# reganosa

LNG market development Thursday 23rd April 2015, Helsinki

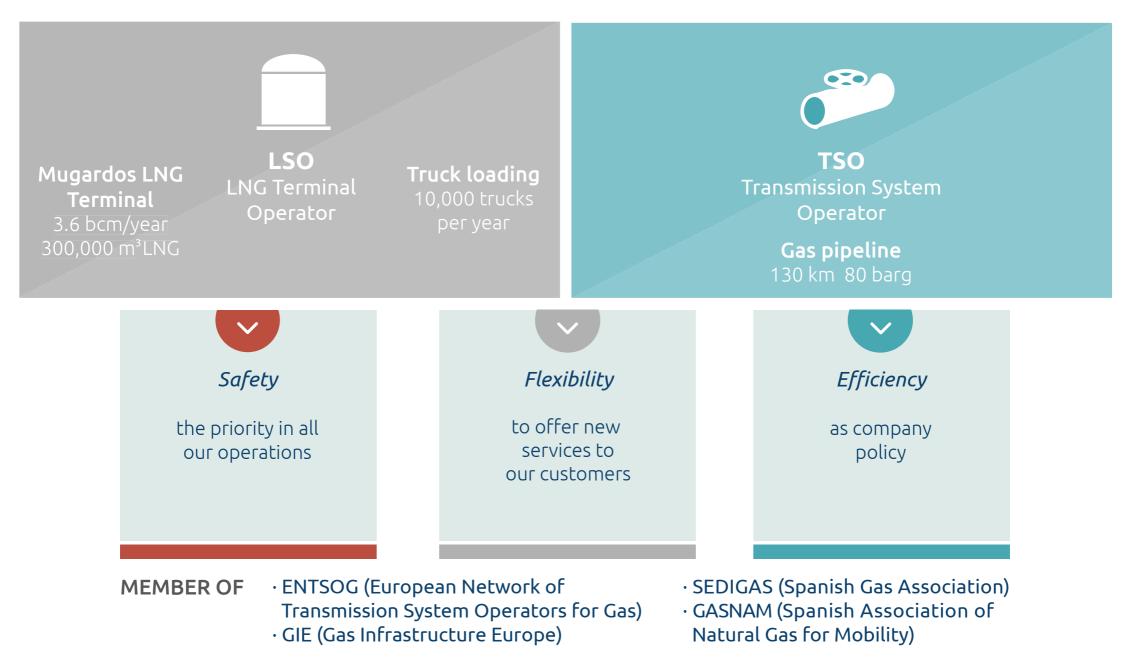
LNG market in Spain Rodrigo Díaz Ibarra Development Manager

