

**6-8
MAY
2019
ATHENS**

HAEE
WWW.HAEE.GR
HELLENIC
ASSOCIATION for
ENERGY ECONOMICS

4th Annual
Symposium

Energy Transition IV SE Europe and beyond

State of play in Greece and the Mediterranean Region and the Role of Gas

Dimitris TZORTZIS

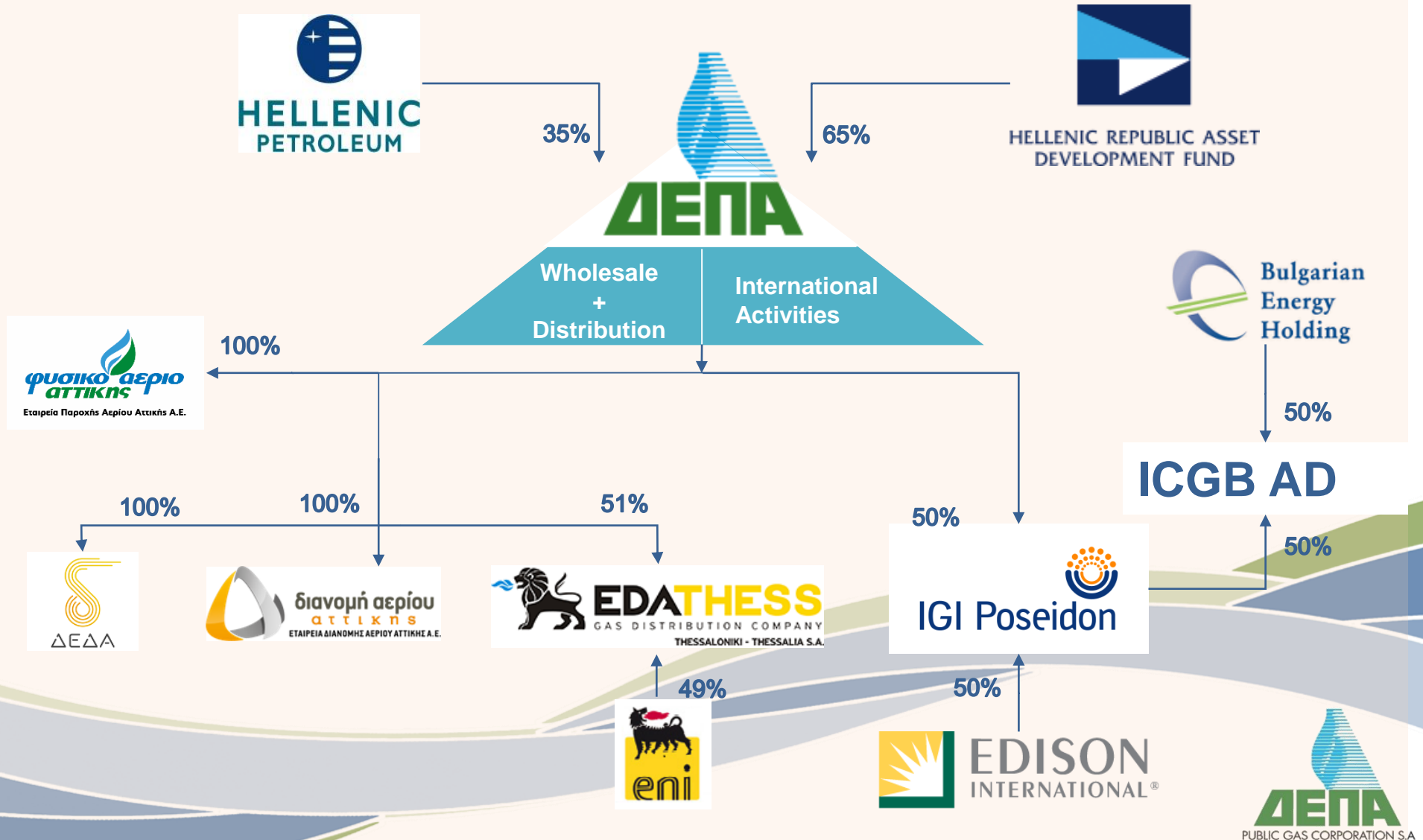
CEO, DEPA

Chairman, IGI Poseidon

Athens, May 6th, 2019

DEPA group end 2018

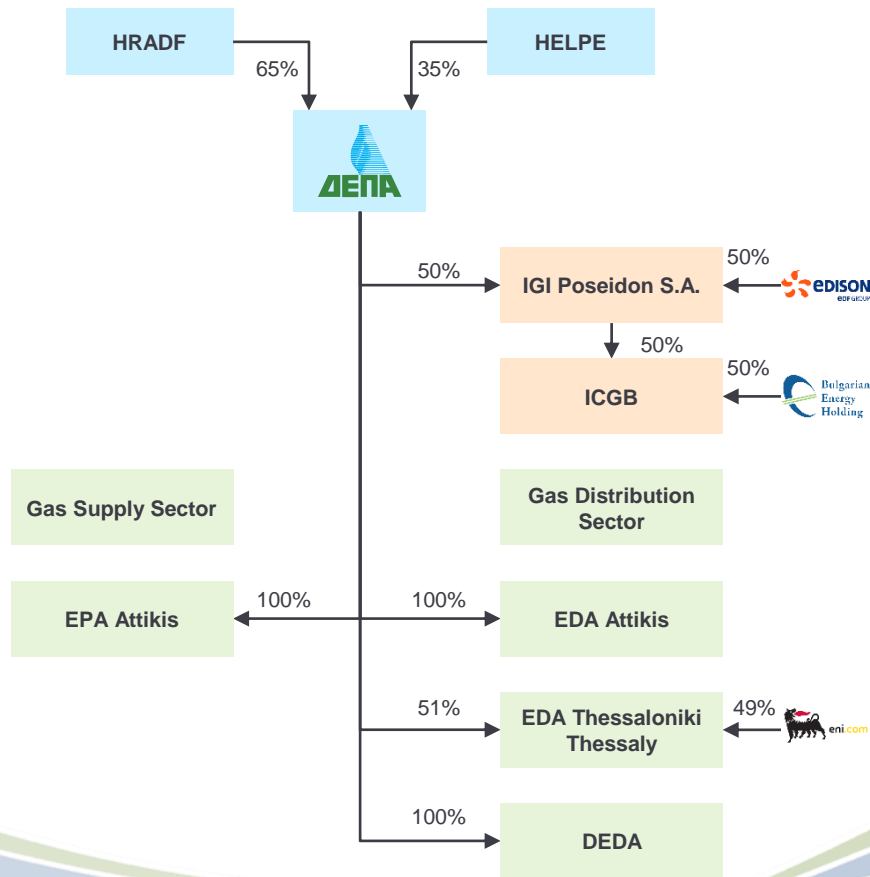
after the first round of transformation: -DESFA, -ZeniΘ, +EPA, +EDA Attica



