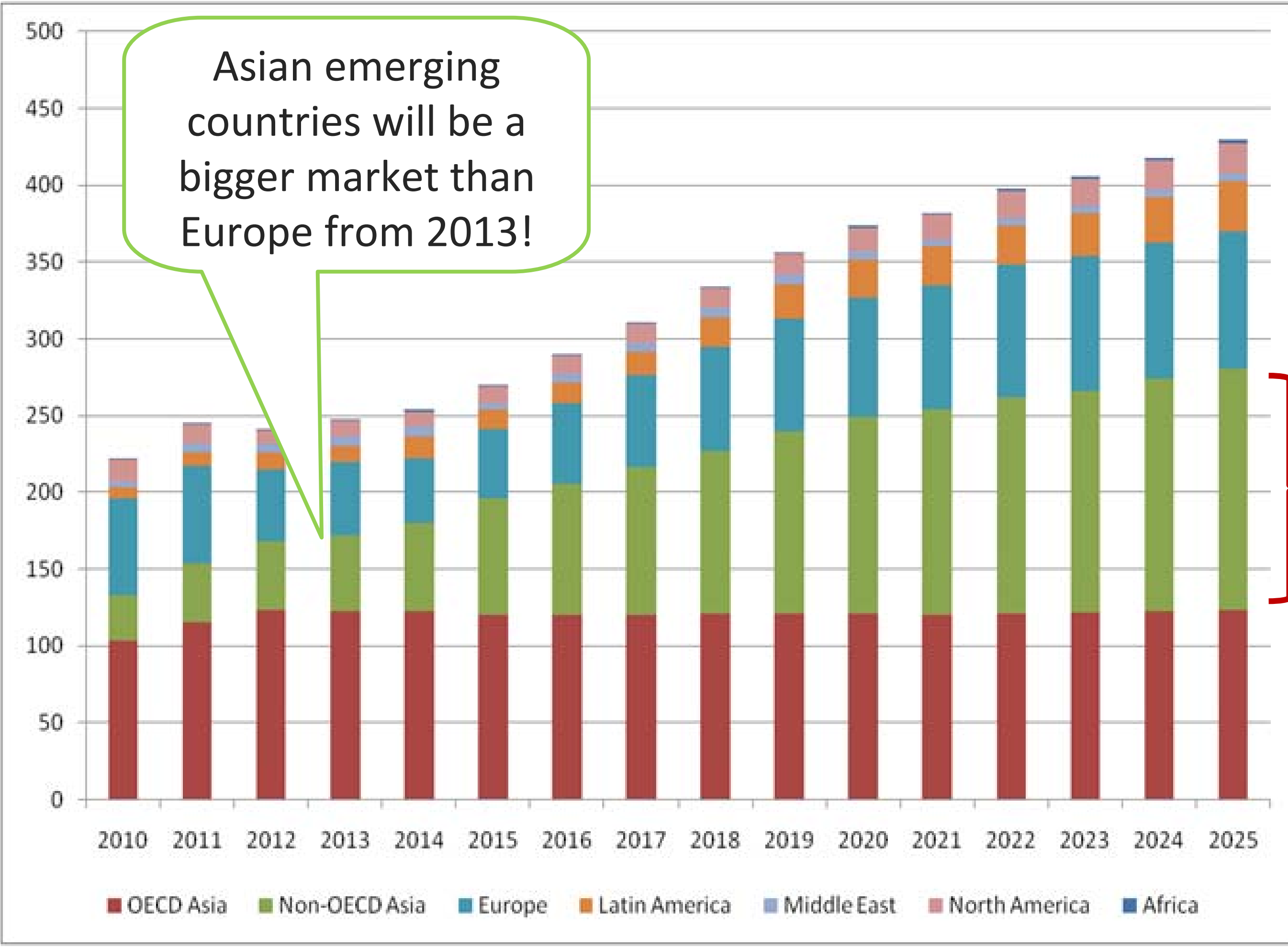

QATAR
AUSTRALIA
201
2018

Global LNG Market Outlook to 2025 – Base Case



Assumption: operating production stable