



A closer glance on European **LNG** infrastructure development

Christophe Liaud
GLE Member, Gas Infrastructure Europe

"Greece as a Southeastern Europe & East Med Energy Gas Hub", 27 September 2017
Athens, Greece

GIE is the association for gas infrastructure in Europe



We represent the entire gas infrastructure business:



Meet our GLE members



16

member
companies

9

countries

1

observer

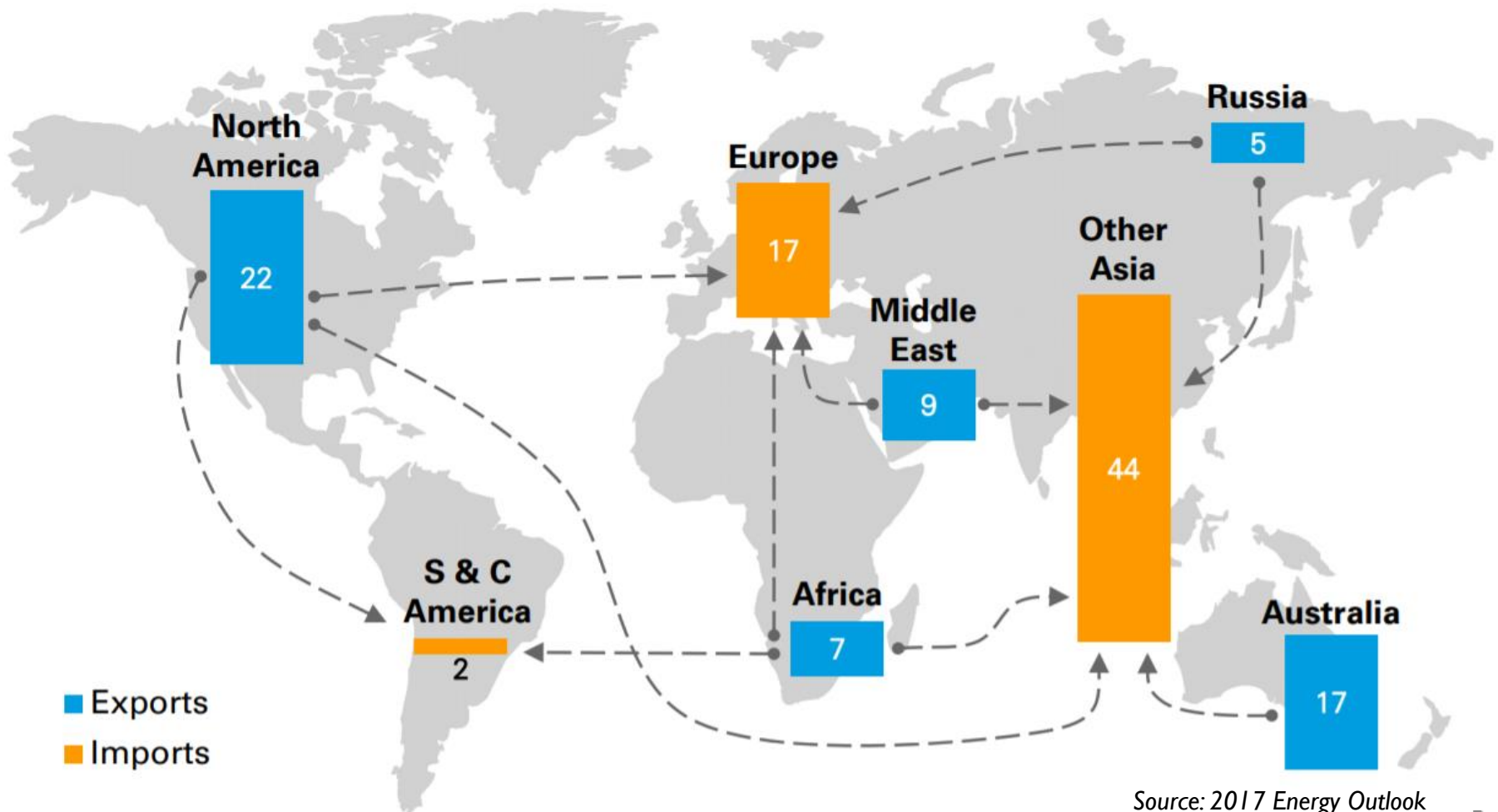




of the existing LNG import capacity
in the EU are our members

LNG's share in traded gas increases sharply

Net LNG exports and imports 2035 (Bcf/d)