# Spring seminar of the Finnish Gas Association





### REGANOSA · DEVELOPER AND OPERATOR OF NATURAL GAS INFRASTRUCTURE



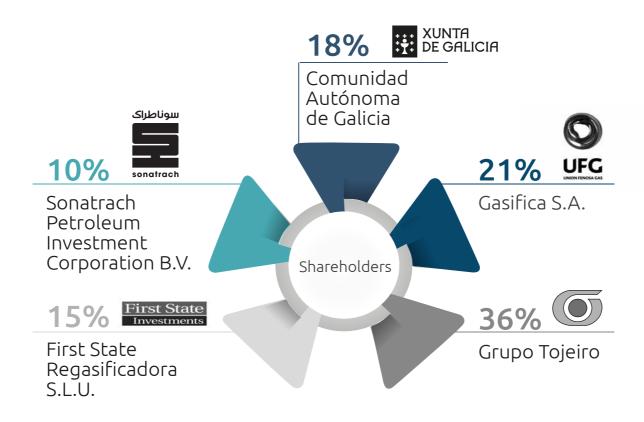
LNG market in Spain

### LNG market in Spain

### REGANOSA SPANISH NATURAL GAS MARKET LNG INFRASTRUCTURE SMALL SCALE

SHAREHOLDERS





REGANOSA SPANISH NATURAL GAS MARKET LNG INFRASTRUCTURE SMALL SCALE

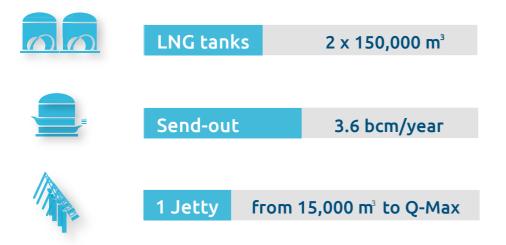
### OUR ACTIVITY IN FIGURES SINCE 2007



**REGANOSA**SPANISH NATURAL GAS MARKETLNG INFRASTRUCTURESMALL SCALE

### MUGARDOS LNG TERMINAL







REGANOSA SPANISH NATURAL GAS MARKET LNG INI

LNG INFRASTRUCTURE

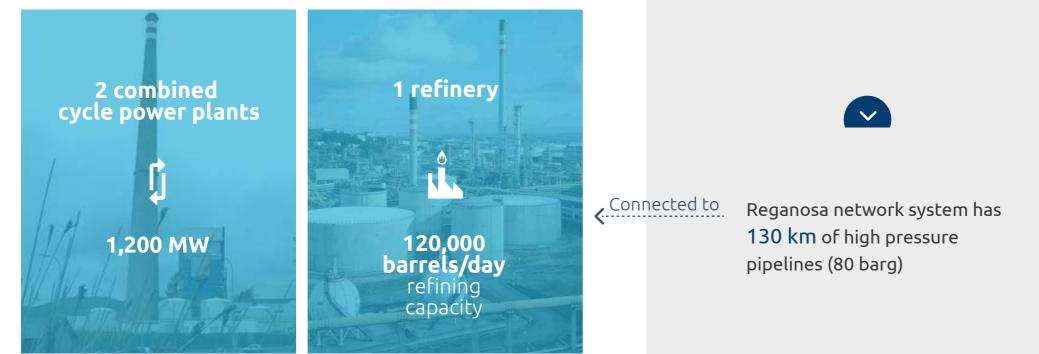
SMALL SCALE

### REGANOSA IS CERTIFIED AS TSO (TRANSMISSION SYSTEM OPERATOR)

This certification allows the company to **plan**, **build and operate main gas pipelines**, which are **essential for the operation of the system** and to **secure the main supply in Europe** 



As a member of **ENTSOG**, Reganosa is involved in the development of the European Plan of Infrastructures of Natural Gas, promoting the consolidation of the internal market for gas. Also, Reganosa ensures the efficient management and coordinated operation of the European gas network