through 2019, -21 mt in 2025

LNG demand by Region to 2025

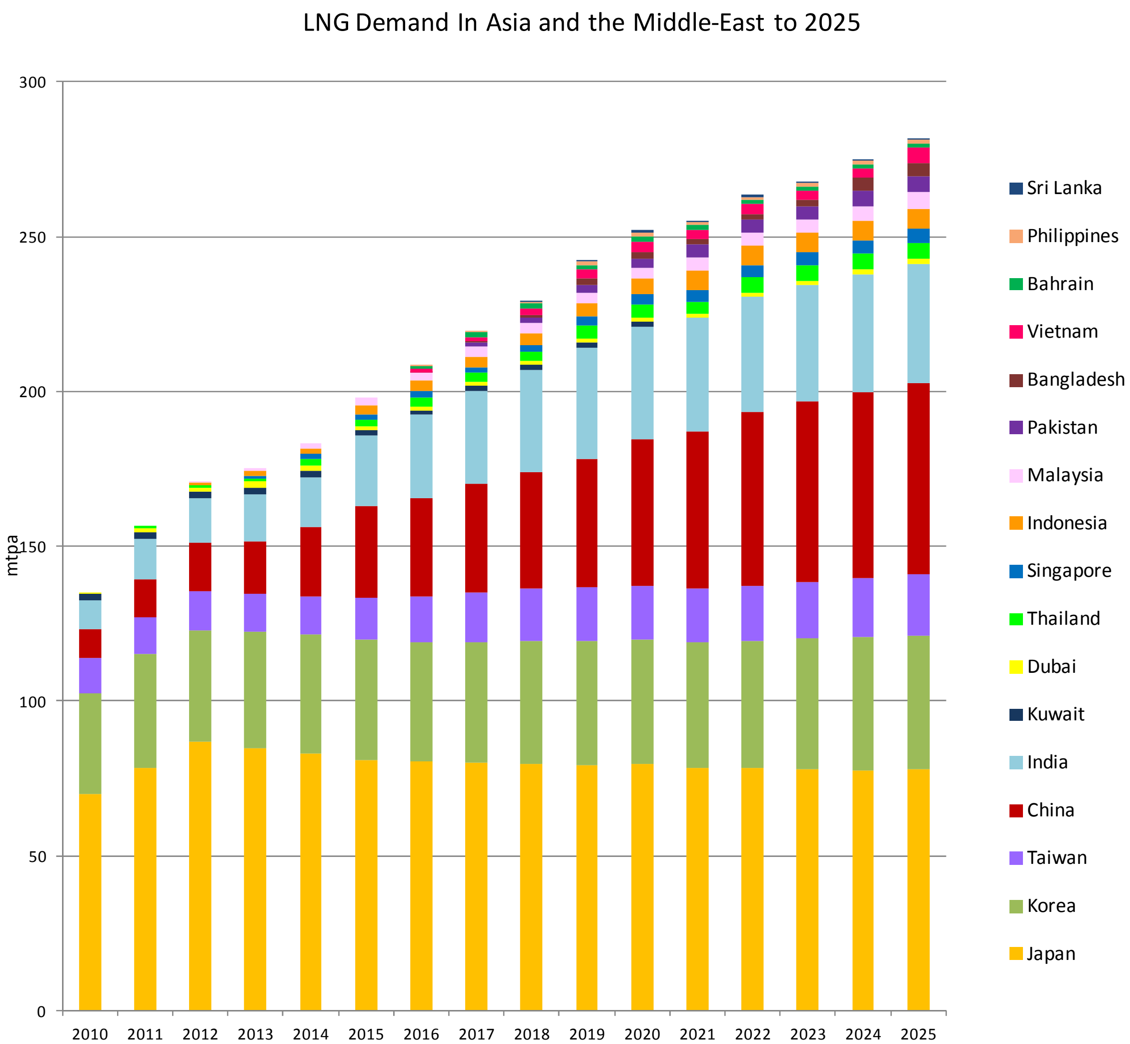


Global LNG Market growth
CAGR: +4% (+208 mtpa)

