



Gas LNG Europe

LNG

A major contribution to a sustainable, competitive and secure European gas market

Francisco de la Flor, GLE President

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:

- 14 member companies
- 9 countries
- 1 observer
- ≈ 90% of existing regas. capacity in Europe



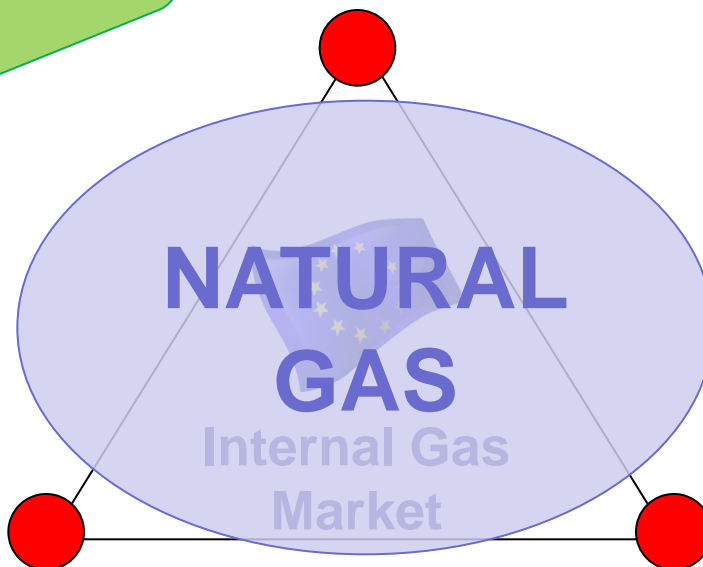
Why Natural Gas and LNG



AFFORDABLE

COMPETITIVE

EU energy objectives



SUSTAINABLE
(low-carbon economy)

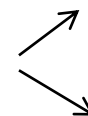
ABUNDANT

SECURITY OF SUPPLY

ACCEPTABLE

The Requisite ?

→ Gas Infrastructure!



