Role of gas infra in SoS

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Specific features of natural gas

Dominated by supply via pipelines for most regions (EU: 80% pipeline, 20% LNG)

➢ Interdependency producer/consumer

Gas market very different from power market: national resource, cross-border transport

EU	Gas	Electricity	
Peak consumption	1477	560	GW
Storage (out)	1267	38	GW
Interconnection	2487	463	GW
Import (average)	430	3	GW

Source: TYNDP ENTSO-E/ENTSOG

Gas and SoS

- ‘2009 gas crisis’: was it a gas crisis or a gas infrastructure crisis?

- The importance of diversity
  - Supply sources
  - Supply routes
  - Fuels

- EU initiatives
  - Promote diversity
  - Minimum standards for interconnectivity
  - Financial support

- Role market versus centralised approach
  - Investment signals for SoS?

LNG terminals in Europe

EXISTING

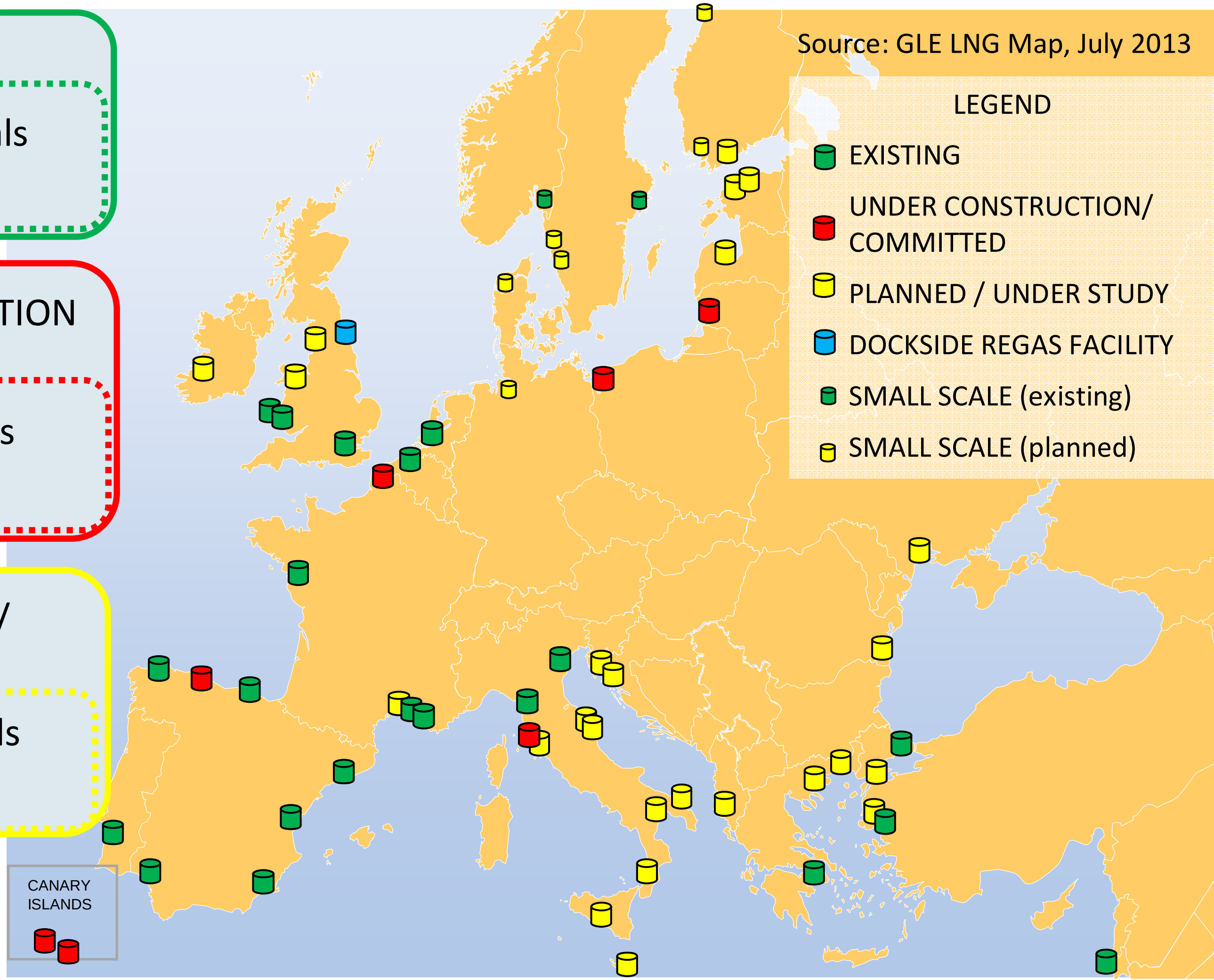
21 LNG Terminals
(190 bcm)