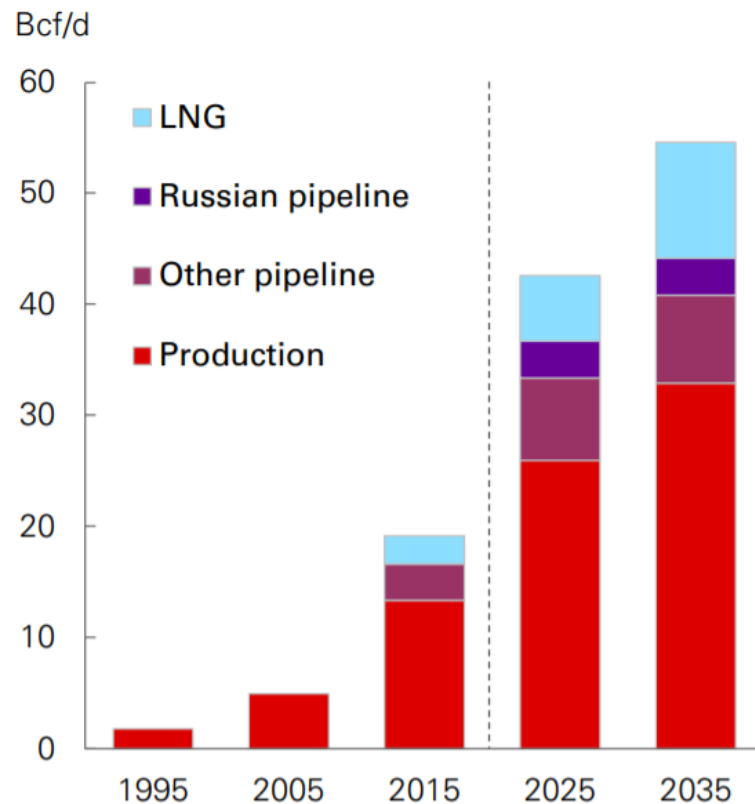


Source: 2017 Energy Outlook

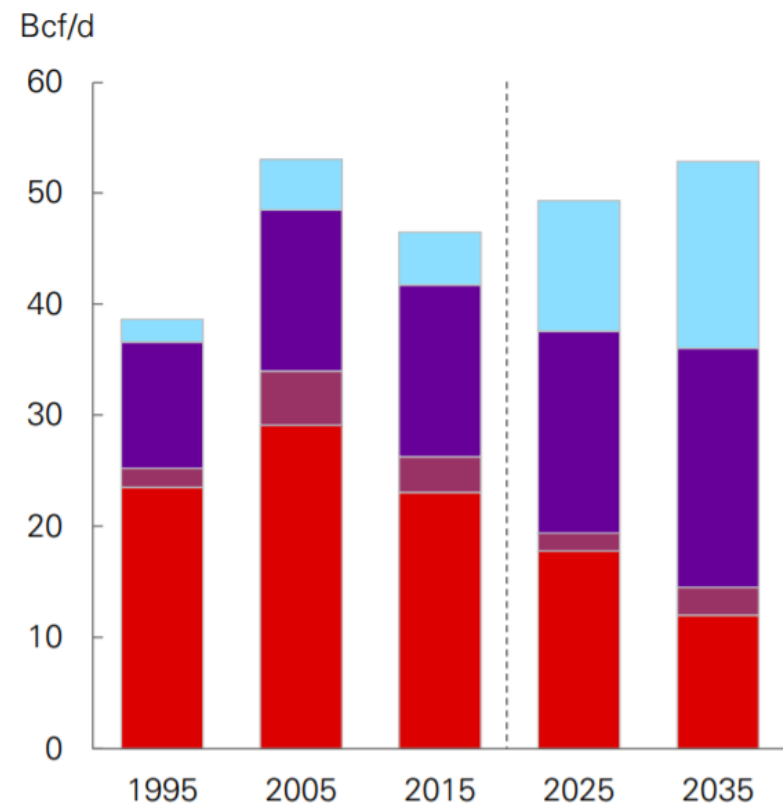
LNG supports gas consumption



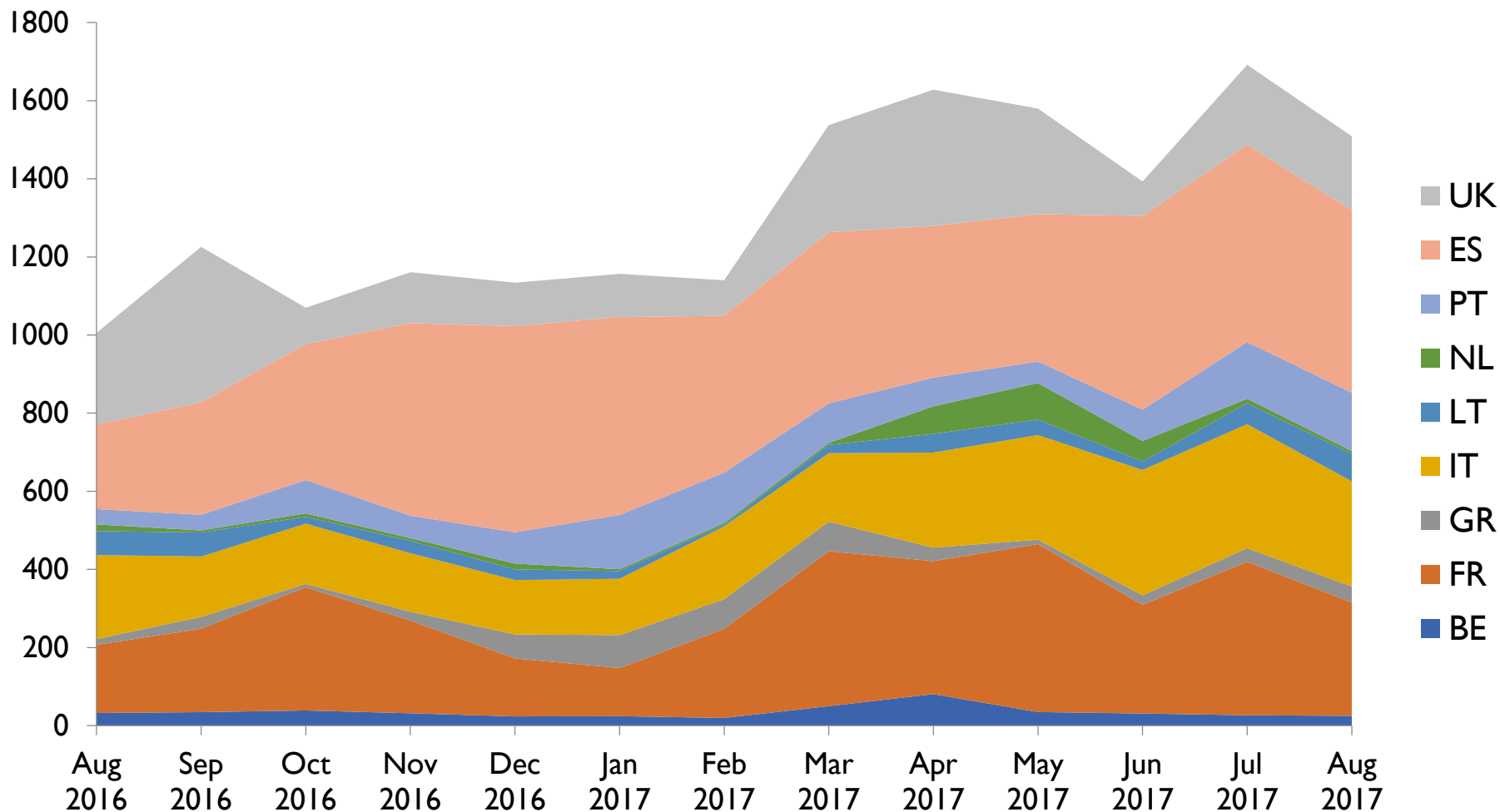
Gas supply to China



Gas supply to Europe



17% of total daily LNG send-out was used in 2016/2017 in the EU



Large scale LNG terminals in Europe in 2016



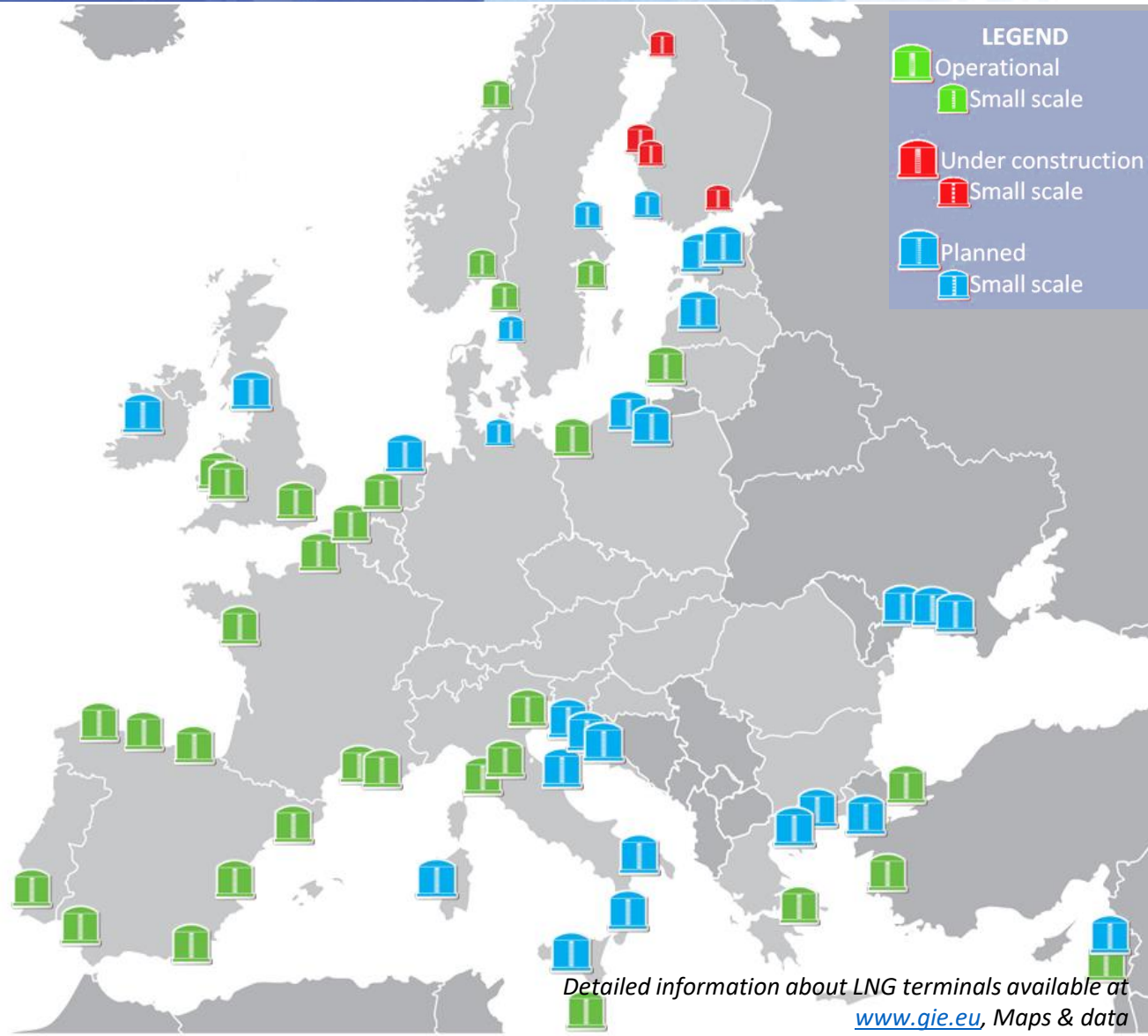
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Canary Islands