**New investments
Existing investments**

LNG maritime routes and trade

LNG makes worldwide gas reserves potentially accessible to Europe



■ IMPORTING COUNTRIES
■ EXPORTING COUNTRIES

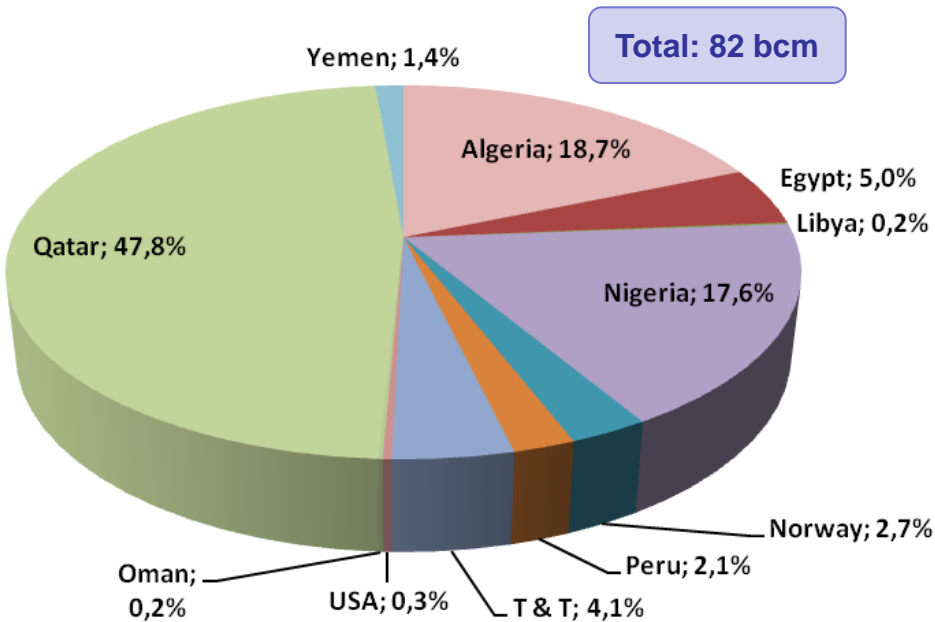
SOURCE: GIGNL

LNG = Enhancing of Security of Supply



LNG Imports in Europe per Exporting country

Total: 82 bcm



Share of LNG World Imports

