



LNG Outlook in EU and Baltic

Kwinten Standaert

Integration of the Baltic LNG market
Stockholm, 2 December 2014



Gas LNG Europe

Who we are

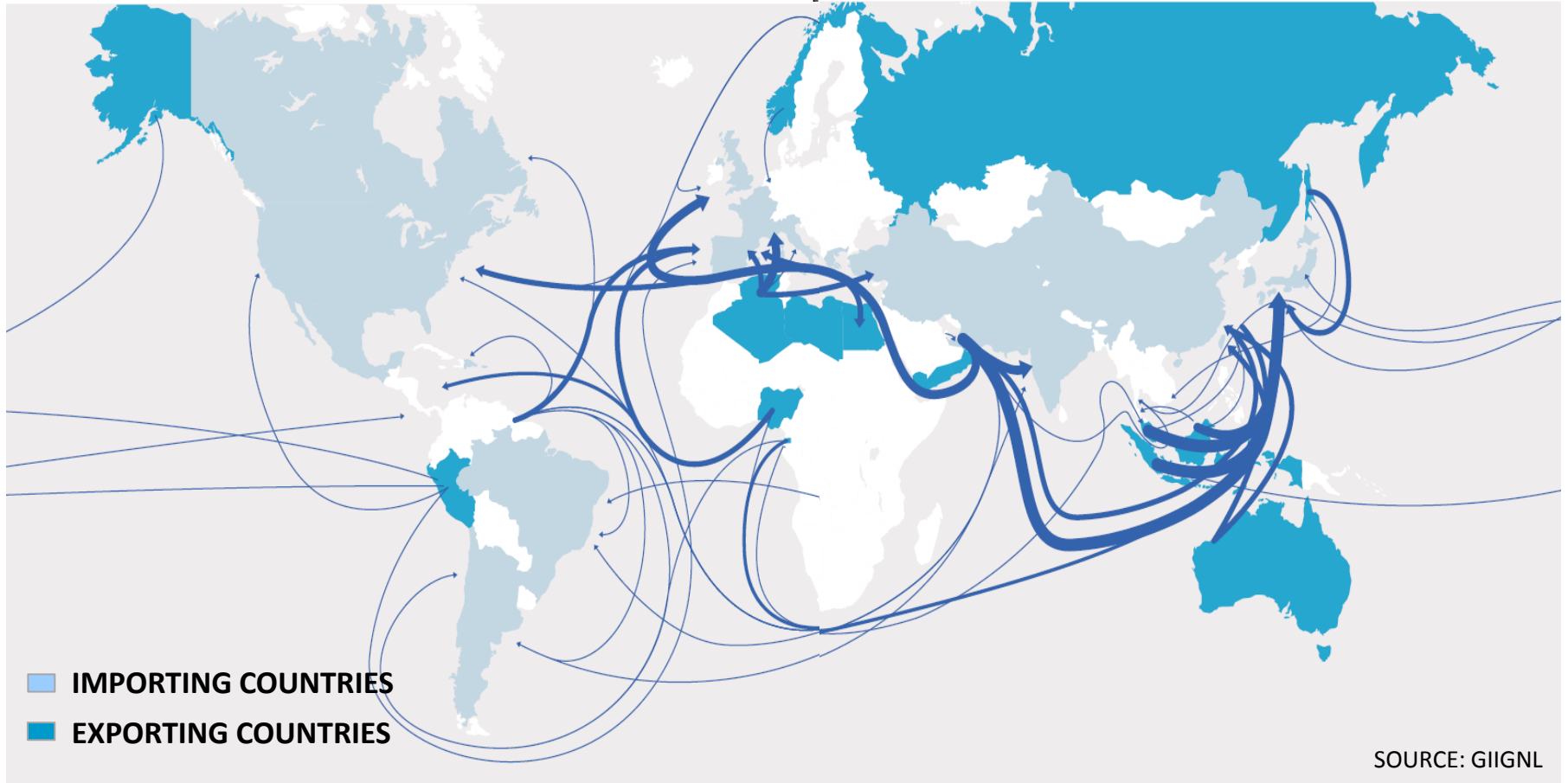
- GLE is one of the three columns of GIE (Gas Infrastructure Europe), the European association of the Transmission, Storage and LNG Terminal Operators