REGANOSA

SPANISH NATURAL GAS MARKET

LNG INFRASTRUCTURE

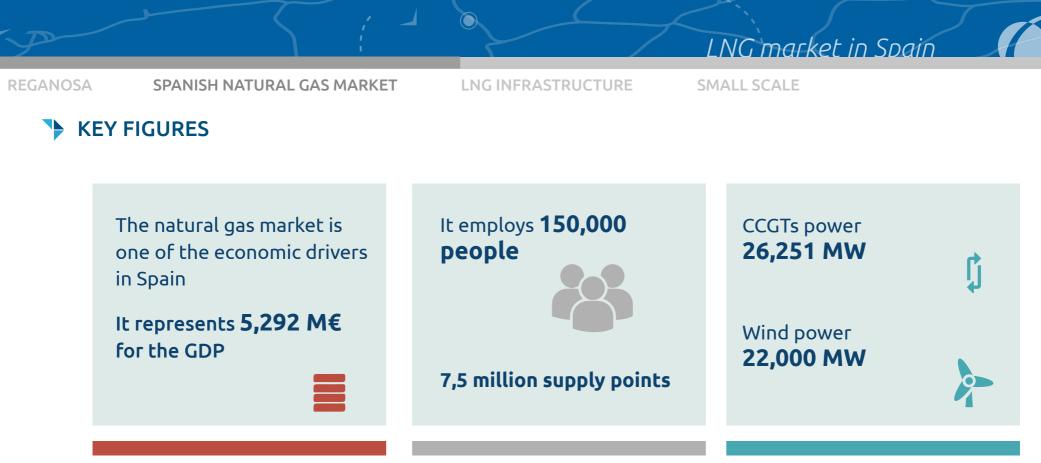
SMALL SCALE

### **EFFICIENCY · COMPANY POLICY IN ALL OPERATIONS USING AND DEVELOPING NEW TOOLS**



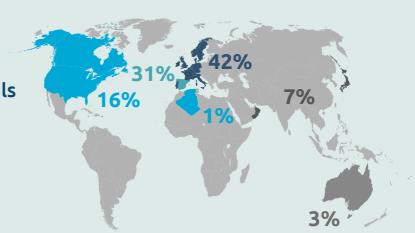
GANESO (Gas Network Simulation and Optimization)

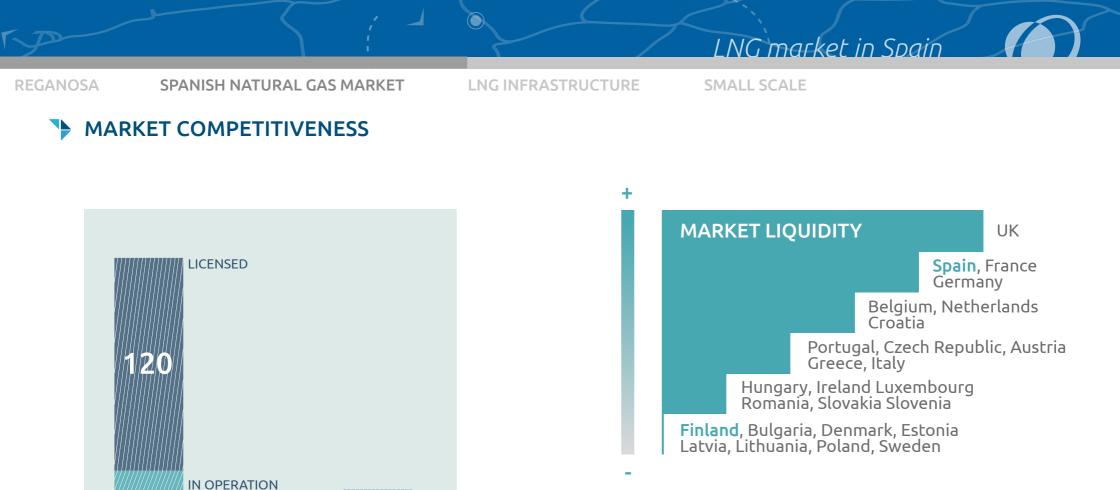
- It analyzes gas networks taking into account the control valves and compressing stations in the gas transport and considering both entries and exits of the network as regasification plants, liquefaction plants, underground storages and consumers
- It can simulate and optimize a network composed by 500 nodes in 20 seconds



Source: Sedigás

Spanish natural gas companies have invested more than **15,400 M€** in the period 2000- 2013 and have spread their presence worldwide Geographic origin of the investment in Spanish terminals in operation





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DISTRIBUTORS

### Market liquidity considering five variables:

- · Churn rate
- Zone size (TWh/year)
- $\cdot$  Number of sources
- HHI
- · RSI

Source: own study from CER data

Source: Sedigás

**B6** 

**SUPPLIERS** 

TSO

### LNG market in Spain

REGANOSA SPANISH NATURAL GAS MARKET LNG

LNG INFRASTRUCTURE

SMALL SCALE

### > DIVERSITY OF SUPPLY

Spain has a high level of **diversification**, importing natural gas from **11 countries**, being the **most diversified system in Europe** 