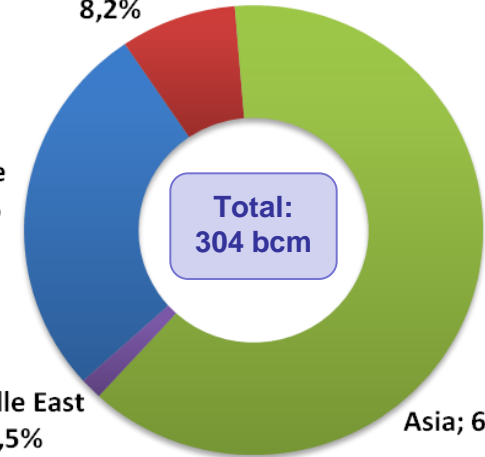
Europe 27,2%

Americas 8,2%

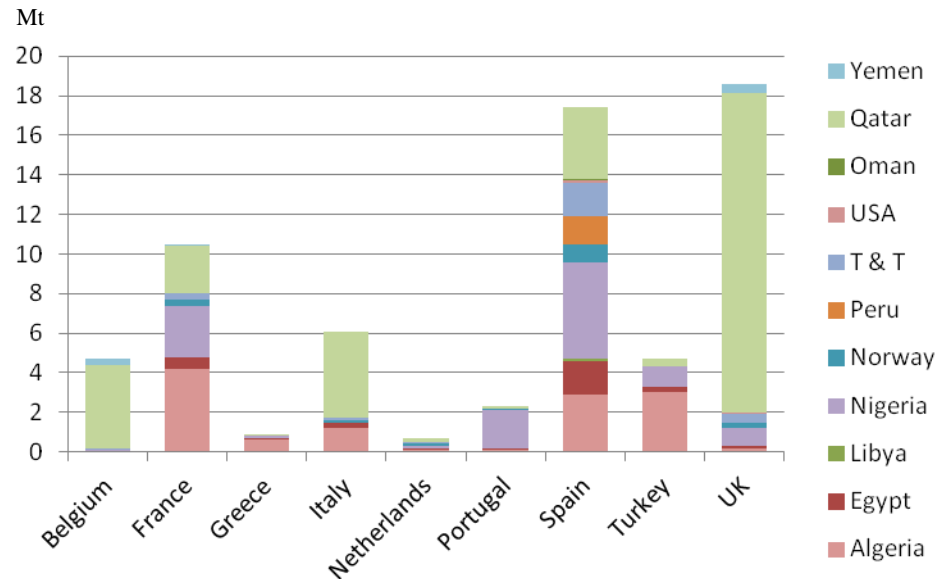
Middle East 1,5%

Total: 304 bcm

Asia 63,1%

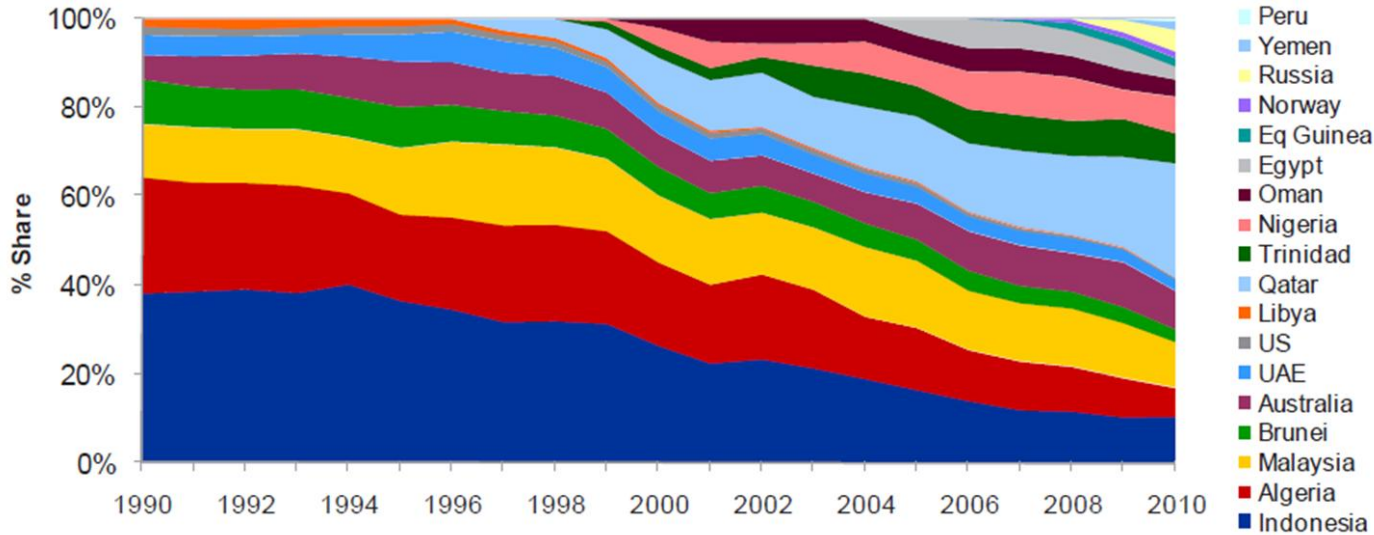


LNG Imports in Europe by source



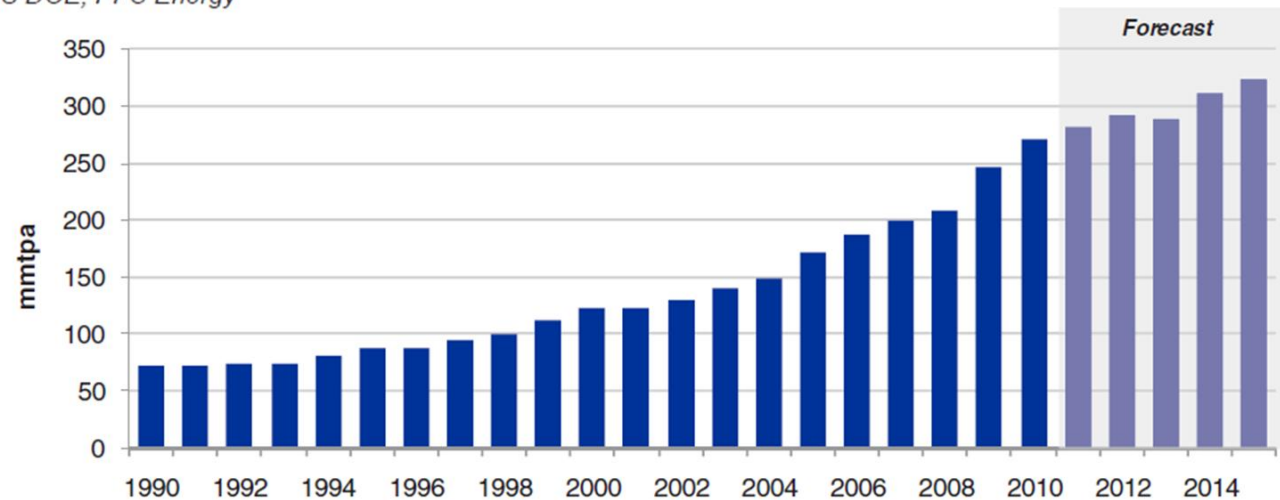
SOURCE: GIIGNL THE LNG INDUSTRY 2011
[Europe includes EU-27 + Turkey]