- GLE membership:
 - 16 member companies
 - 9 countries
 - 2 observers

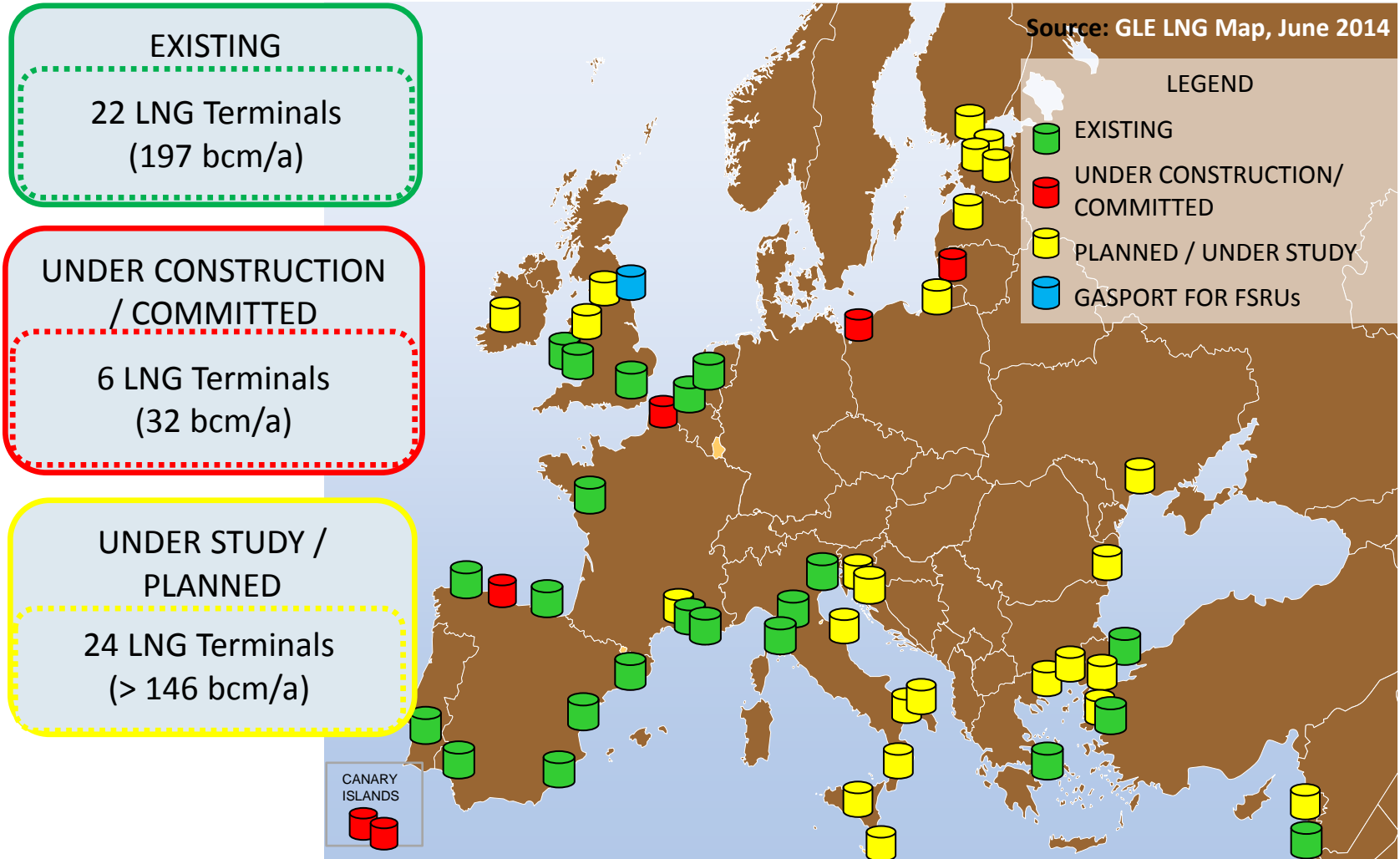
➤ **GLE represents ca. 90% of regasification capacity in the EU**







LNG makes worldwide gas reserves potentially accessible to Europe

LNG terminals in Europe (large scale)






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

Existing

<p>Norway, Øra LNG Fredrikstad</p> <p>Start-up: 2011</p> 
<p>NOMINAL ANNUAL CAPACITY 0,15 bcm^3 (N)/year</p>
<p>LNG STORAGE CAPACITY 6.500 m^3 LNG</p>
<p>Sweden, Brunnsviksholmen Nynäshamn</p> <p>Start-up: 2011</p> 
<p>NOMINAL ANNUAL CAPACITY 0,5 bcm^3 (N)/year</p>
<p>LNG STORAGE CAPACITY 20.000 m^3 LNG</p>