Detailed information about LNG terminals available at www.gie.eu, Maps & data

Large scale LNG terminals in Europe in 2016



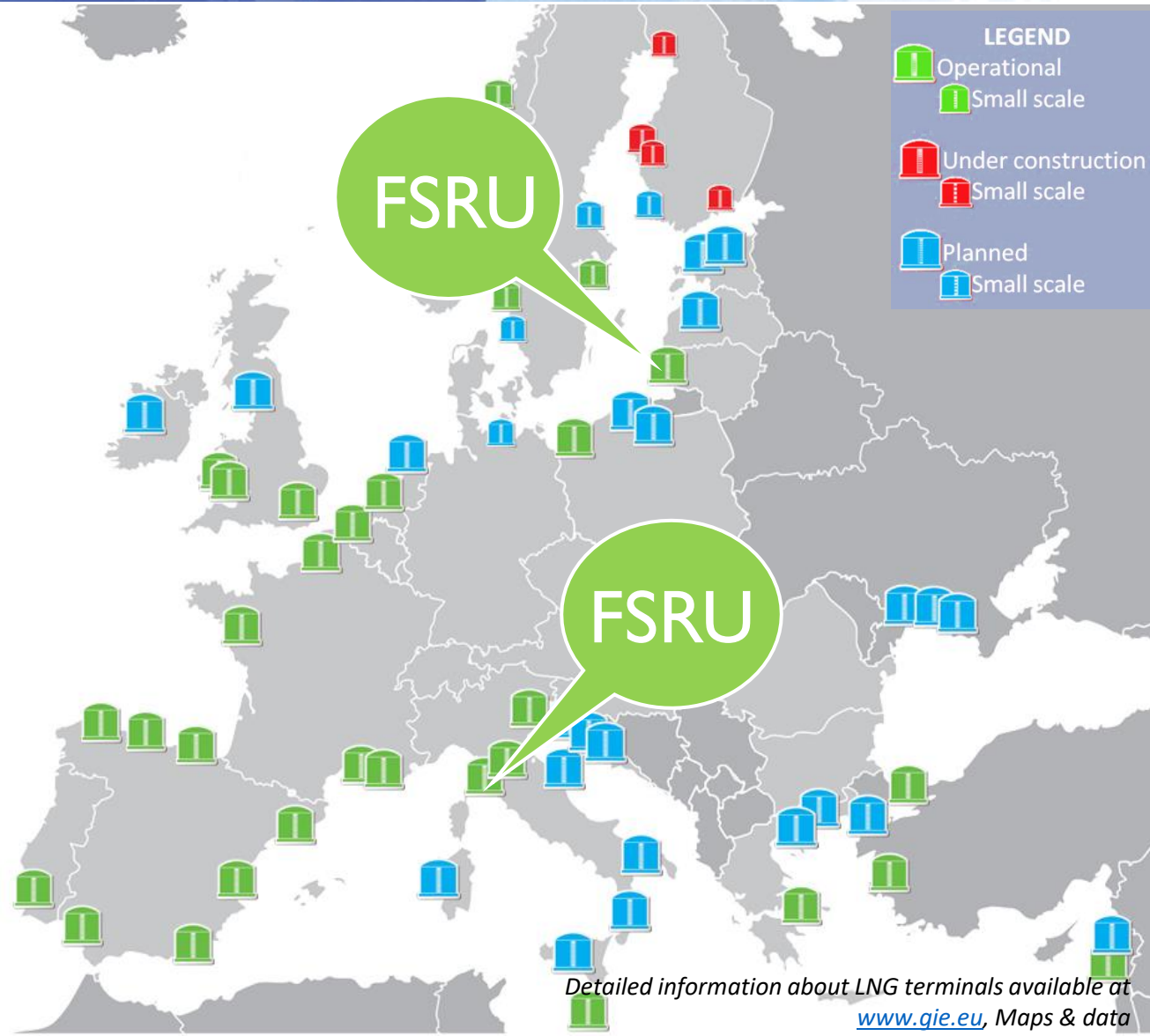
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Canary Islands



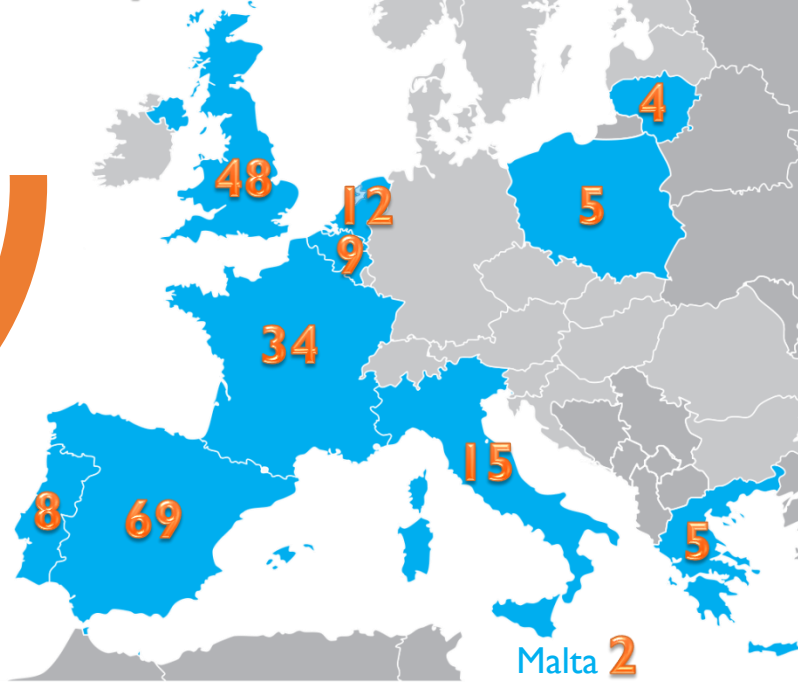
Detailed information about LNG terminals available at www.gie.eu, Maps & data