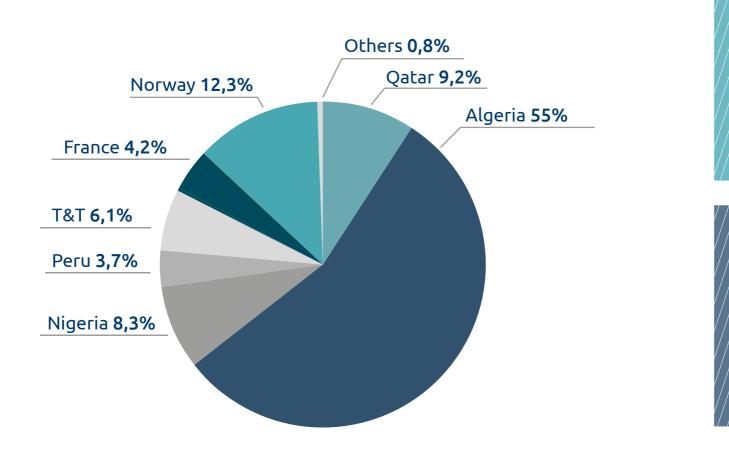
SUPPLIES IN 2014

LNG

47%

NG

53%



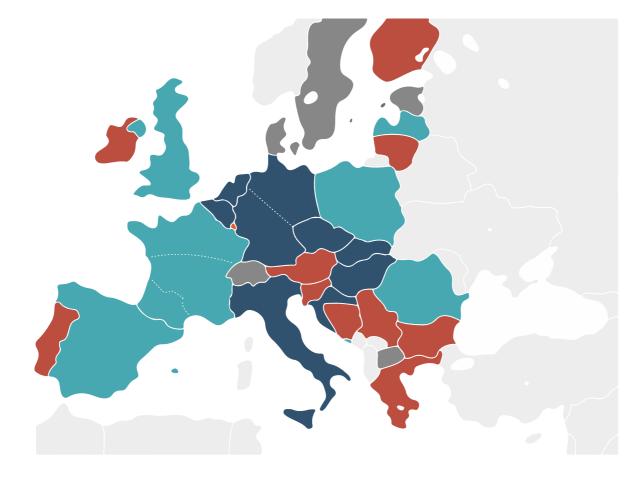
Source: CORES

REGANOSA SPANISH NATURAL GAS MARKET LNG INFRASTRUCTURE

SMALL SCALE

### SECURITY OF SUPPLY

### The Spanish gas sytem **guarantees the security of supply**





N-1= 100% or more: guarantees that, in case of failure of the largest gas infrastructure in the system, the remaining infrastructures of it allow total coverage for the gas demand

Source: ENTSOG, TYNDP 2015



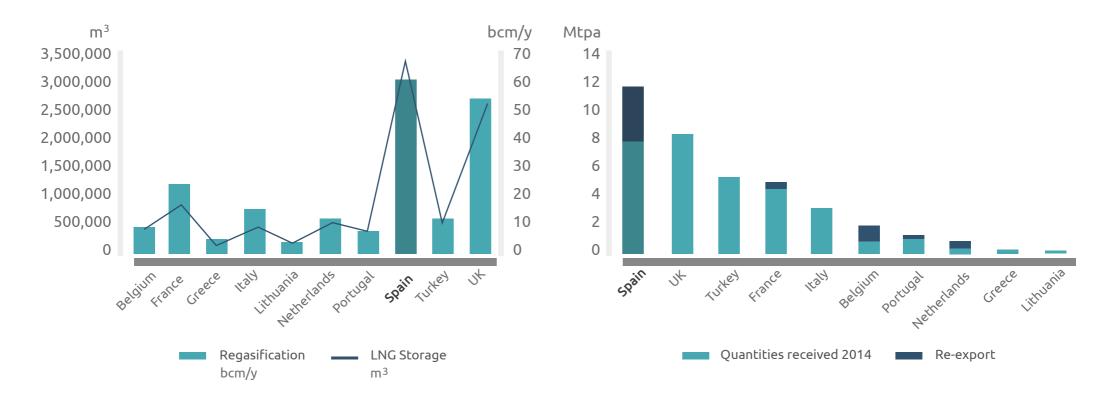
### LEADERSHIP IN THE EUROPEAN LNG MARKET