Under construction

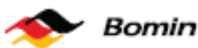


<p>Lithuania, Independence (FSRU)</p> <p>Start-up: 2014</p> <p>www.oil.lt</p> 	
<p>MAXIMUM HOURLY CAPACITY 460.000 m^3 (N)/h</p>	<p>NOMINAL ANNUAL CAPACITY 4 bcm^3 (N)/year</p>
<p>LNG STORAGE CAPACITY NUMBER OF TANKS</p>	<p>170.000 m^3 LNG 4</p>
<p>Poland, Świnoujście</p> <p>Start-up: 2014</p> <p>www.polskielng.pl</p> 	
<p>MAXIMUM HOURLY CAPACITY [by 2014 : 656.000 m^3 (N)/h future : tba</p>	<p>NOMINAL ANNUAL CAPACITY [by 2014 : 5 bcm^3 (N)/year future : 7,5 bcm^3 (N)/year</p>
<p>LNG STORAGE CAPACITY NUMBER OF TANKS</p>	<p>[by 2014 : 320.000 m^3 LNG future : 480.000 m^3 LNG [by 2014 : 2 future : 3</p>
<p>Sweden, Lysekil</p> <p>Start-up: 2014</p> 	
<p>0,3 bcm^3/y 30.000 m^3 LNG Storage</p>	

Proposed LNG terminals in the Baltic Sea

Large-scale

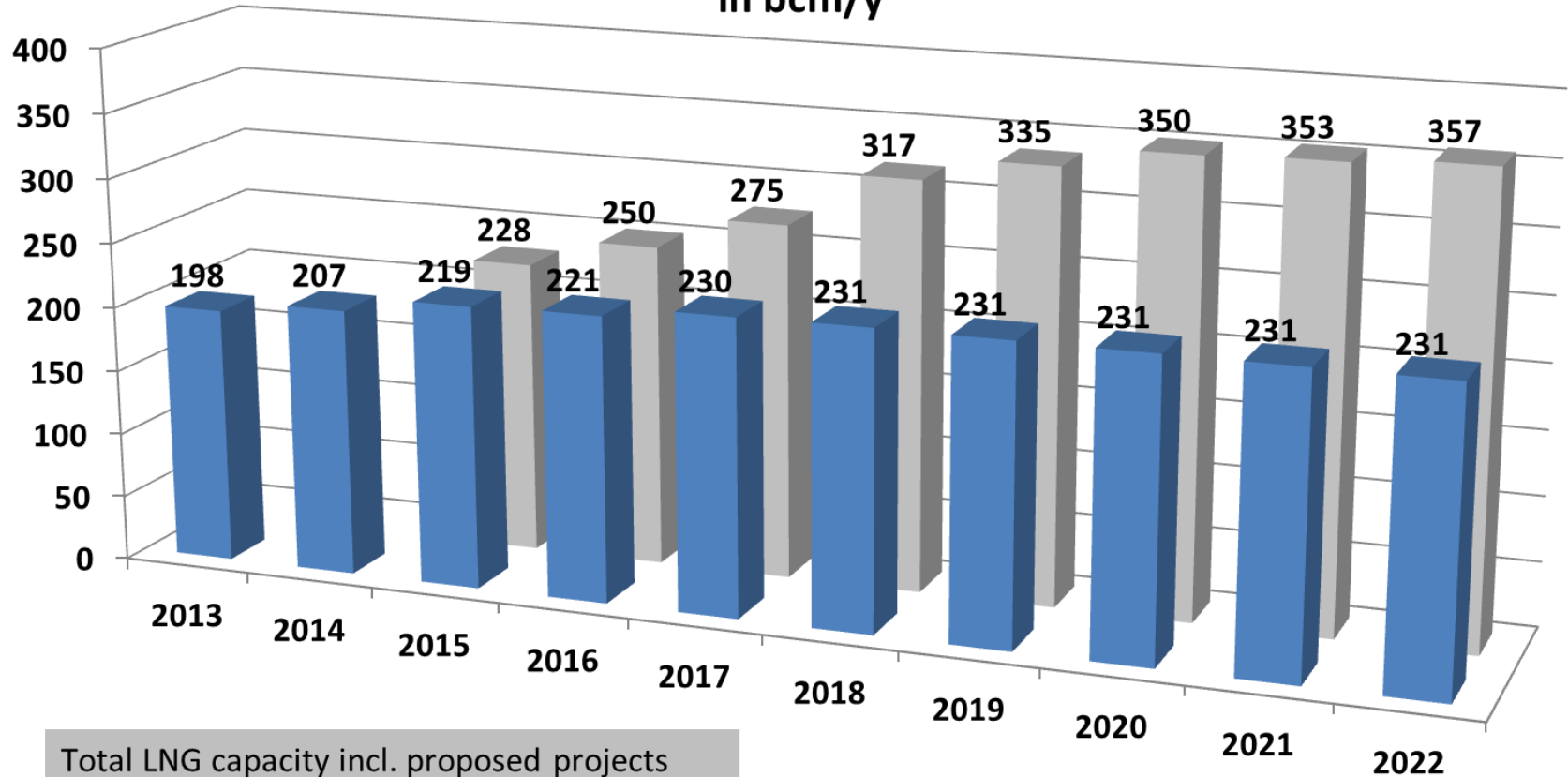
Estonia, Paldiski Start-up : 2015 2,5 bcm/y 180,000-320,000 m ³ LNG storage	
Estonia, Muuga, Tallinn Start-up : 2015/2018/2025 small scale/4/8 bcm/y 320.000 m ³ LNG storage	
Estonia, Sillamäe Start-up : -	
Finland, Inkoo (Finnigulf LNG) Start-up : 2017/2019 8 bcm/y 165.000/330.000 m ³ LNG storage	
Latvia, Riga Start-up : 2016 5 bcm/y 180.000 m ³ LNG storage	
Russia, Kaliningrad Start-up : 2018	