They all amount



Europe: 222 bcm/year

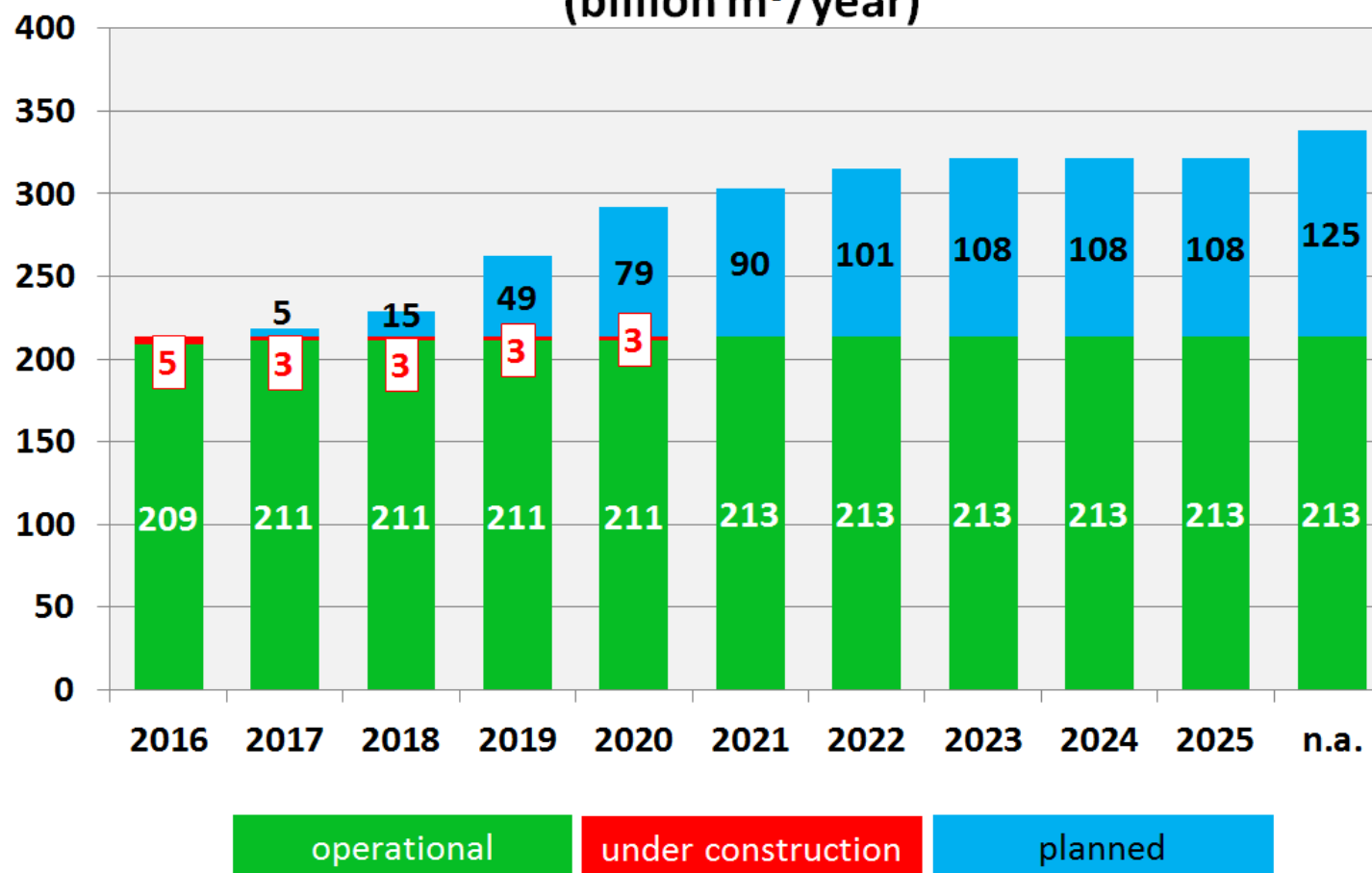
EU 28: 209 bcm/year



Regasification capacity development



**EU-28: Regasification capacity of large-scale terminals
(billion m³/year)**



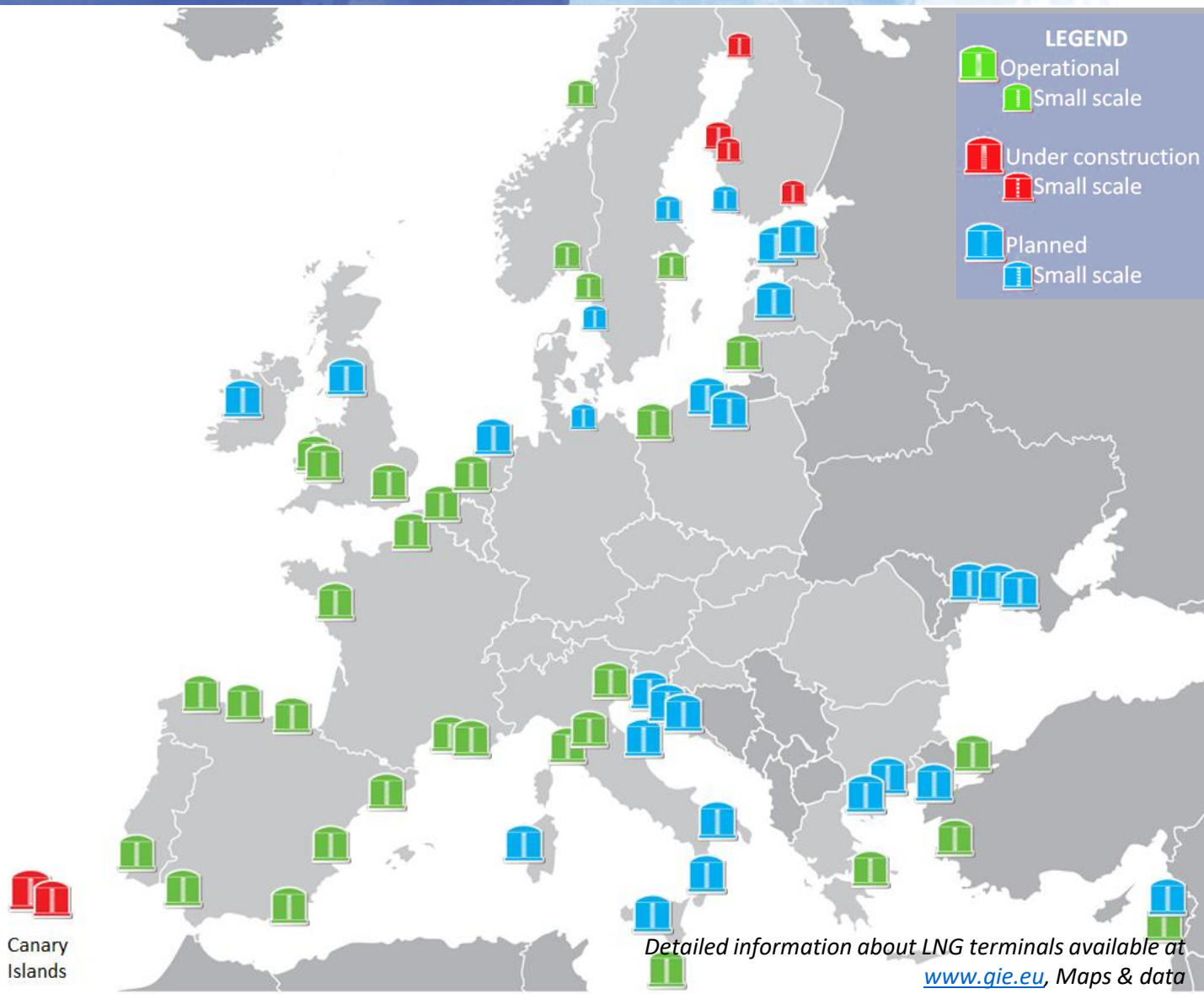
Small scale LNG terminals in Europe in 2016