- Leader in storage capacity of LNG
   29.6%
- Leader in regasification capacity 36.75%

First importer of LNG
 24%

LNG market in Spain

Leader in re-exports
60%



### REGANOSA SPANISH NATURAL GAS MARKET LNG INFRASTRUCTURE SMALL SCALE

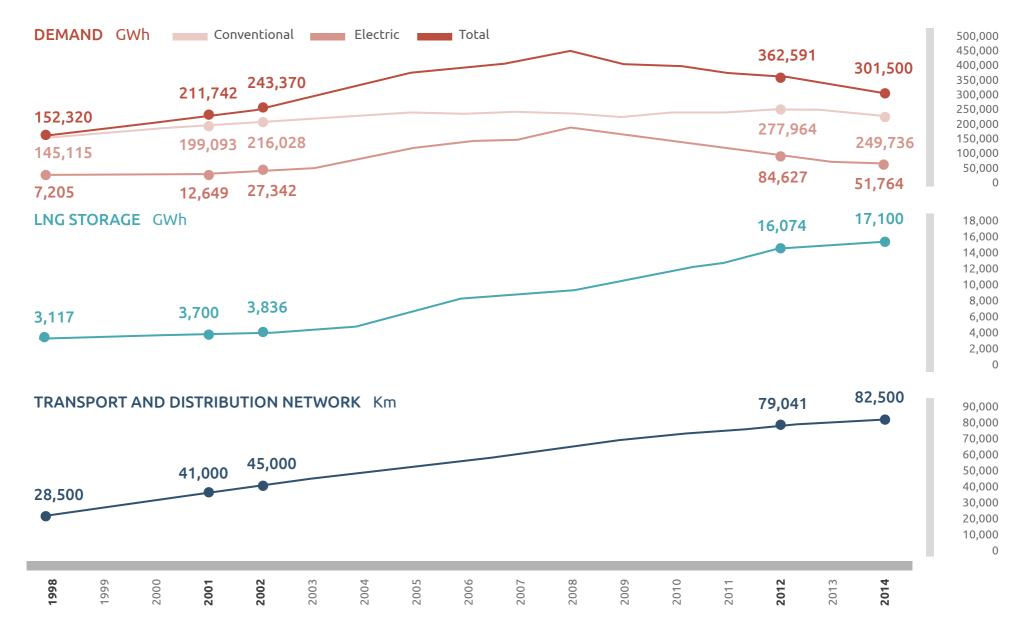
### **REGULATORY DEVELOPMENT**

1998	Unbundling: transmission and distribution (regulated) vs importation and marketing
2001	The govermment defines the capacities and the tariffs. Revenues guarantee a reasonable profitability and the infrastructure development
2002	Development of infrastructures according to the Goverment Mandatory Energy Plan based on security of supply and the evolution of demand
2012	Towards the elimination of the gap between income and costs. Transmission System Operator. Ownership unbundling
2014	Guarantee measures to secure the economic sustainability and accesibility to the gas markets
2015	Iberian Gas Market