Small-scale

Denmark, Hirtshals Start-up : 2018	Germany, Hamburg  Start-up : 2015
-	-
Finland, Tahkoluoto, Pori Start-up : 2016 30.000 m ³ LNG storage	Finland, Tornio Manga LNG  Start-up : 2017 50.000 m ³ LNG Storage 1 tank
Finland, Pansio, Turku Start-up : 2018 0,1 bcm/y 30.000 m ³ LNG storage	
Sweden, Göteborg Start-up : 2015 0,5 bcm/y 20.000 m ³ LNG Storage 1 tank	Sweden, Gävle  Start-up : 2016 0,3 bcm/y 30.000 m ³ LNG Storage 1 tank

Regasification capacity development

**Regasification Capacity in Europe
in bcm/y**



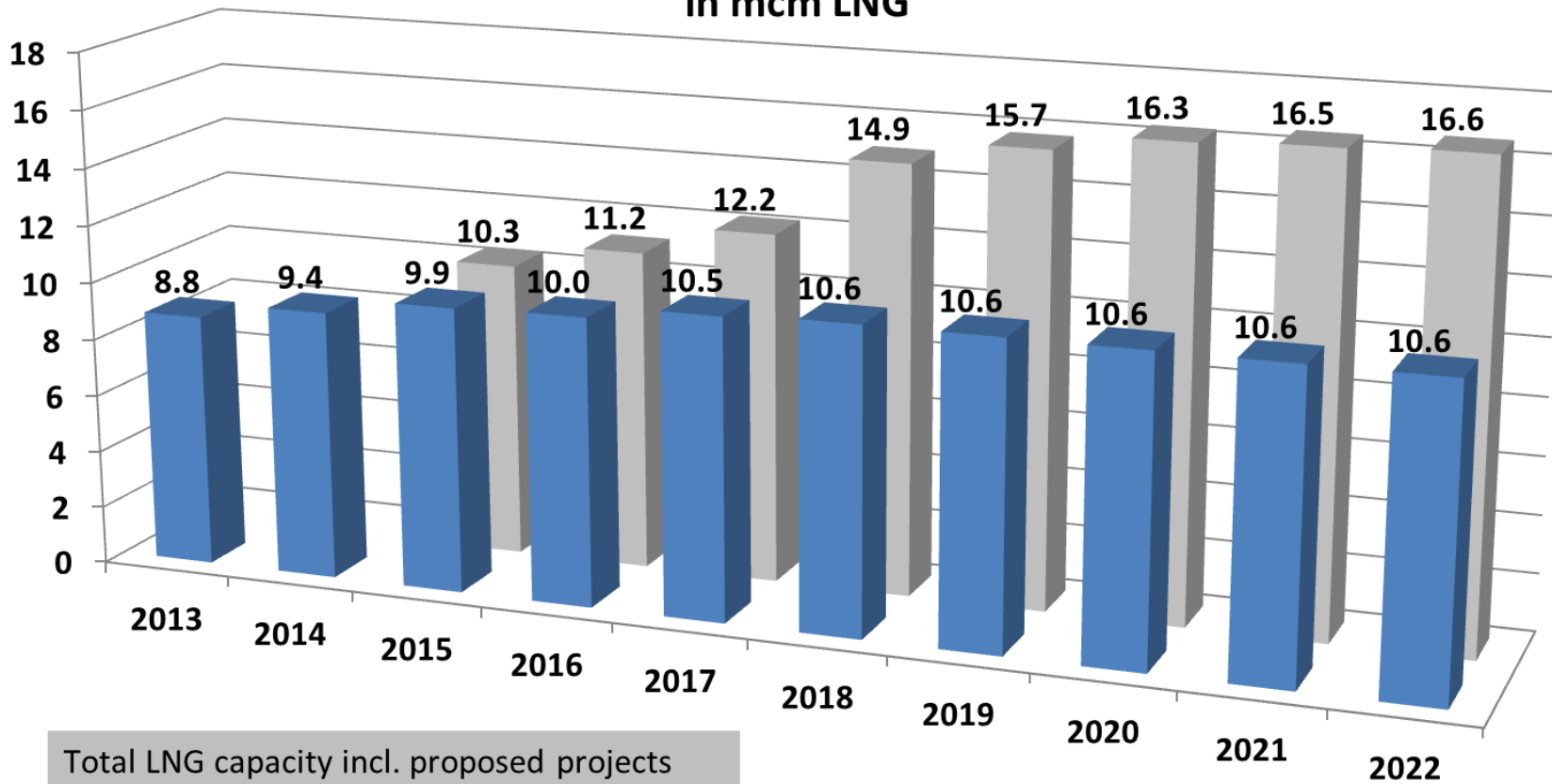
Total LNG capacity incl. proposed projects