	CAGR 2010 - 2025	Δ in mtpa
Africa	-	+1
North America	+2%	+6
Europe	+2%	+27
Middle East	+1%	+1
Latin America	+11%	+25
Non-OECD Asia	+12%	+128
OECD Asia	+1%	+20

Non-OECD Asia
X4 by 2025

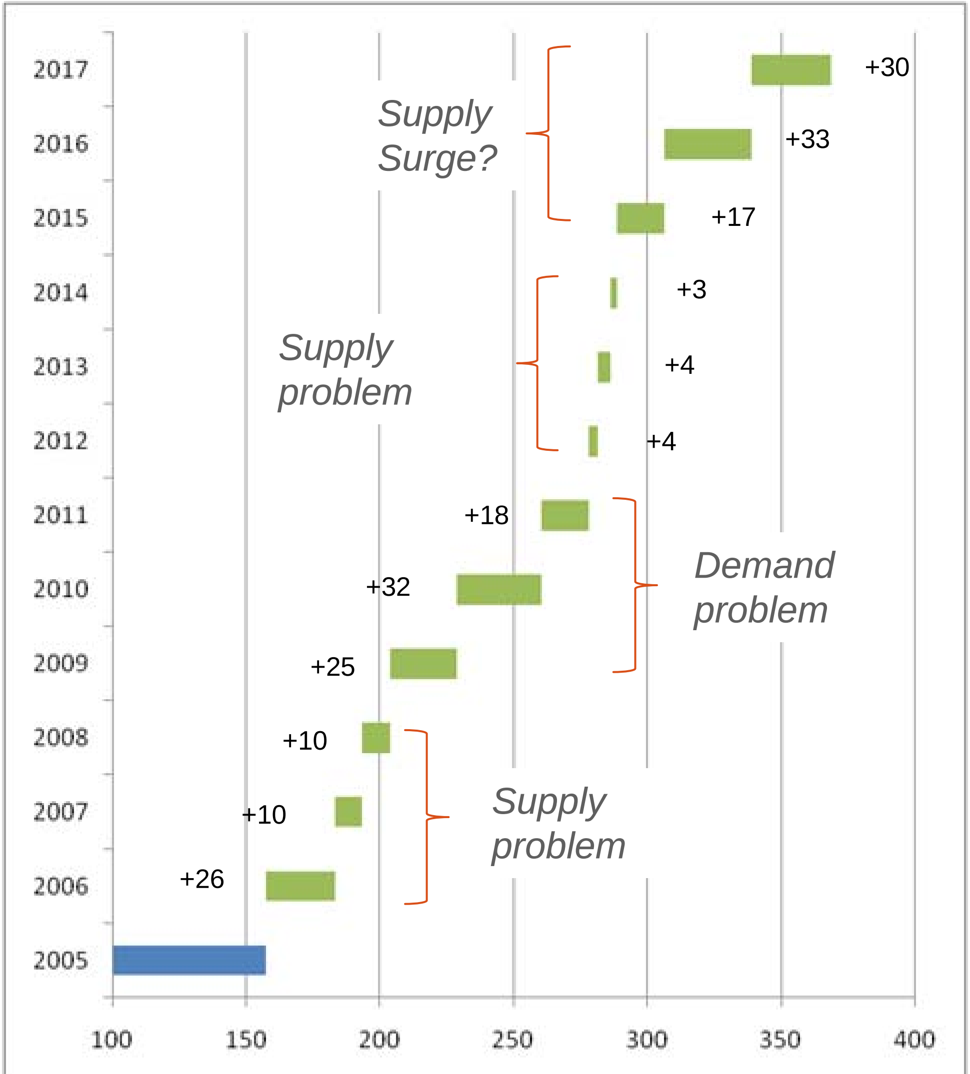
Growing LNG Demand in Asia Pacific and Middle-East