LNG = Diversification of sources



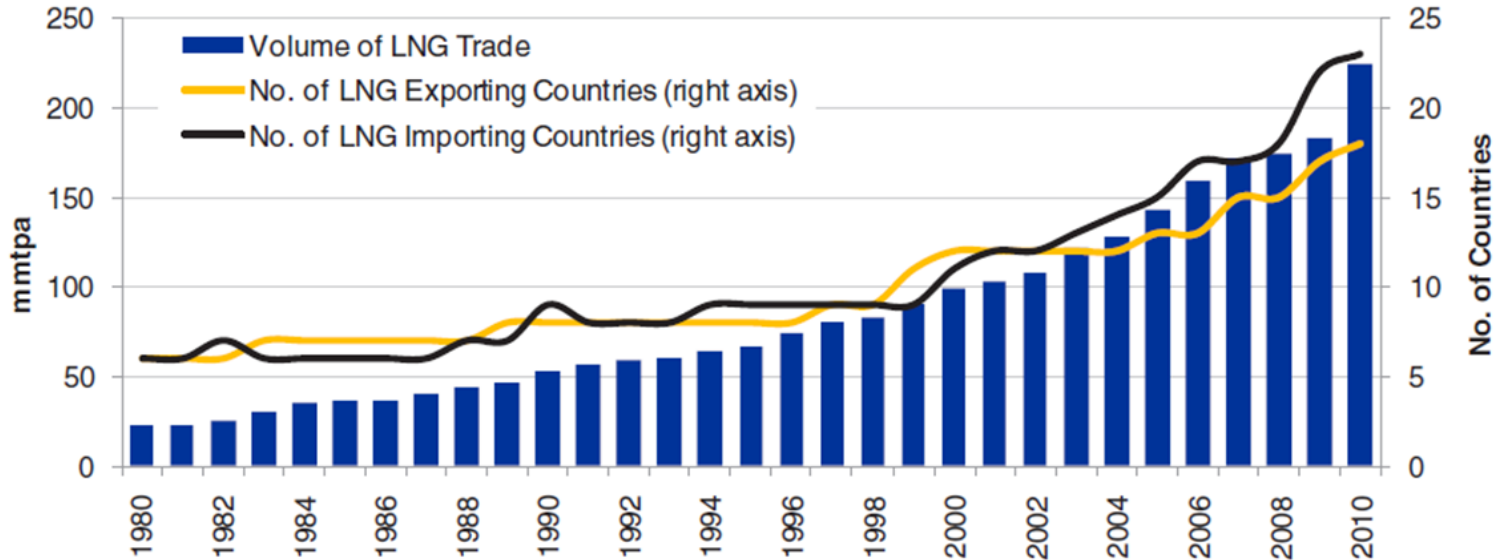
Sources: Cedigaz, Waterborne LNG Reports, US DOE, PFC Energy

Global Liquefaction capacity build-out



Source: PFC Energy, Company Announcements

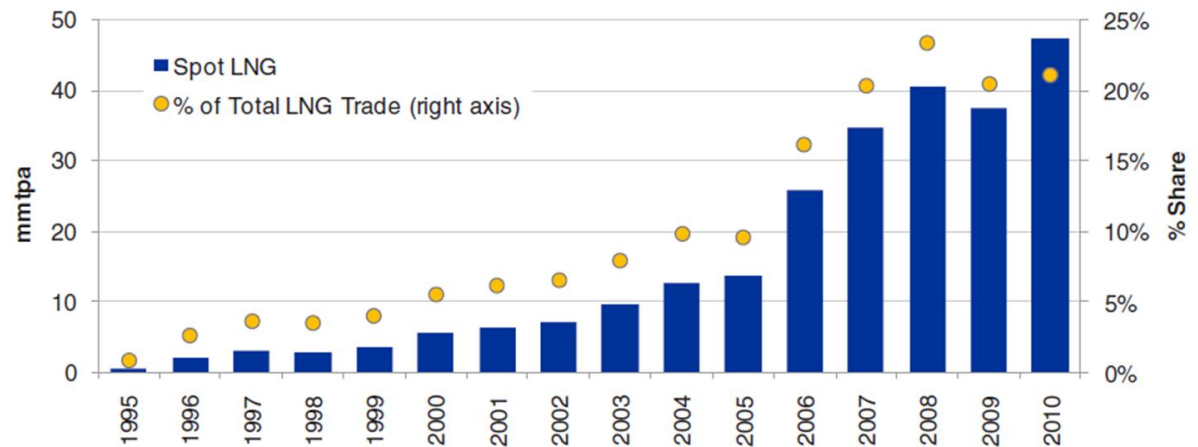
LNG = Increasing of competition



Number of LNG exporting and importing countries 1980-2010

Sources: Cedigaz, Waterborne LNG Reports, US Energy Information Agency (EIA), US Department of Energy (DOE), PFC Energy