4

4

4



New market for LNG: **Natural gas for transport fuel**

Truck loading (1/2)

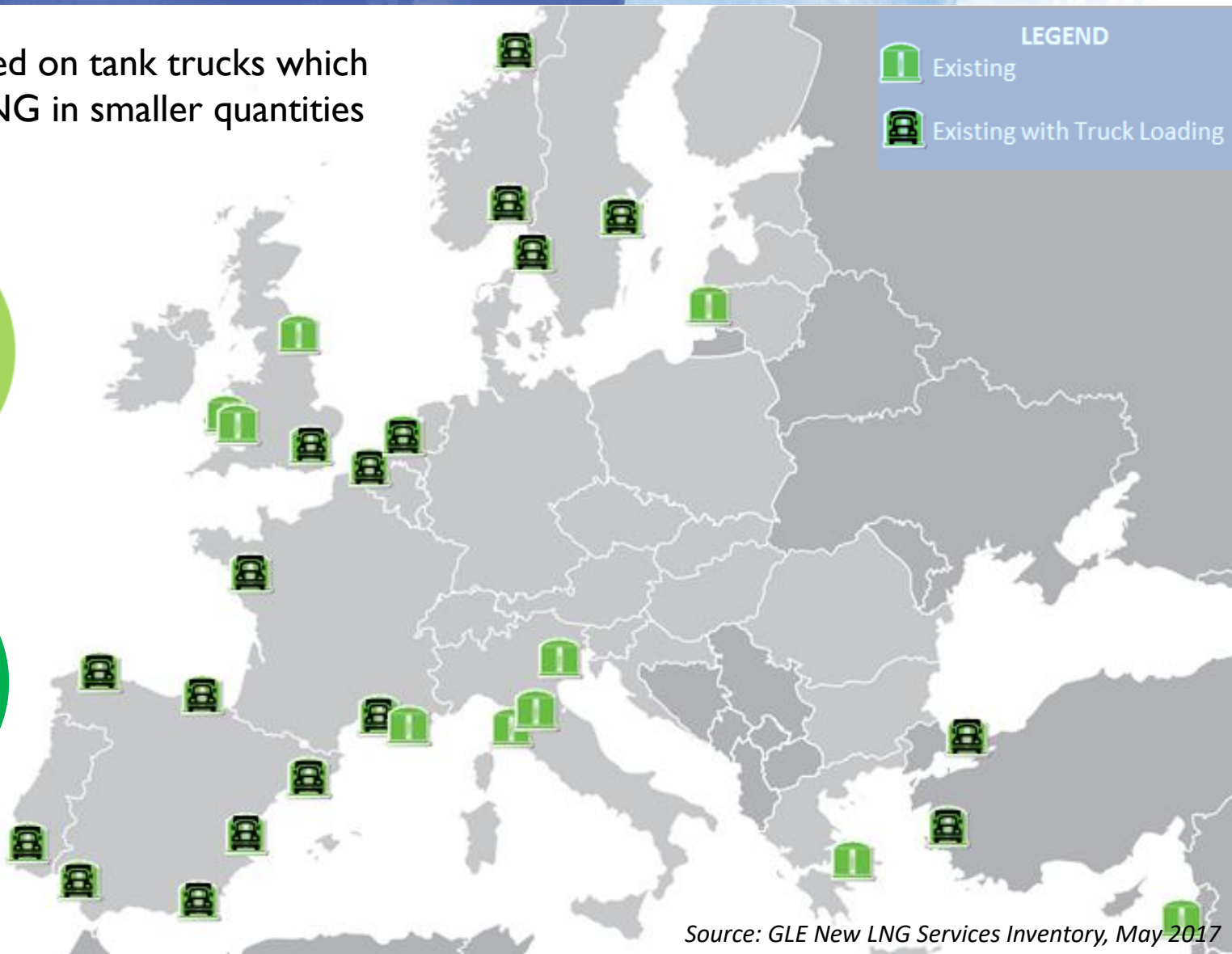


- LNG is loaded on tank trucks which transport LNG in smaller quantities

18

EU seaports

78%
of EU LNG
terminals

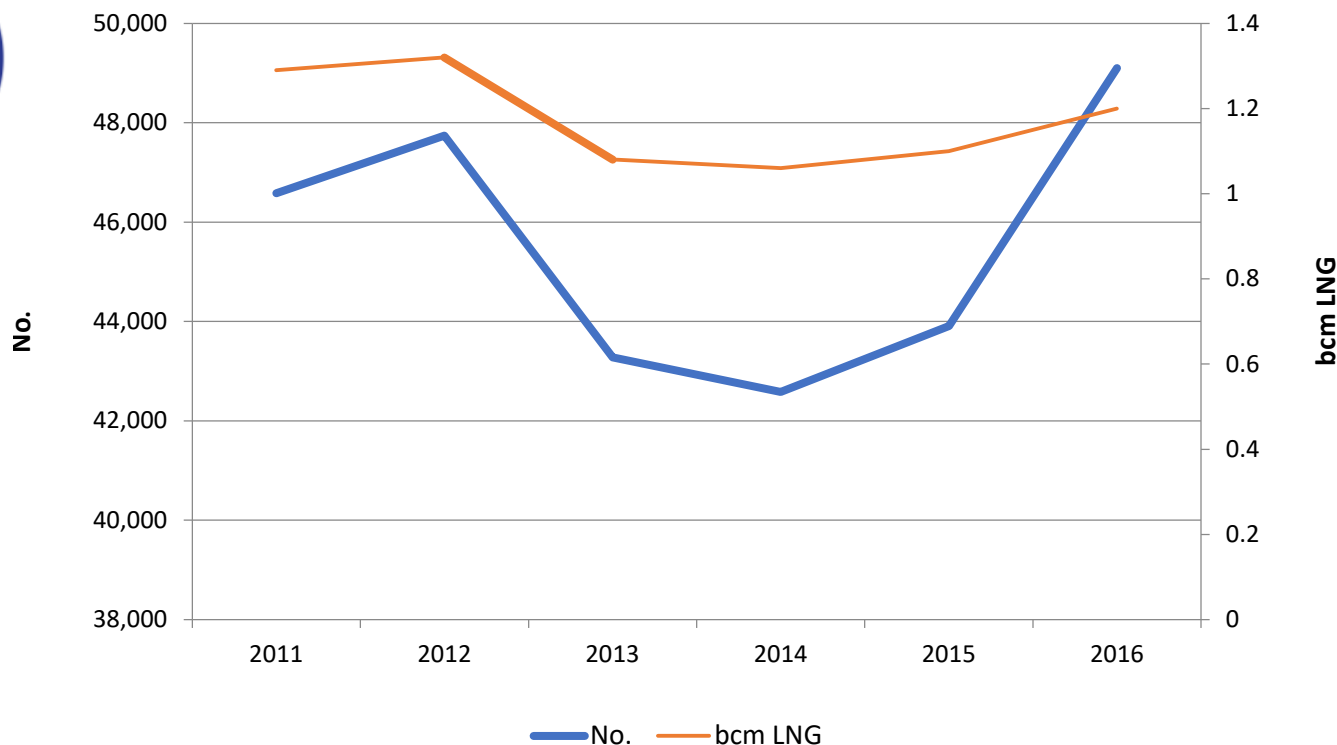


Source: GLE New LNG Services Inventory, May 2017

Truck loading (2/2)