- LNG demand expected to increase by 150 mtpa in the region from 2010 to 2025 (CAGR 5%)
- Demand from Japan, South Korea and Taiwan expected to remain stable ~ 50% of total demand by 2025
- By 2025, the growth will be led by:
  - China: +53mt
  - New LNG importers in South East Asia: +37mt
  - India: +29mt

Source: CERA, GDF SUEZ LNG Analysis December 2012

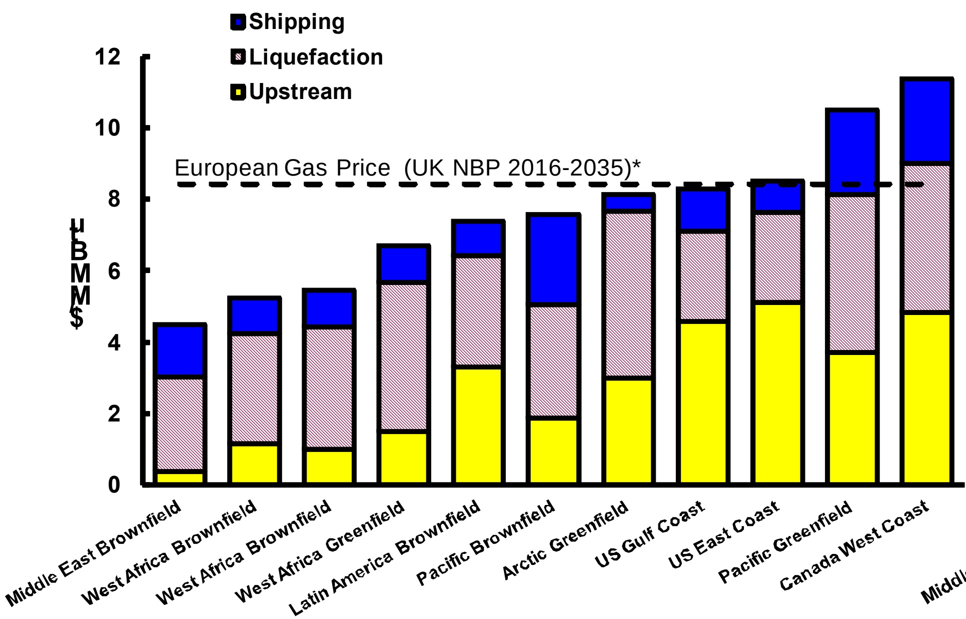
A cyclical LNG market

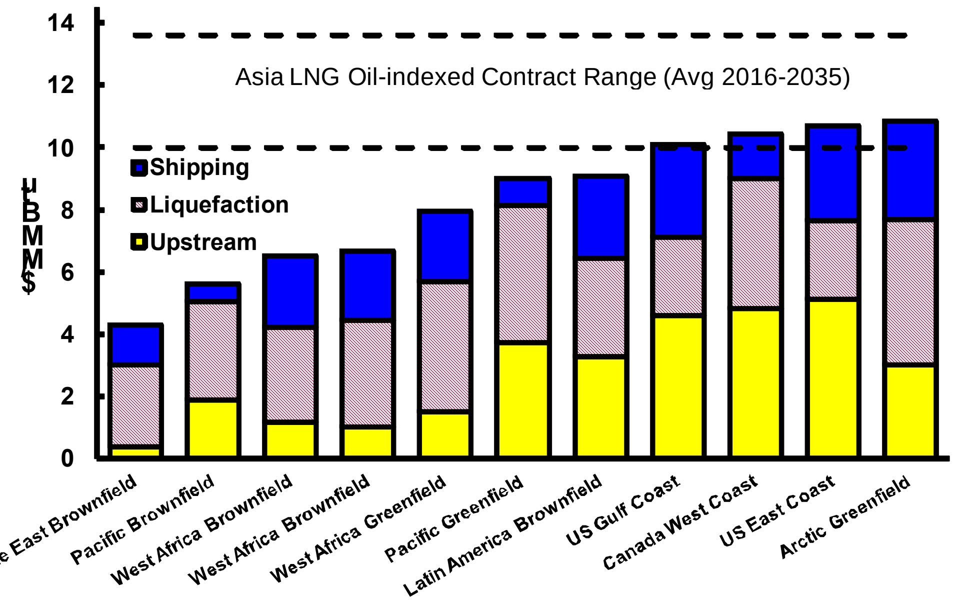


Sources: PFC, December 2012

- **After the plentiful years of 2010-2011, new LNG projects are scarce in the medium term, leading to a tight LNG market to 2015**
- **The next supply surge should take place starting in 2015, with Australia leading the way**
- **Between 2015 to 2017, about 12mtpa out of the 80 mtpa additional volumes have not yet been contracted:**