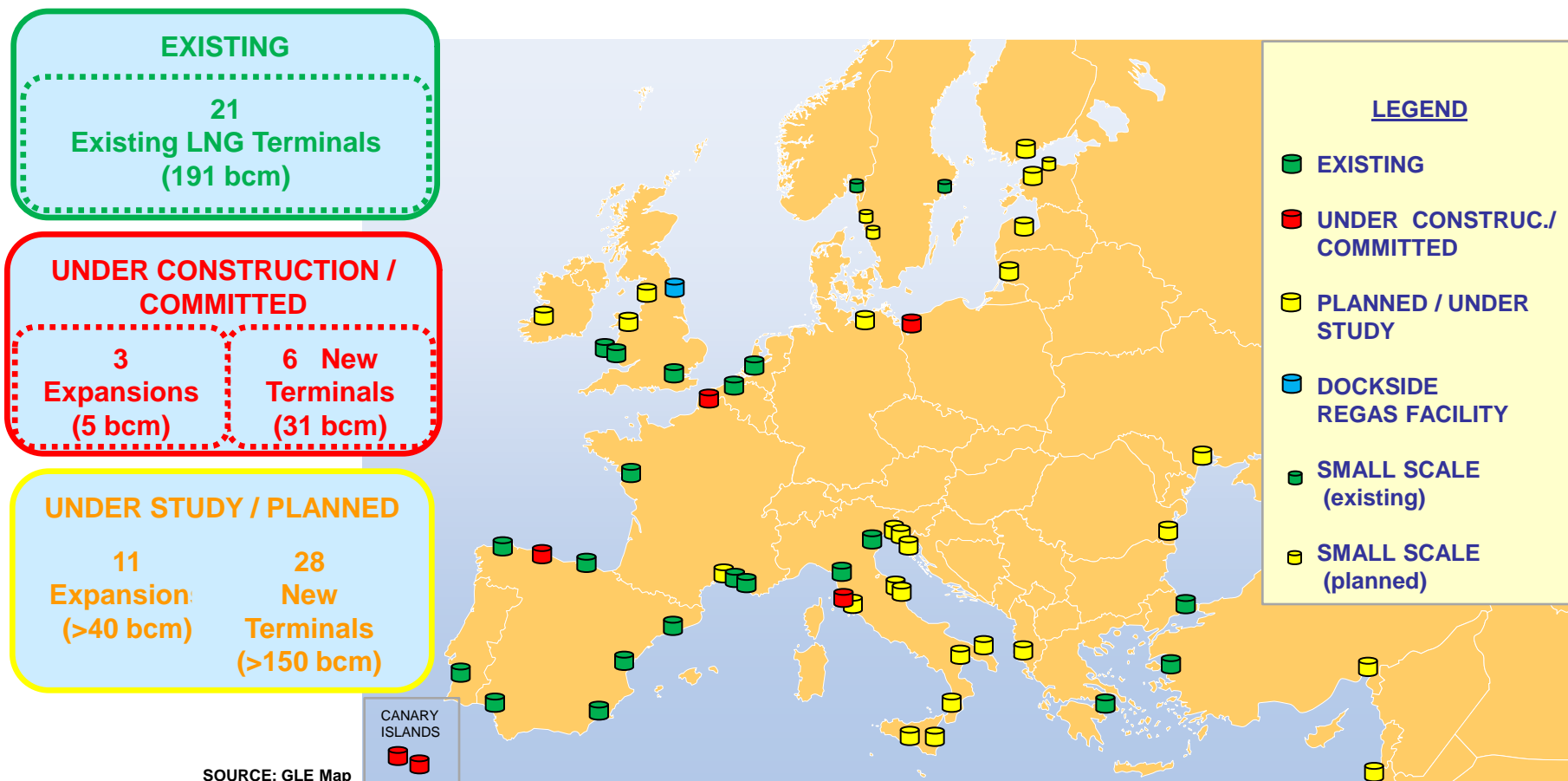
LNG Spot trade: Volume and share of Total LNG Trade