Truck loading development (2011-2016)



Source: GLE LNG New Services Inventory, May 2017

An unparalleled rise: More than 49,000 trucks loaded 2.1 mcm LNG at truck loading facilities in 2016, the highest rate in the past 5 years

Rail loading



- LNG is loaded on rail tanks which transport LNG in smaller quantities
- In several EU countries (France, the Netherlands, Poland, and Spain) rail loading is a service under study, whereas in France and the UK railway connection is already available



Source: LNG World Shipping

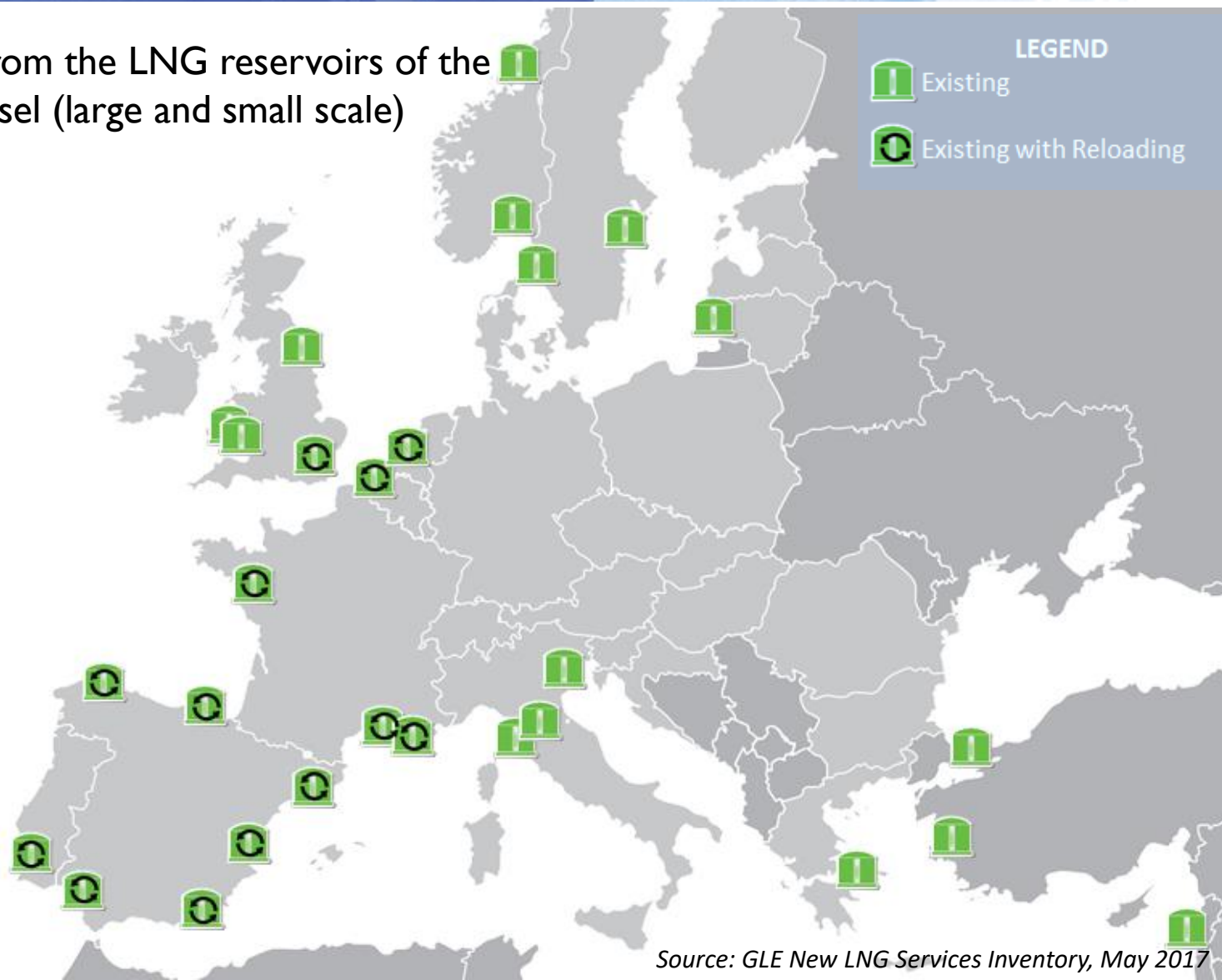
Reloading (1/2)



- Transfer of LNG from the LNG reservoirs of the terminal into a vessel (large and small scale)