LNG capacity existing and under construction

Source: GLE LNG Investment Database, September 2014

LNG storage capacity development

**LNG Terminals' Storage Capacity in Europe
in mcm LNG**



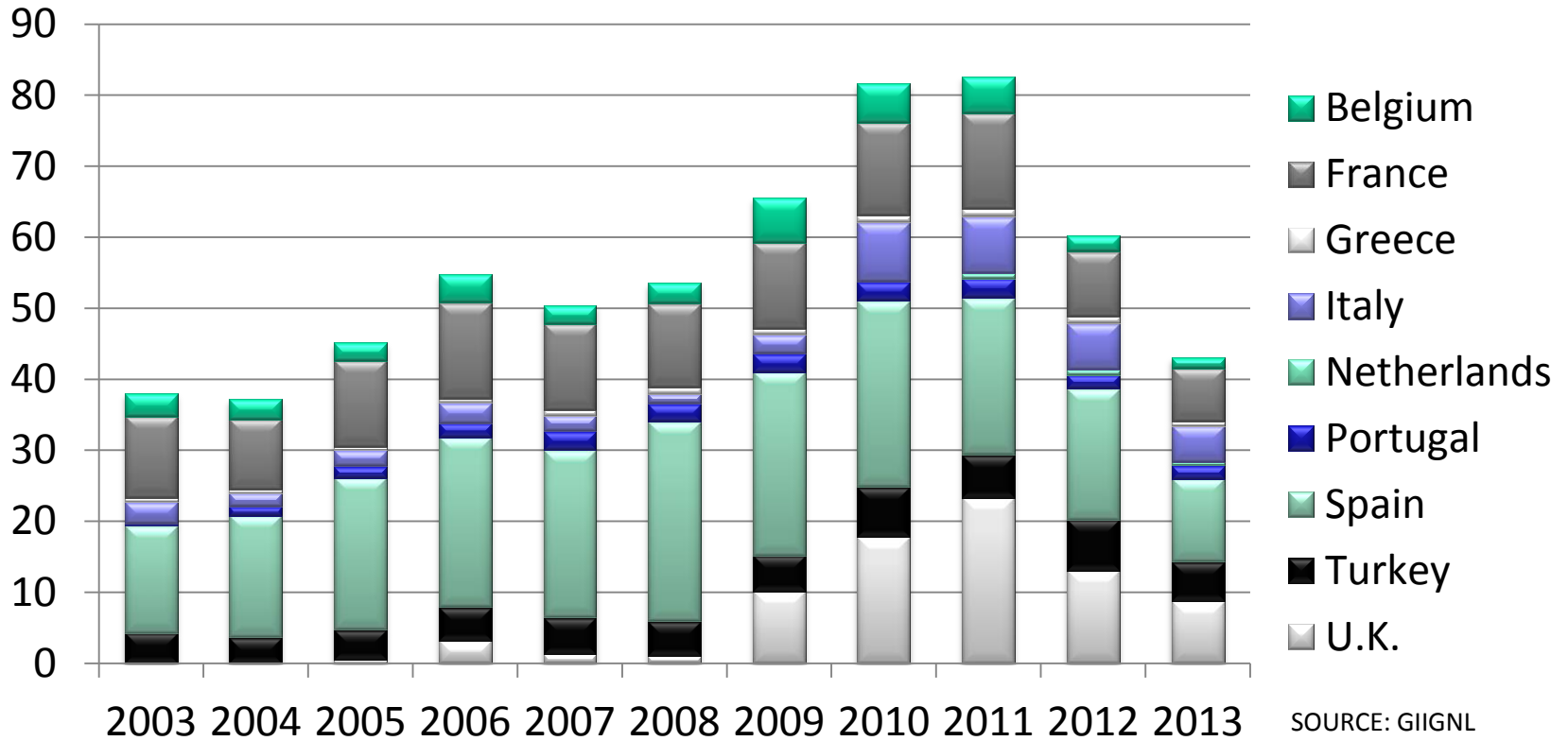
Total LNG capacity incl. proposed projects