Sources: Cedigaz, Waterborne LNG Reports, US DOE, PFC Energy

LNG Terminals in Europe

The role played by European LNG terminals may differ at each location but all Terminals make a contribution to gas (and power) security of supply

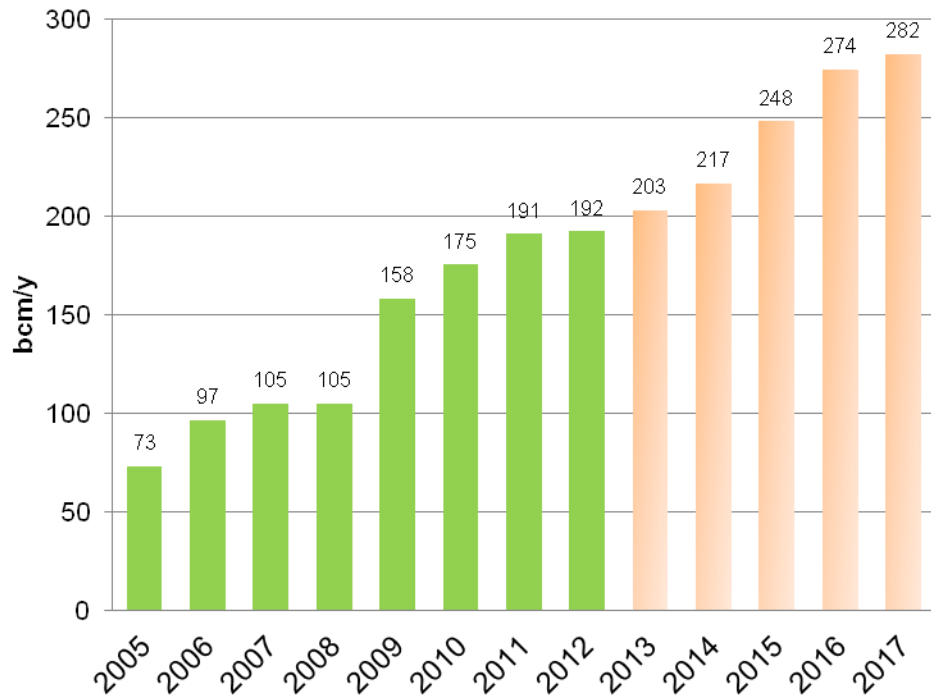


Detailed information on LNG Projects is available at: http://www.gie.eu/maps_data/index.asp

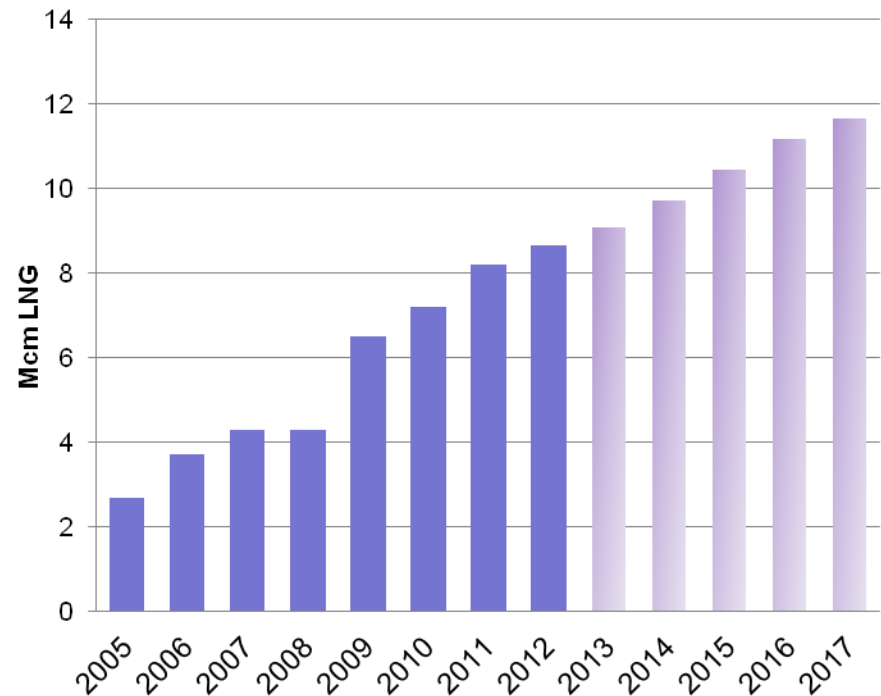
LNG Terminals in Europe: Evolution of capacity