  - **These volumes could either remain flexible or been sold on a LT basis;**
  - **Due to high development costs, projects need to conclude at least some Sales and Purchase Agreements on LT basis to proceed to a Final Investment Decision.**
- **With US LNG exports that would come on stream post-2016, would we see an even longer supply surge?**

LNG projects competition





*Net of regas and entry charges

Source: CERA

Tough competition to supply Europe and Asia.

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GDF SUEZ IN LNG

GDF SUEZ, a global leader in LNG business

Leader in the Atlantic Basin

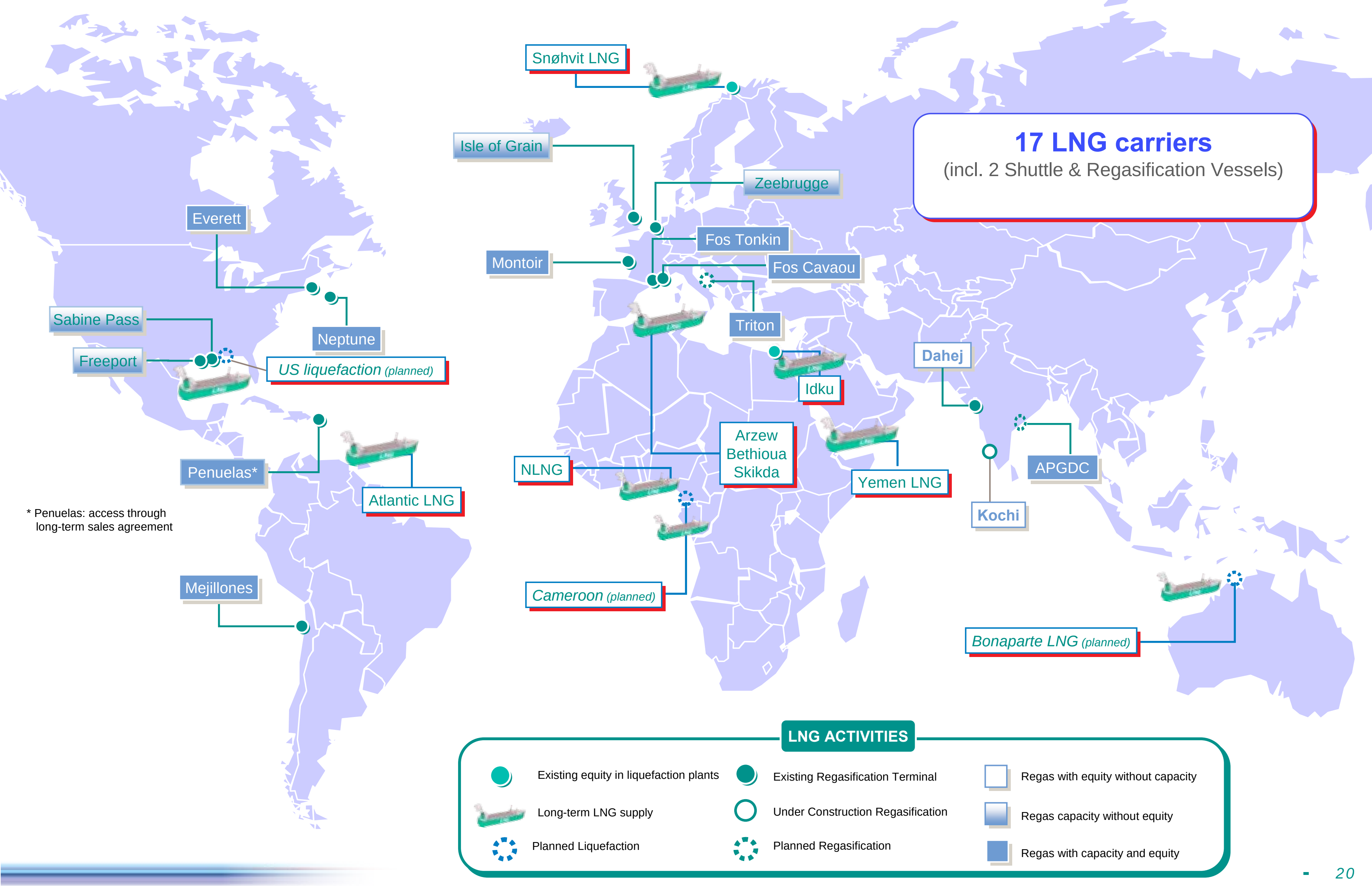
- *A 16 mtpa* LNG portfolio, sourced from *6 countries*
- *Largest* LNG importer in Europe
- *2nd largest* operator of LNG terminals in Europe
- *3rd largest* LNG importer in the world