REGANOSA SPANISH NATURAL GAS MARKET LNG INFRASTRUCTURE

SMALL SCALE

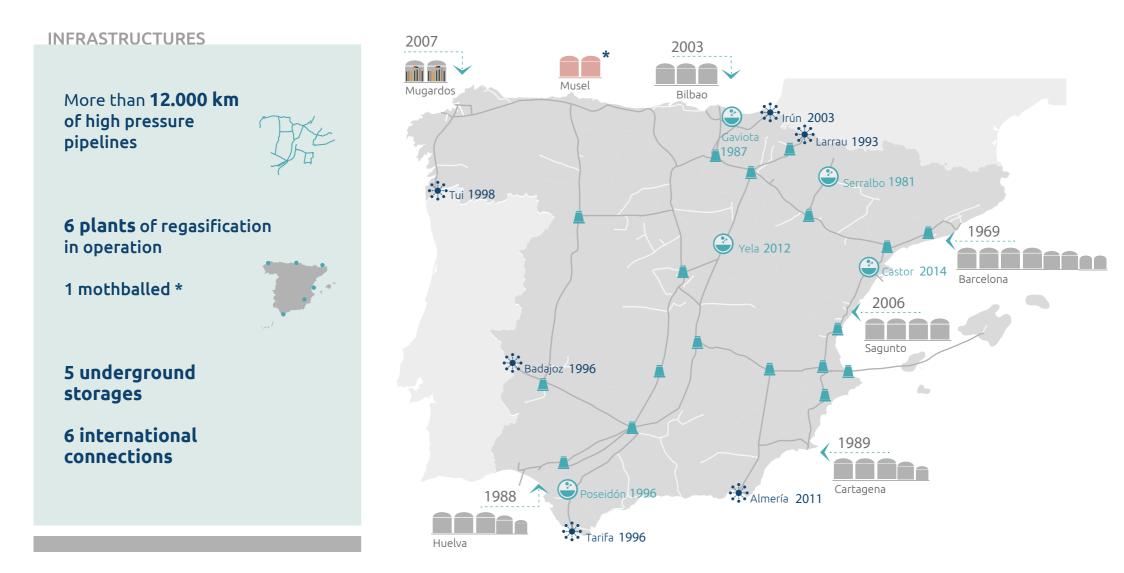
### > INFRASTRUCTURE DEVELOPMENT

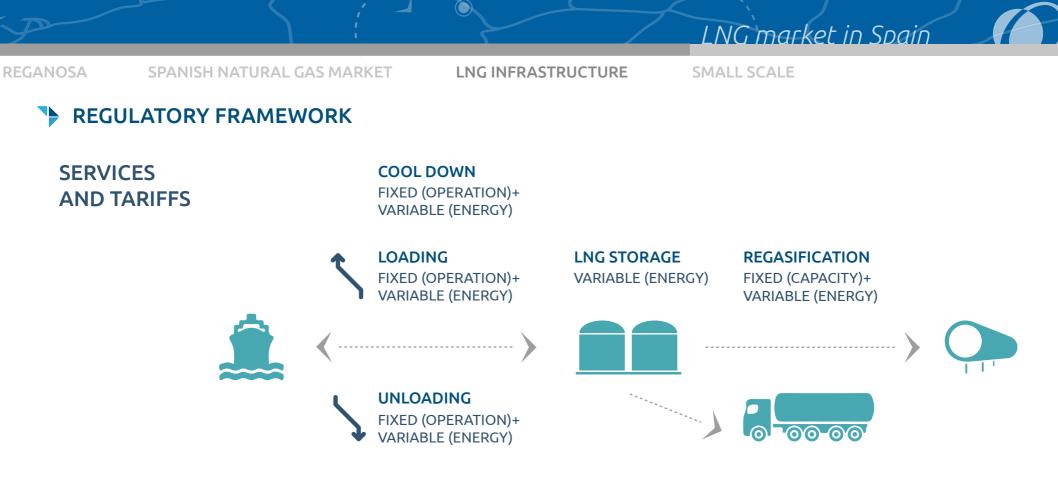


Source: own study from Sedigás and GTS data

REGANOSA SPANISH NATURAL GAS MARKET LNG INFRASTRUCTURE SMALL SCALE

NATURAL GAS INFRASTRUCTURE IN SPAIN





### THIRD PARTY ACCESS (TPA)

Regulated System Same access conditions in all terminals Services offered on a non-discriminatory basis to all users Long-Term contracts are not binding for terminal users TRUCK LOADING FIXED (CAPACITY)+ VARIABLE (ENERGY)