REGASIFICATION CAPACITY IN EUROPE

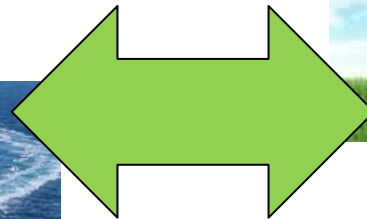


LNG TERMINALS' STORAGE CAPACITY IN EUROPE



Source: GLE MAP & GLE INVESTMENT DATABASE

LNG provides a high level of flexibility making it the ideal partner for renewables



LNG: an ideal partner for renewables



High volatility of Renewables for Electricity Production The Role of Gas - 2 days in Spain

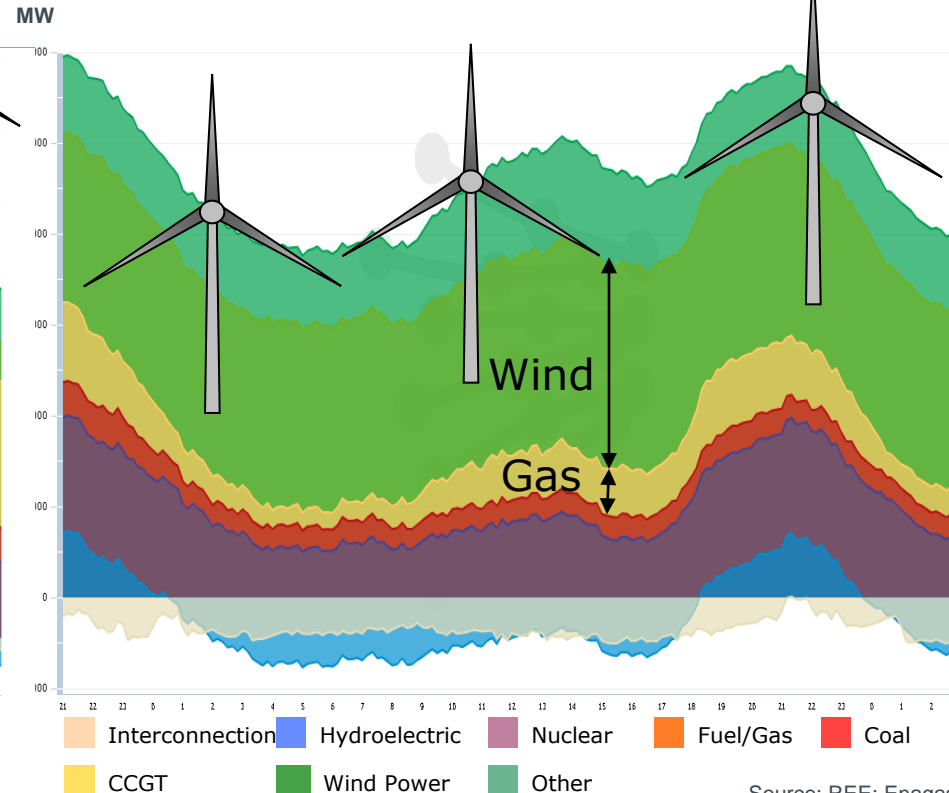
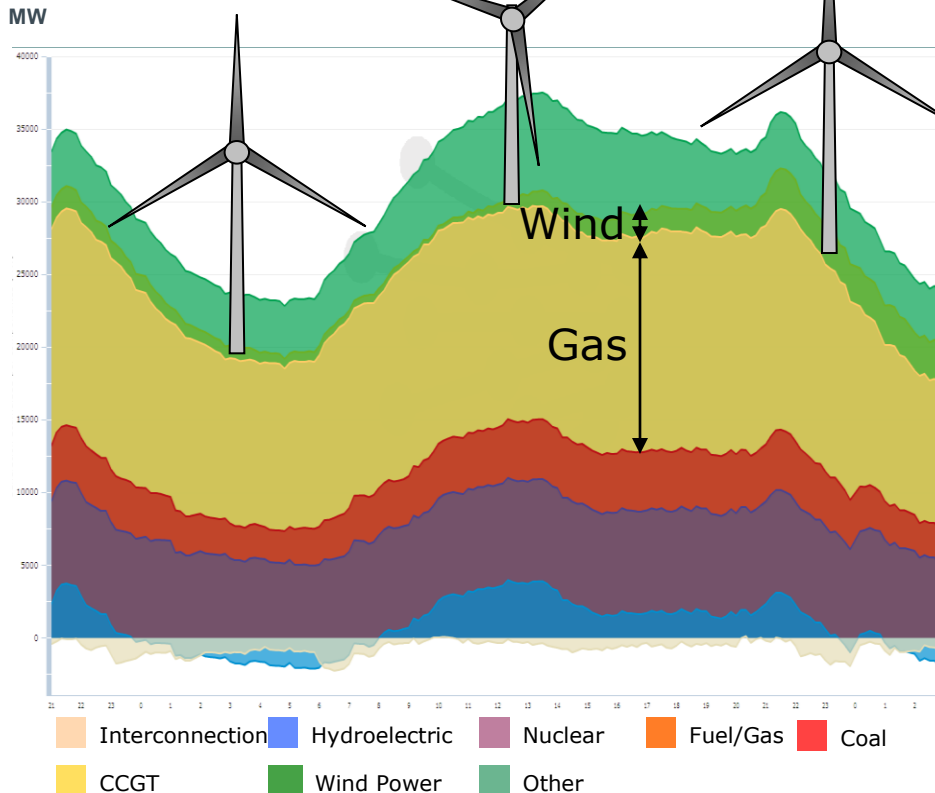
30 September 2010 – 24h