UNDER CONSTRUCTION / COMMITTED

7 LNG Terminals
(35 bcm)

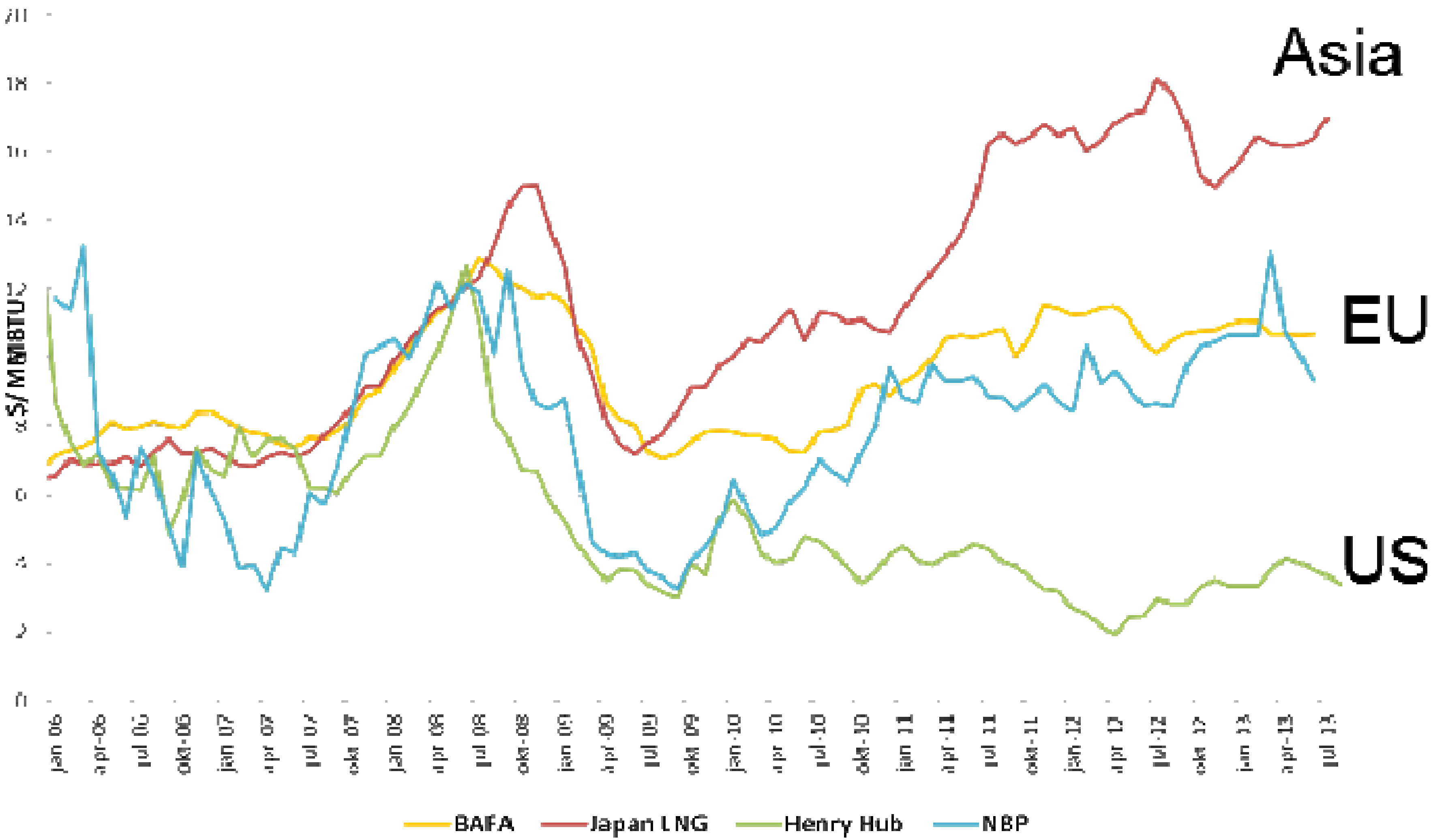
UNDER STUDY / PLANNED

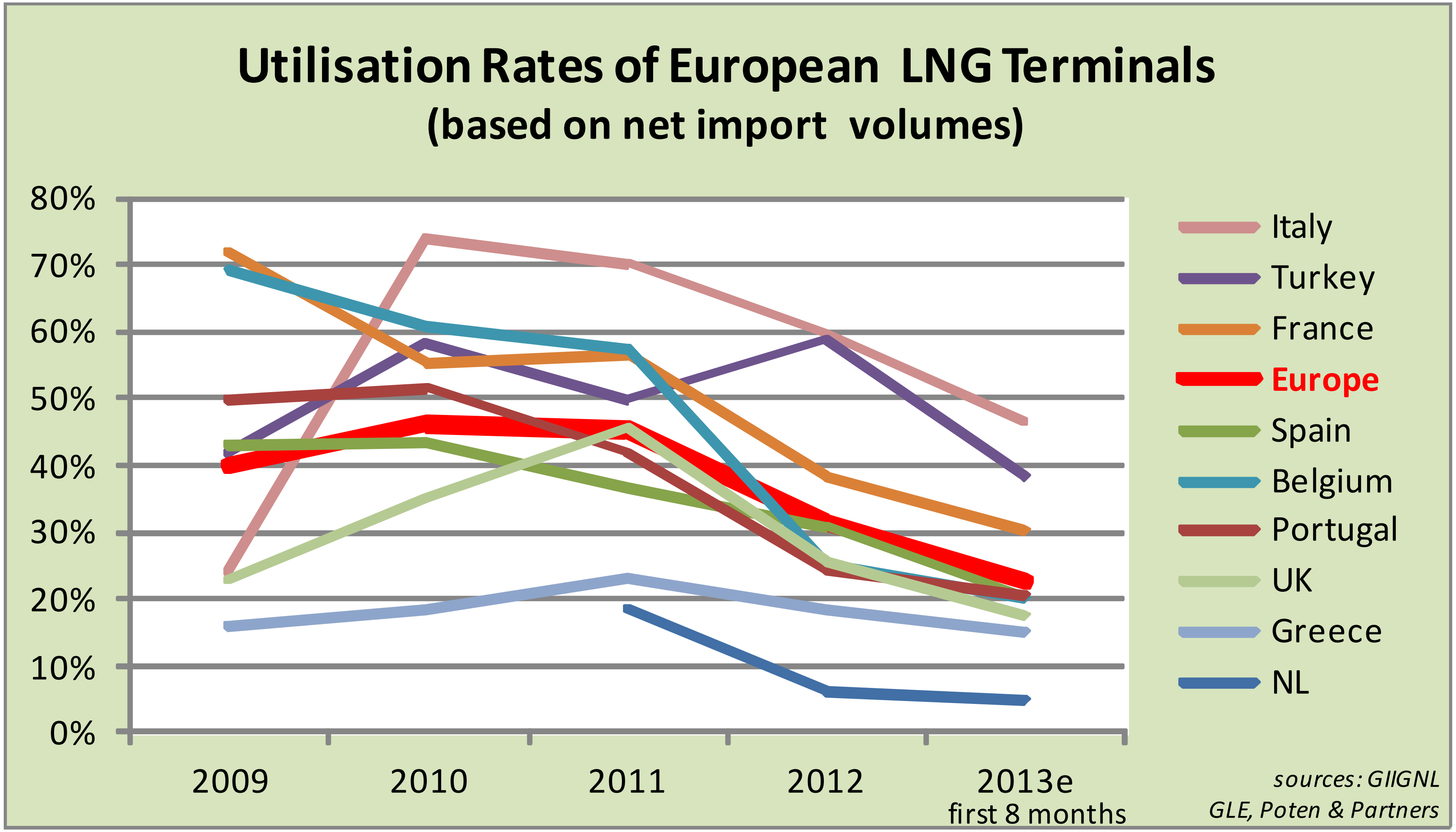
32 LNG Terminals
(>160 bcm)



Detailed information on LNG terminals available at http://www.gie.eu/index.php/maps-data/lng-map

Global gas prices




Utilisation Rates of European LNG Terminals
(based on net import volumes)
80%
70%
60%
50%
40%
30%
20%
10%
0%
2009
2010
2011
2012
2013e
first 8 months
Italy
Turkey
France
Europe
Spain
Belgium
Portugal
UK
Greece
NL
sources: GIIGNL
GLE, Poten & Partners

With respect to security of supply, gas infrastructure is the means to an end in the interplay between markets and governments