Snøhvit liquefaction plant, Norway

GDF SUEZ Point Fortin

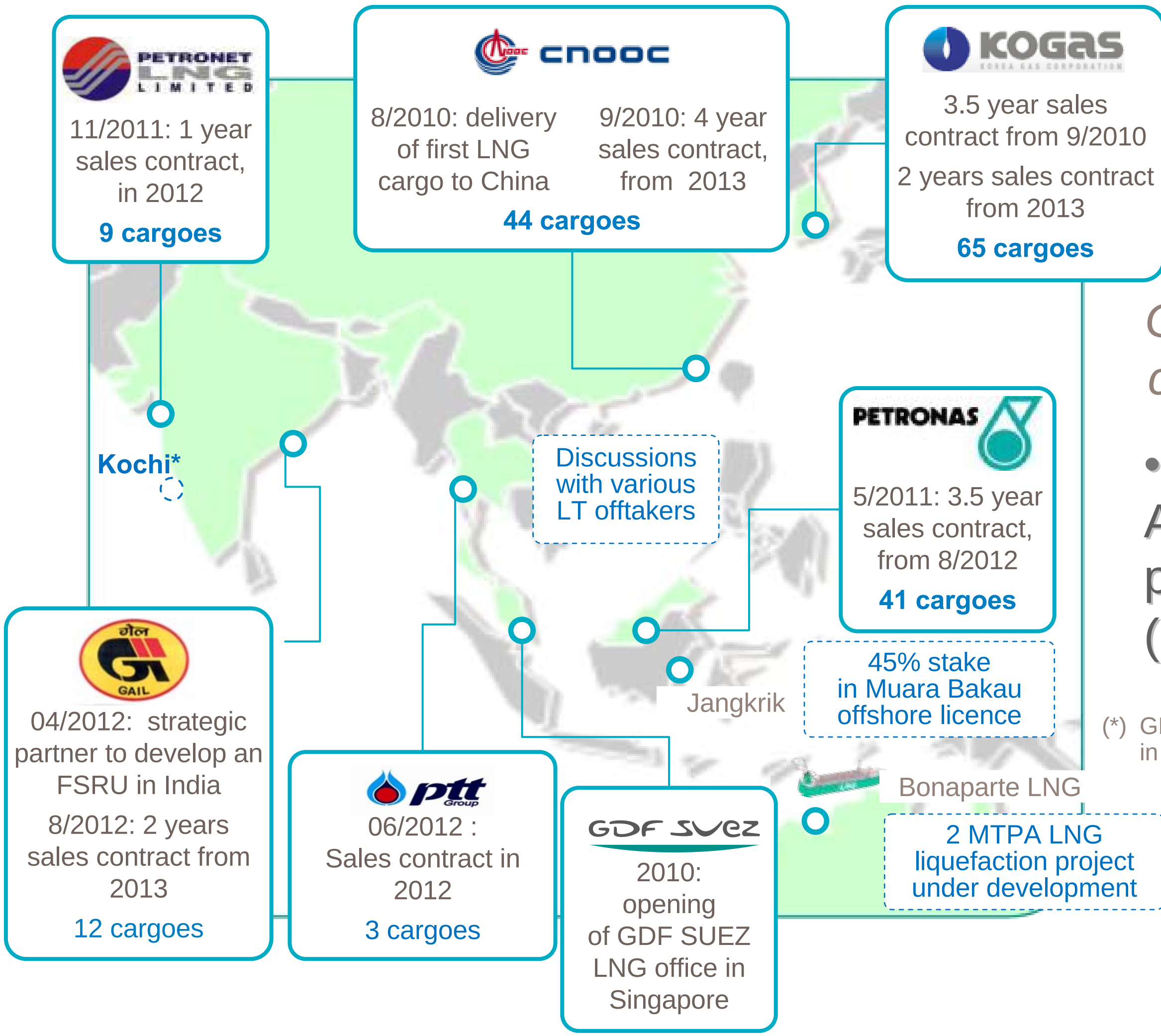
Fos Cavaou LNG terminal, France

GDF SUEZ LNG global presence



* Penuelas: access through long-term sales agreement

GDF SUEZ LNG development in Asia



GDF SUEZ' value creative commercial development

- Sales agreements with major Asian players: up to *174 cargoes* (~10.8 Mt)

(*) GDF SUEZ holds a 10% stake in Petronet LNG

GDF SUEZ liquefaction projects

A balanced portfolio of liquefaction projects and assets: geographical diversity and variety of business models

Integrated Projects

BONAPARTE LNG

- Upstream and floating liquefaction offshore Australia
- Commercialization of the LNG in Asia Pacific markets
- FID in 2014, first gas in 2018

Santos

Aggregator

CAMEROON LNG

- Aggregation of the feedgas
- Onshore liquefaction plant development
- Commercialization of the LNG and offtake LNG volumes
- Opportunity for geographical optimization
- FID in 2014, first gas in 2018

SNH Cameroun

LNG Liquefier/Tolling

US EXPORTS
Cameron LNG

- Access to liquefaction capacity
- Access to flexible LNG
- Opportunity to sell to Asia Pacific with a variety of indexation exposure (HH, Brent)
- Early start up of supply (2016+)

Sempra Energy®

Innovative market distribution: Future opportunities in Small-scale LNG

Niche LNG
Supply small/remote markets (oversea or overland) with small LNG tankers (less than 20,000 m3) or LNG barges or LNG trucks

LNG as fuel
LNG to be used as fuel for ships or for road vehicles. Strong potential due to:
-IMO pollution rules limiting NOx and SOx emissions from ships (fuel for ships).
-environmental regulations in Europe/Asia

In the US,
Everett terminal supplies LNG via truck to nearly all of the 31 customer-owned LNG storage tanks in region (0.2 mt delivered per year by truck - 10 000 loadings)

GDF SUEZ move into the small scale LNG market in Europe:
- GDF SUEZ will supply GASNOR with 7.5 TWh of LNG from Zeebrugge over a 12-year period, starting in 2013.
- GDF SUEZ and Doeksen have designed an LNG fuelled ferry, to be commissioned and used in the Netherlands

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