LNG capacity existing and under construction

Source: GLE LNG Investment Database, September 2014

Low LNG imports to Europe continue

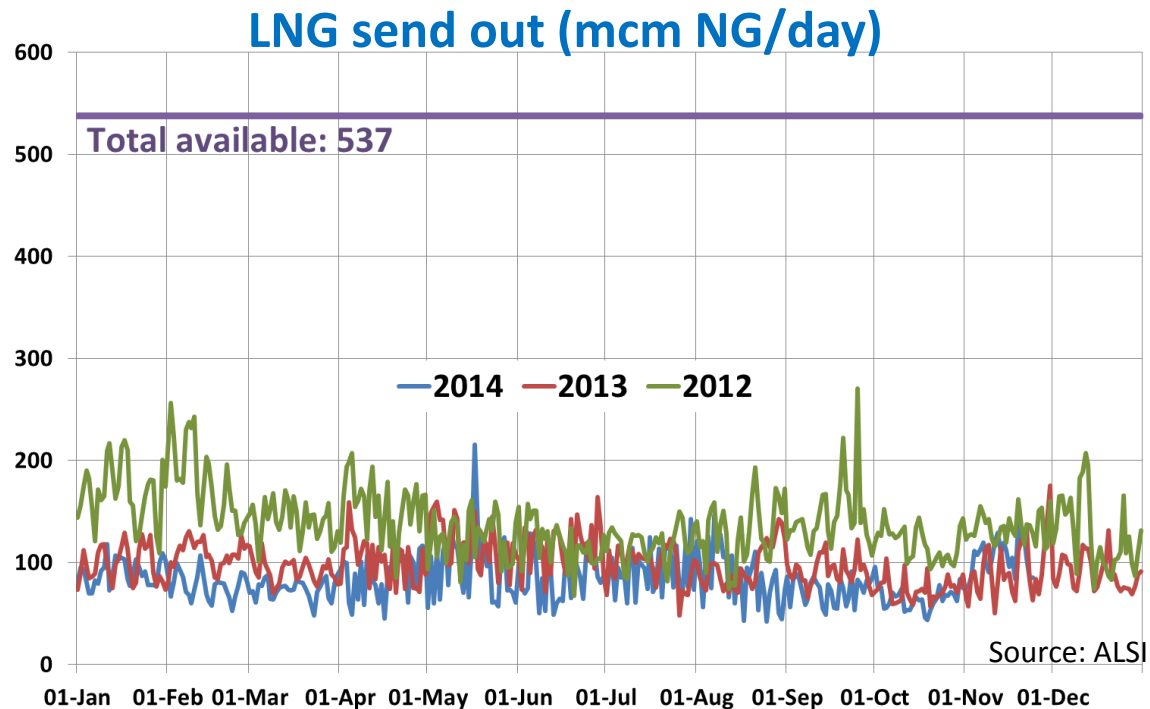
LNG imports (bcm)



**After 27% fall (22 bcm) between 2011 and 2012,
new 28% fall (17 bcm) between 2012 and 2013**

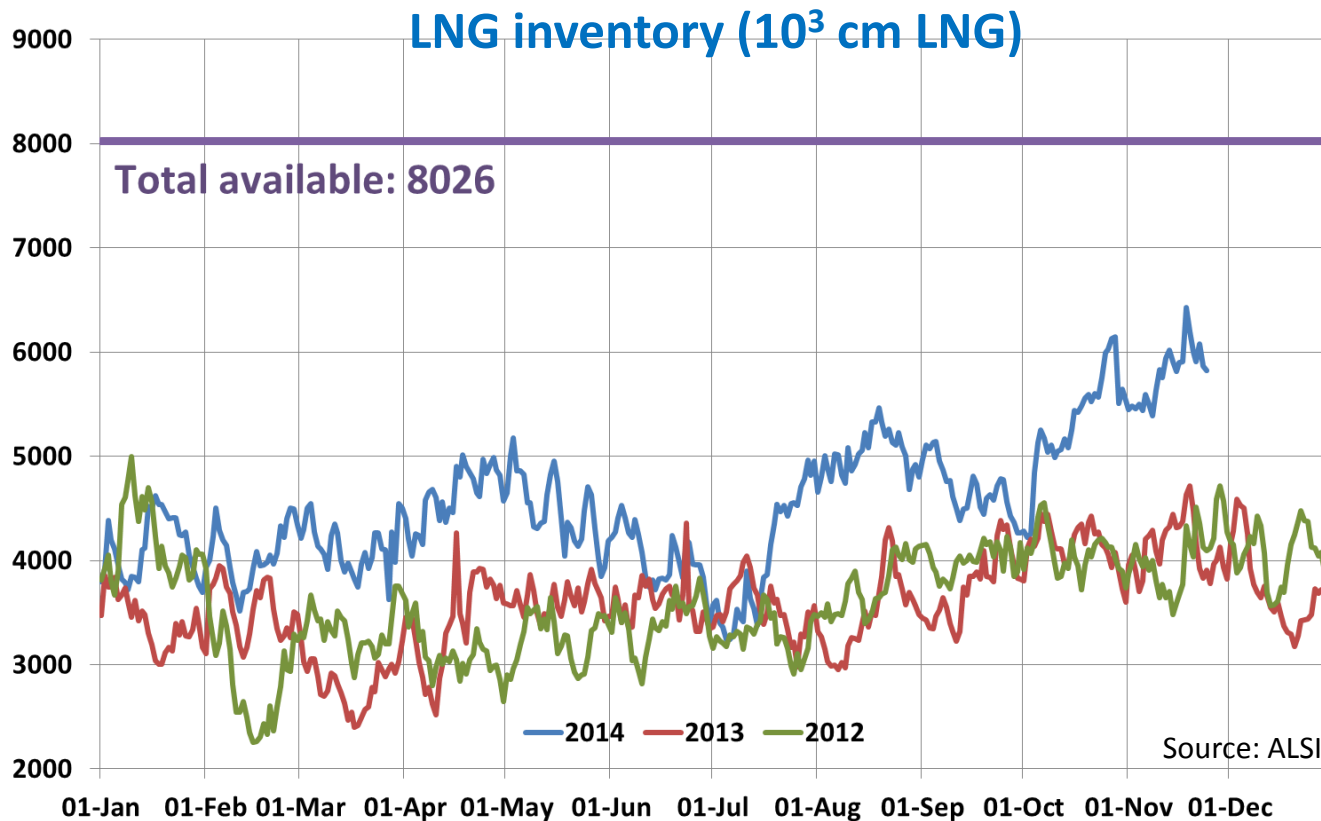
Total send out capacity of large-scale LNG terminals: 185 bcm/year