Wind Power 1%-10%

**Difference
9.000 MW**

21 April 2012 – 24h

Wind Power 50-60%



Source: REE; Enagas

The use of LNG as a fuel offers an excellent opportunity for improving the environmental footprint in the transport sector

Some examples of proven LNG applications



LNG powered offshore supply vessel, Norway



LNG powered vessel design (source: DNV)



Locomotive converted to LNG, US



LNG trailer 50 m³, China



LNG bus, Poland



LNG truck, Netherlands



NG and LCNG station, US

Source: IGU/NGVA Europe/DNV

Less SO_x, NO_x, CO₂ and particle emissions compared to other fossil fuels



Present and under study ECA zones

Source: IMO/DNV

Conclusions



- LNG and LNG infrastructures contribute to Security of Supply, diversification of sources and routes and competition
- LNG plays different roles in different countries
- LNG provides high level of flexibility contributing to renewables integration
- LNG will be key in meeting strict environmental requirements for the heavy transport sector (trucks, ships bunkering)
- LNG Terminal operators are continuously working to enhance transparency and facilitate access to new users

Conclusions



- LNG volumes to EU are increasing (2008/2011: +50 %) representing more than 20% of EU gas imports in 2011
- To secure LNG flows to EU, European LNG markets should be attractive (high competition with Asian buyers)
- Significant investments on LNG going on, but great uncertainty about planned projects
- Sound Investment Climate is required
 - Regulatory stability
 - Speeding- up permitting and authorisation procedures
 - Same level-playing field between r-TPA and exempted
- Everyone in EU should have access to LNG



**Thank you
for your kind attention!**

Back-up

Gas Naturally campaign