13
EU seaports

57%
of EU LNG
terminals

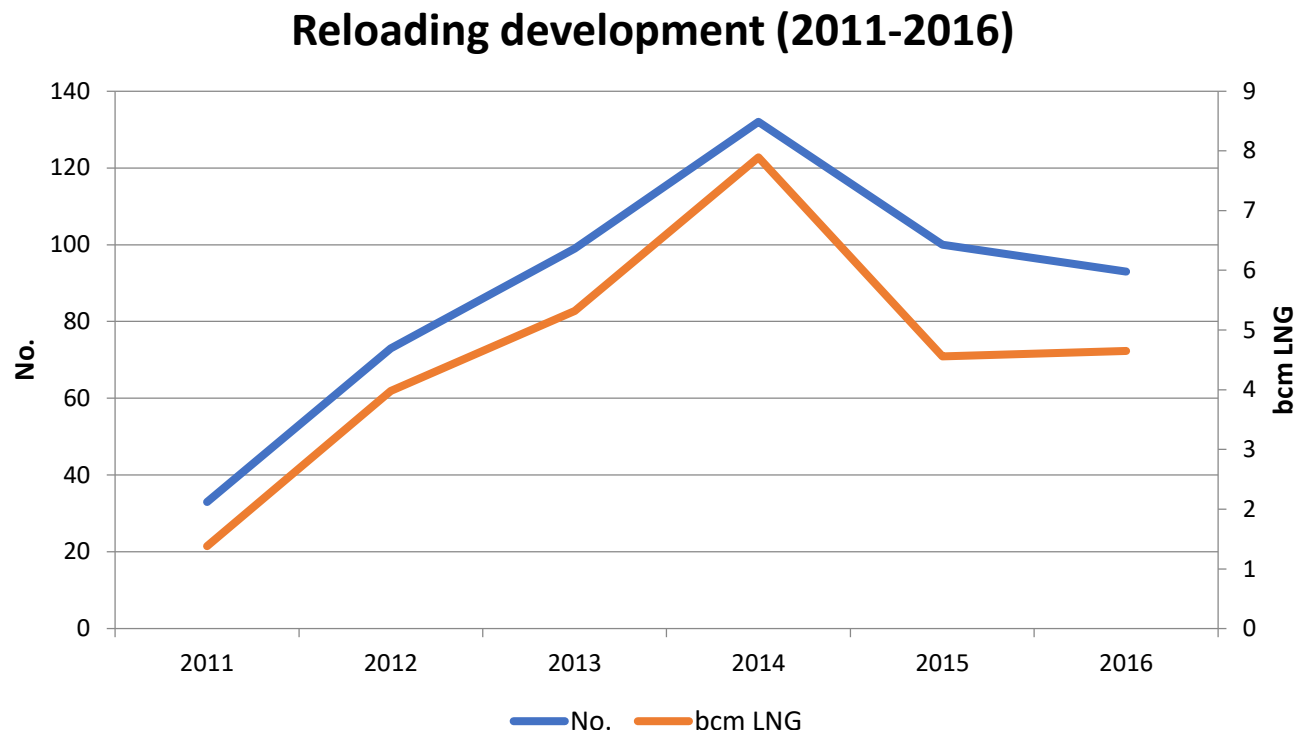


Source: GLE New LNG Services Inventory, May 2017

Reloading (2/2)

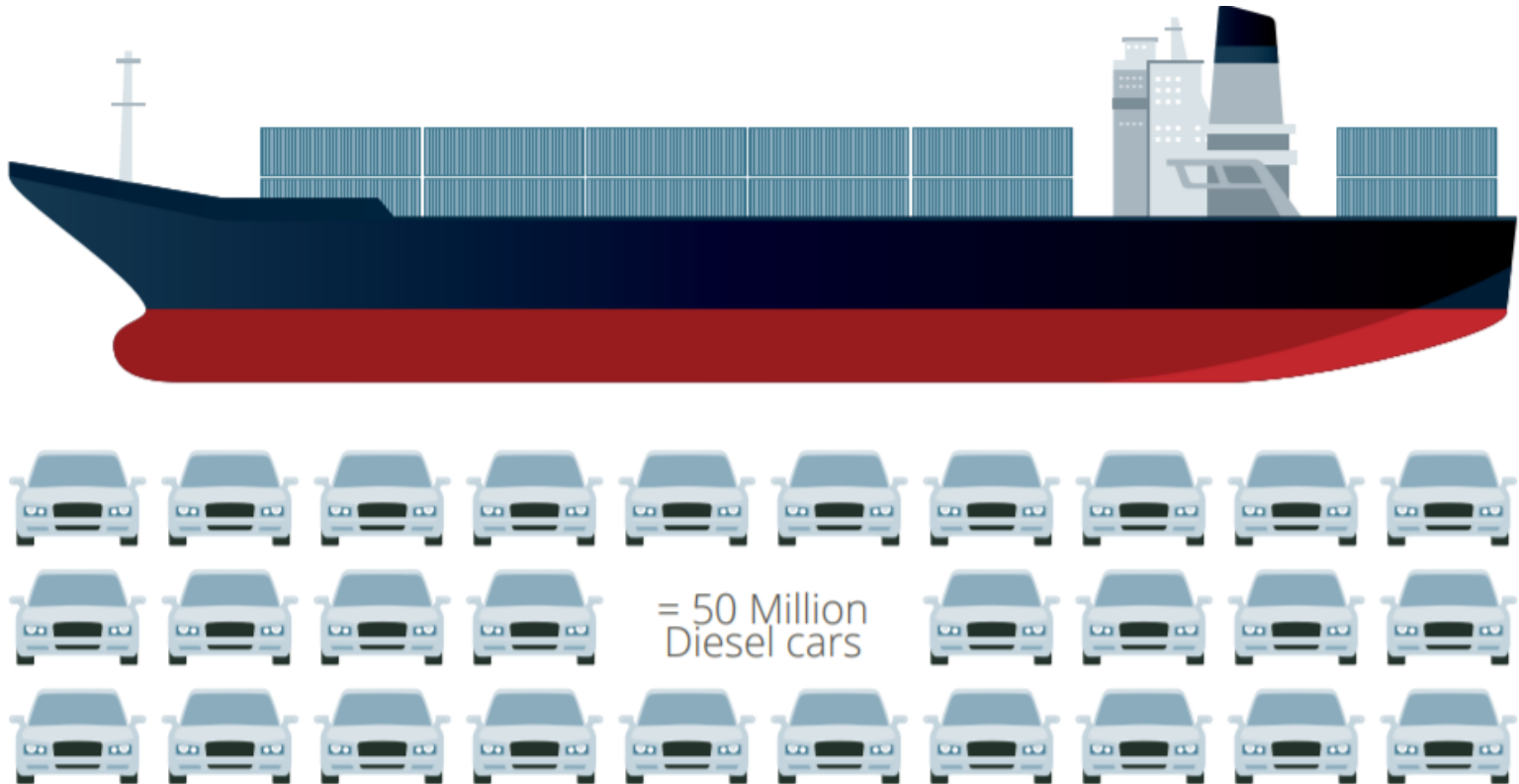


- The number of reloading, the transfer of LNG from the LNG reservoirs of the terminal into a vessel, **tripled in the past 6 years**.
- Countries with **highest reloading capacity**: France, Belgium, the Netherlands



Source: GLE New LNG Services Inventory, May 2017

Did you know that...



One large container ship, powered by 3 percent sulphur bunker fuel, emits the same amount of sulphur oxide gasses, as 50 million diesel-burning cars?

Source: IGU, Clean marine transport report, 2017

Small-scale ship loadings



- LNG is loaded on ships with a maximum capacity up to 30.000 m³ LNG
- Zeebrugge and Gate LNG terminals performed small-scale ship loadings in 2016
- Klaipeda LNG terminal in Lithuania performed its first small ship loadings in the beginning of 2017



Source: World Maritime News

Bunkering of cruise ships with passengers on board



Viking Line Cruise:



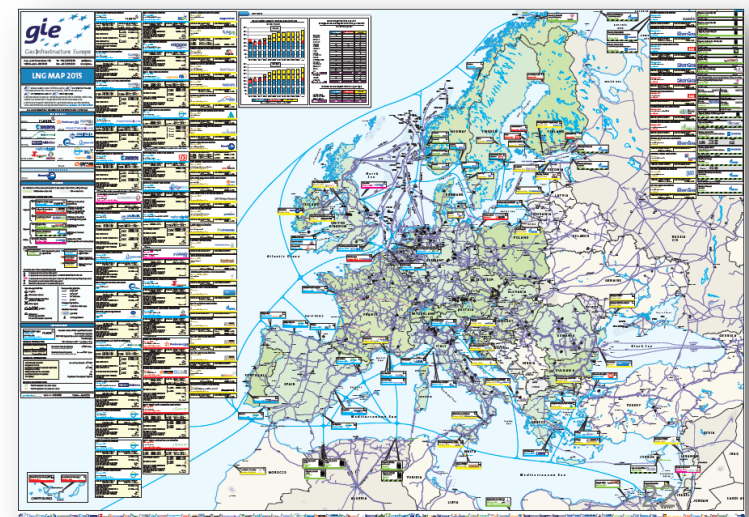
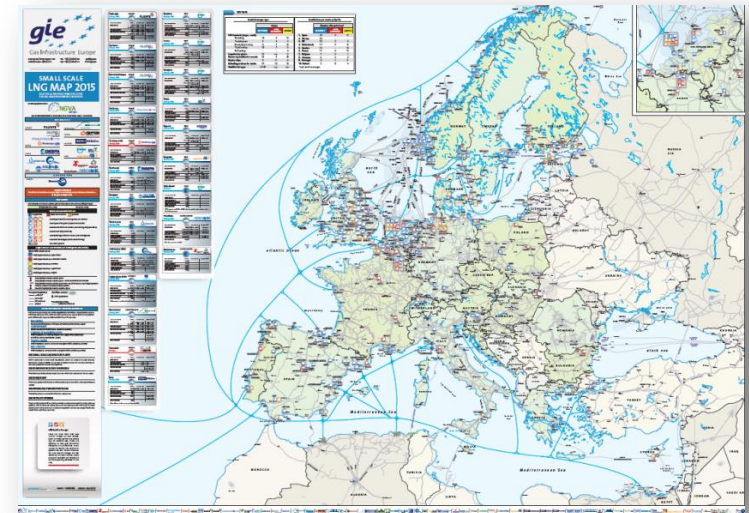
GIE (SS)LNG Maps