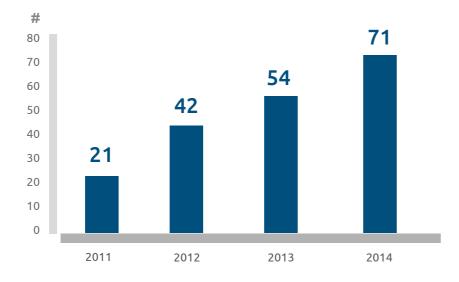
### REGANOSA **SPANISH NATURAL GAS MARKET**

LNG INFRASTRUCTURE

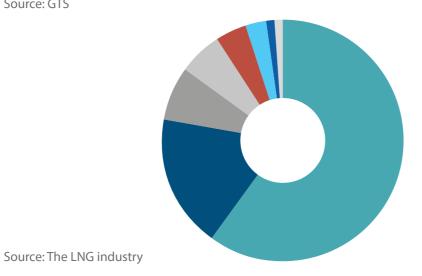
**SMALL SCALE** 

### LOADING

Terminals: flexibility to adapt to the market needs with new activities

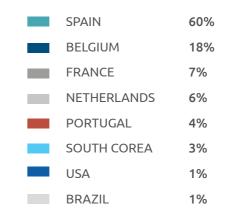


Source: GTS



LOADING OPERATIONS IN **SPANISH TERMINALS** 

### **RE-EXPORTS LOADED BY RELOADING COUNTRY IN 2014**



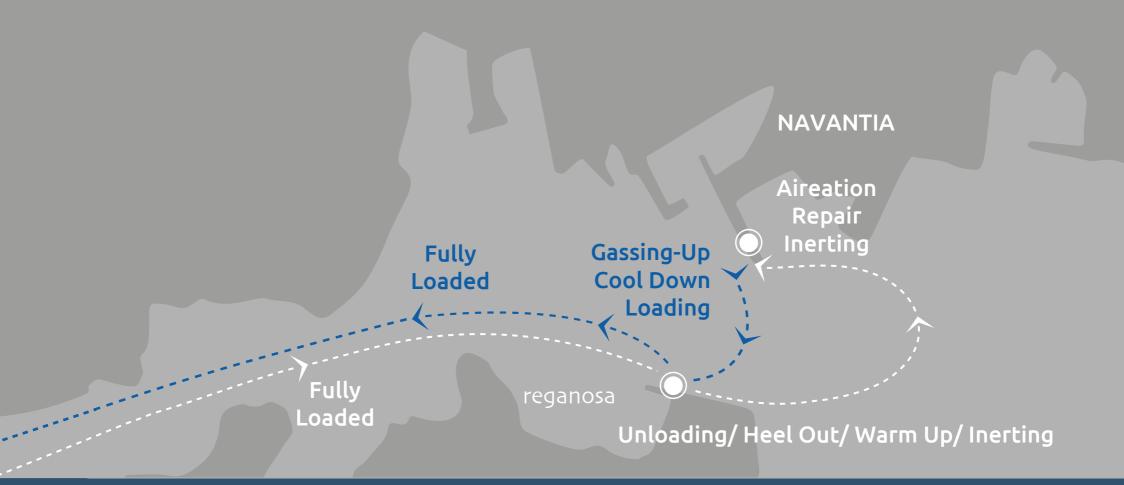
## REGANOSA SPANISH NATURAL GAS MARKET LNG INFRASTRUCTURE SMALL SCALE

> POST DRY DOCK SERVICES

30 operations since 2011

• Reganosa promotes the development of the regulatory framework in Spain for new services