- On 3 December 2014, the Lithuanian LNG terminal is expected to be commissioned. It increases the EU annual regasification capacity by 4 bcm to 189 bcm
- In average just 16% of total daily LNG send-out used from January to November 2014



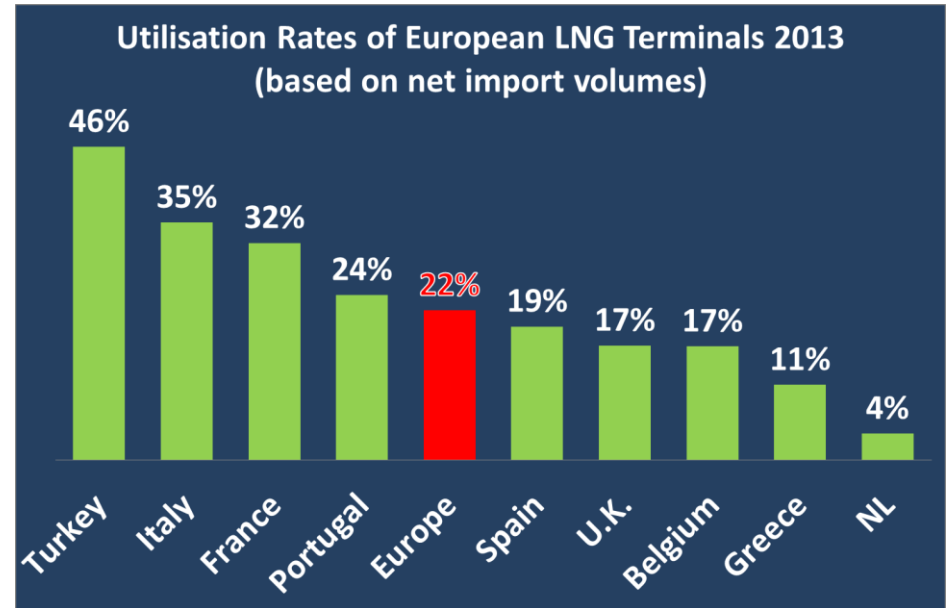
Higher LNG storage inventory in 2014

- European LNG inventory as of 24 November 2014: 5.8 mcm LNG
- Lithuania will increase the European LNG storage capacity by 0.17 mcm to 8.2 mcm LNG



Although acuteness of the situation may be different on each LNG terminal depending on technical or contractual characteristics, most LSOs share concerns regarding:

- management of “Minimum Send-out” to avoid the need for flaring
- management of inventory to maximize send-out on peak demand periods
- management of maintenance and operation (e.g., reduced lifetime of all the rotating equipment results in increasing maintenance cost)
- and more generally, the organization of the LNG terminals