GIE offers two LNG maps:
LNG and SSLNG Map

Print versions of the maps
(format:A0) can be ordered at
www.gie.eu.

*2017 versions available from
December 2017*



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



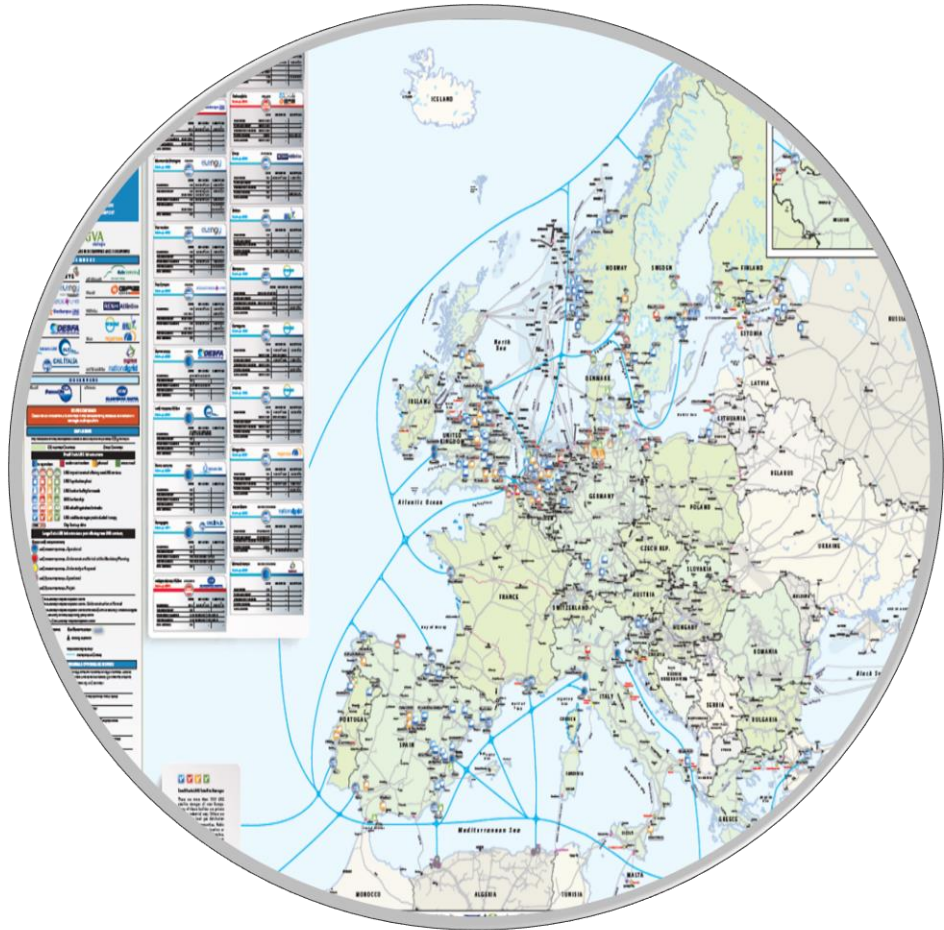


Back-up slides

GLE Small Scale LNG Map



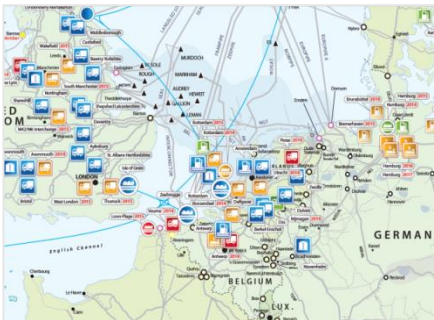
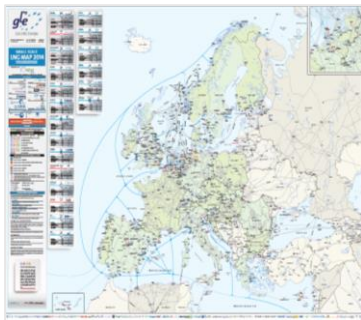
This for the first time provides the LNG industry and interested parties with an overview of the available, planned and announced small-scale LNG infrastructure and services in Europe.



GLE Small Scale LNG Map



- It covers the infrastructure for **sea transport**, **transport on inland waterways** as well as **road transport**.
- Additionally, it shows the **existing infrastructure** as well as the **planned infrastructure** (i.e. projects) and **public accessible and private facilities** (e.g. LNG filling stations).
- It shows not only the **type and location of the infrastructure**, but also **standardised additional information of each facility** (e.g. company, website, capacity, start-up year).



Facility	Type	Location	Capacity	Start-up year	Company	Website	Status
Rotterdam 2015	Sea transport	Rotterdam	1.2	2015	Rotterdam LNG	rotterdamlng.com	Operational
Amsterdam 2014	Sea transport	Amsterdam	1.0	2014	Amsterdam LNG	amsterdamlng.com	Operational
Utrecht 2014	Sea transport	Utrecht	0.8	2014	Utrecht LNG	utrechtlng.com	Operational
Antwerp 2014	Sea transport	Antwerp	0.6	2014	Antwerp LNG	antwerplng.com	Operational
Brussels 2014	Sea transport	Brussels	0.5	2014	Brussels LNG	brusselslng.com	Operational
Paris 2014	Sea transport	Paris	0.4	2014	Paris LNG	parislng.com	Operational
London 2014	Sea transport	London	0.3	2014	London LNG	londonlng.com	Operational
Amsterdam 2014	Sea transport	Amsterdam	0.2	2014	Amsterdam LNG	amsterdamlng.com	Operational
Utrecht 2014	Sea transport	Utrecht	0.1	2014	Utrecht LNG	utrechtlng.com	Operational
Antwerp 2014	Sea transport	Antwerp	0.1	2014	Antwerp LNG	antwerplng.com	Operational
Brussels 2014	Sea transport	Brussels	0.1	2014	Brussels LNG	brusselslng.com	Operational
Paris 2014	Sea transport	Paris	0.1	2014	Paris LNG	parislng.com	Operational
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