Agreement with the **third shipyard in the world** repairing LNG vessels to complete the repair cycle



REGANOSA SPANISH NATURAL GAS MARKET

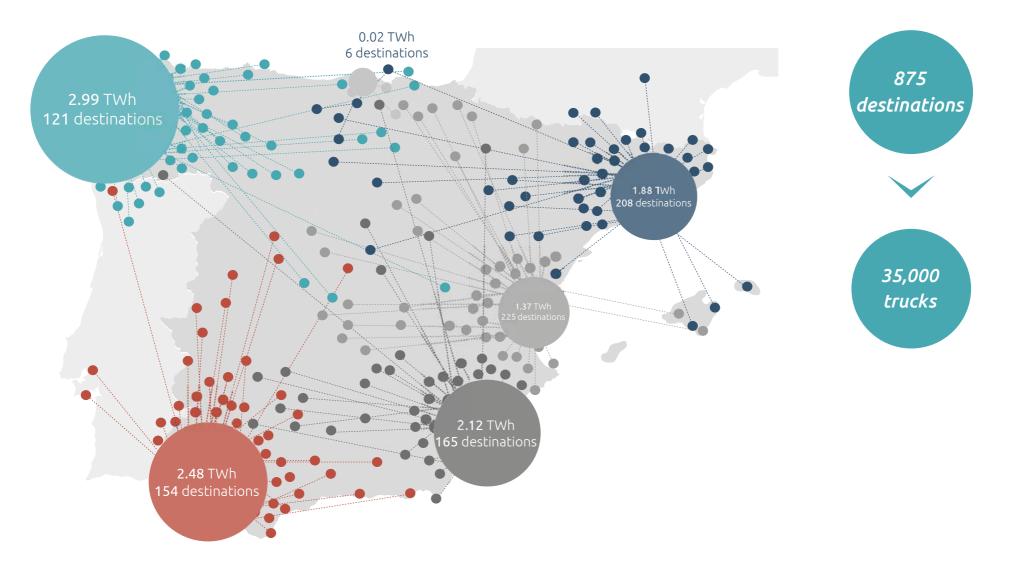
LNG INFRASTRUCTURE

**SMALL SCALE** 

### > TRUCK LOADING

Small scale as a solution to cover the demand in those areas away from the gas network

2014





### REGANOSA SPANISH NATURAL GAS MARKET LNG INFRASTRUCTURE SMALL SCALE

### LNG AS FUEL

12 Spanish ports with diverse projects related to LNG bunkering, in different maturity levels



### LNG market in Spain

### REGANOSA

SPANISH NATURAL GAS MARKET

LNG INFRASTRUCTURE

SMALL SCALE

### LNG HUB



- 1 LNG Terminal
  - 1 Comprehensive Port
- O 1 Core Port

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- 2 Outer Harbours
- 2 Inner Harbours
- 1 Anchoring area
- 2 Shipyards

### motorways of the sea

- A. Motorway of Baltic sea
- B. Motorway of Eastern Europe
- C. Motorway of Southwestern Europe
- D. Motorways of Southeastern Europe

### **GEOSTRATEGIC POSITION**

Part of motorways of the sea and the TEN-T network Next to the Atlantic corridor of Finisterre Navigated by up to 40,000 vessels a year Large part of passing traffic is heading for the ECA areas of Northern Europe Large fishing fleet with base port in the area



- In the last 15 years, regulation in Spain has been effective in the development of a competitive natural gas market
- This development has brought Spain to a leadership position in the European LNG market
- Due to their capacities and flexibility, Spanish LNG infrastructures are a key aspect to:
  - Security and diversification of supply
  - Developing new services: reloadings, small scale, LNG as fuel
  - Developing renewable energies
- Next steps: improve flexibility and liquidity

# KIITOS



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