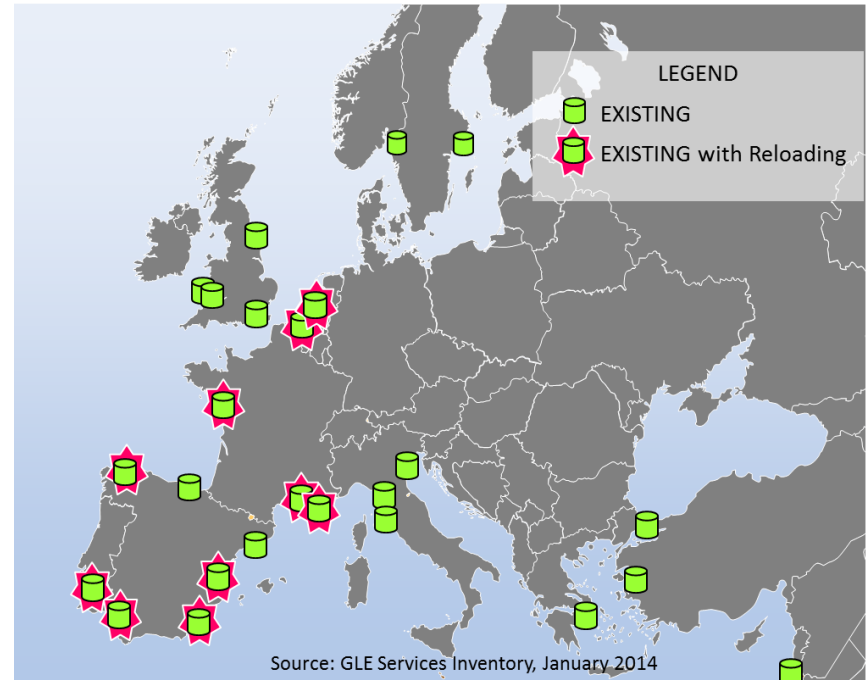
Source: GIIGNL and GLE

If calculated on gross import volumes (i.e. before re-exports), the figures above would be improved for countries where cargoes have been reloaded. However, European average would not be significantly changed.

Development of “new” LNG services continues

Reloading

- Transfer of LNG from the LNG tanks at the terminal into a vessel
- 10 LNG terminals have reloaded cargoes
- 12% of gross imports have been re-exported (6% in 2012) including to other EU countries



Transshipment

- Transfer of LNG from one vessel to another
- Offered in France, Spain and from 2015 in Belgium



SSLNG services of terminal operators

Loading of bunkering ships

- LNG is loaded on bunkering ships which supply to LNG-fuelled ships or LNG bunkering facilities for vessels

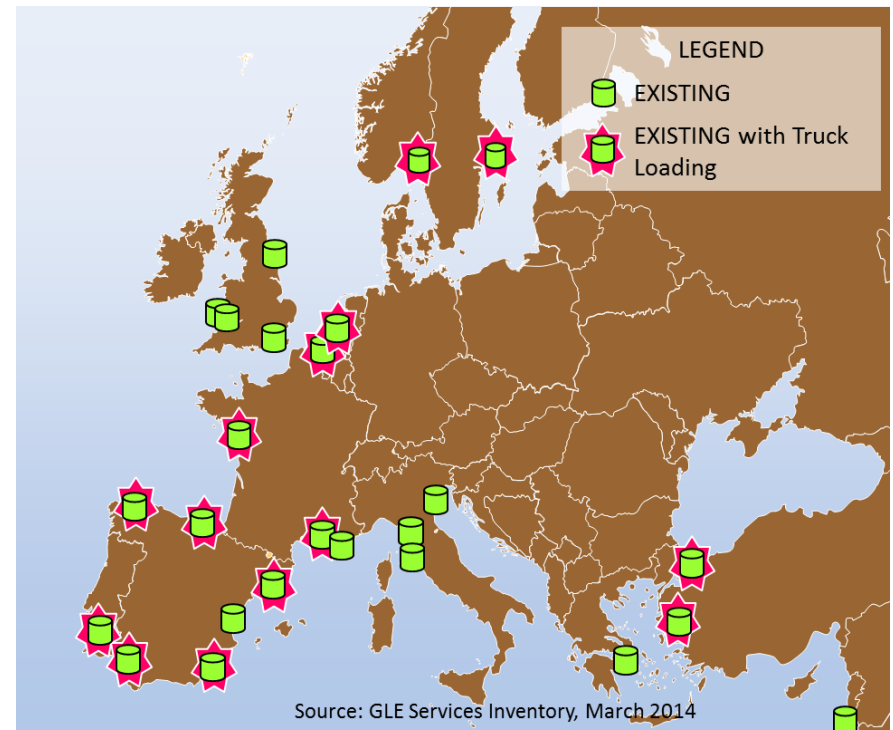


Truck loading

- LNG is loaded on tank trucks which transport LNG in smaller quantities

Rail loading

- LNG is loaded on rail tanks which transport LNG in smaller quantities



GIE is proud to support



Gas Naturally

GN is a campaign to showcase the essential role of natural gas in the forthcoming energy revolution. The mitigation of climate change has become one of the most important issues for the gas industry.

**Thank you
for your kind attention.**

GIE - Gas Infrastructure Europe
www.gie.eu