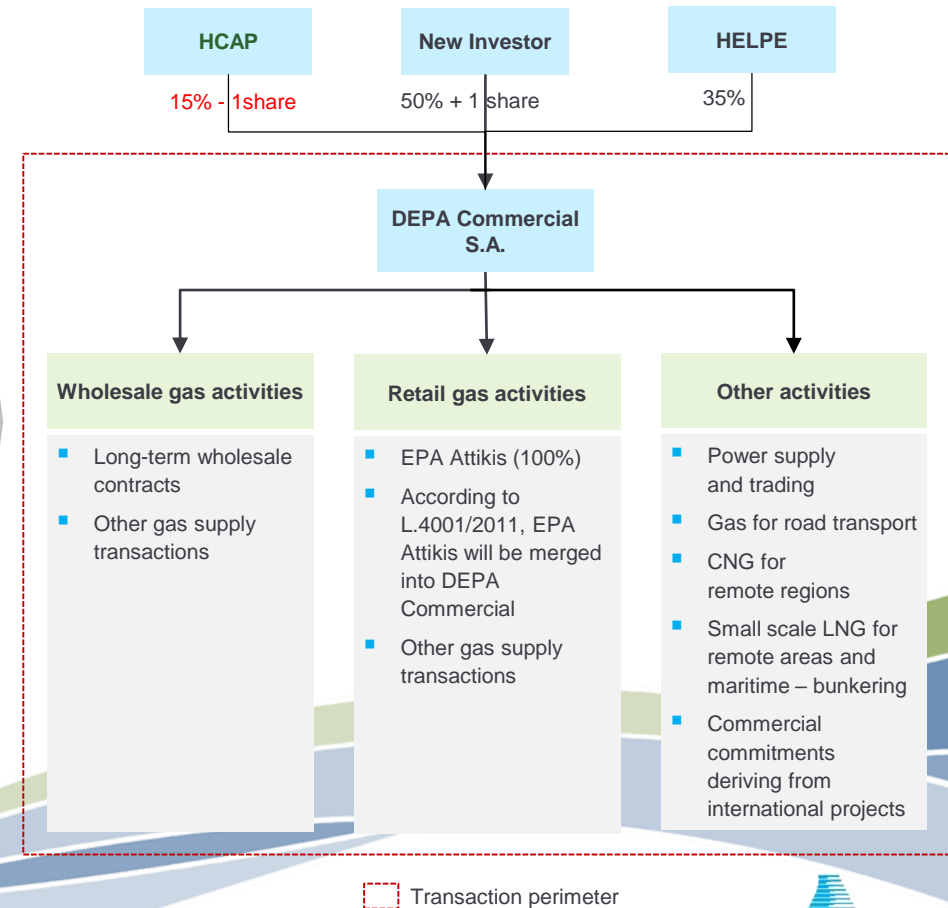
DEPA into the new era: **Law 4602 / 2019** (9th March 2019)

Full Ownership Unbundling split and tender (first for commercial)

Current DEPA's group structure



DEPA Commercial envisaged post transaction end state



3 months for split (planned for 31st of May)

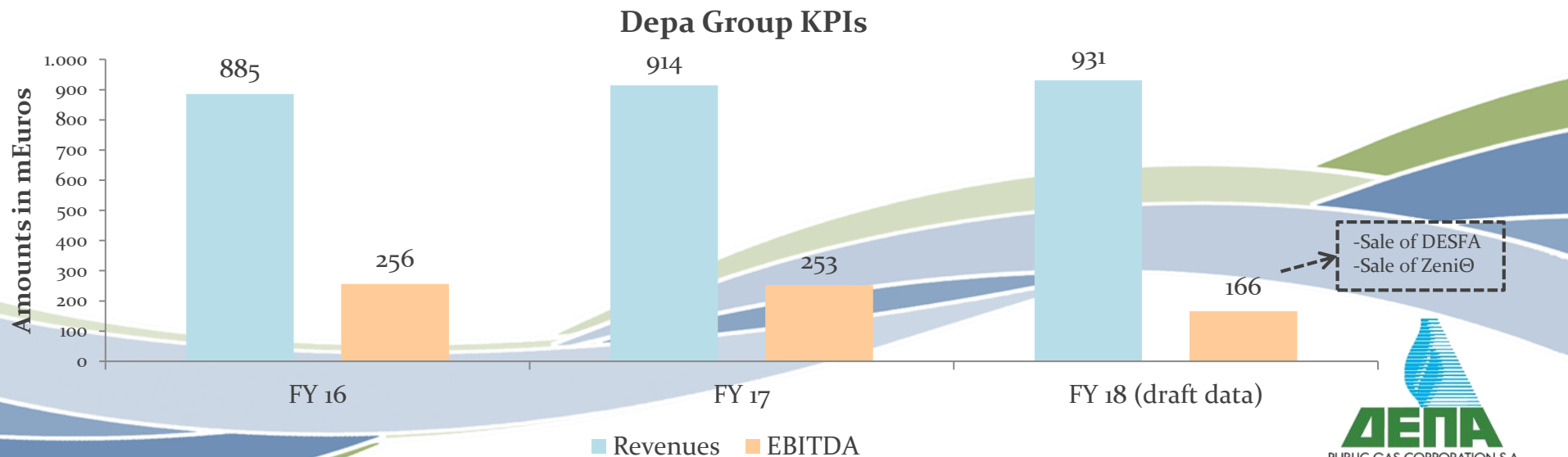
3 more months for merge/transform the 2 companies (31st of August)

Expression of Interest for DEPA Commercial 50% + 1 (about to start)

DEPA's Group Financial strong Performance

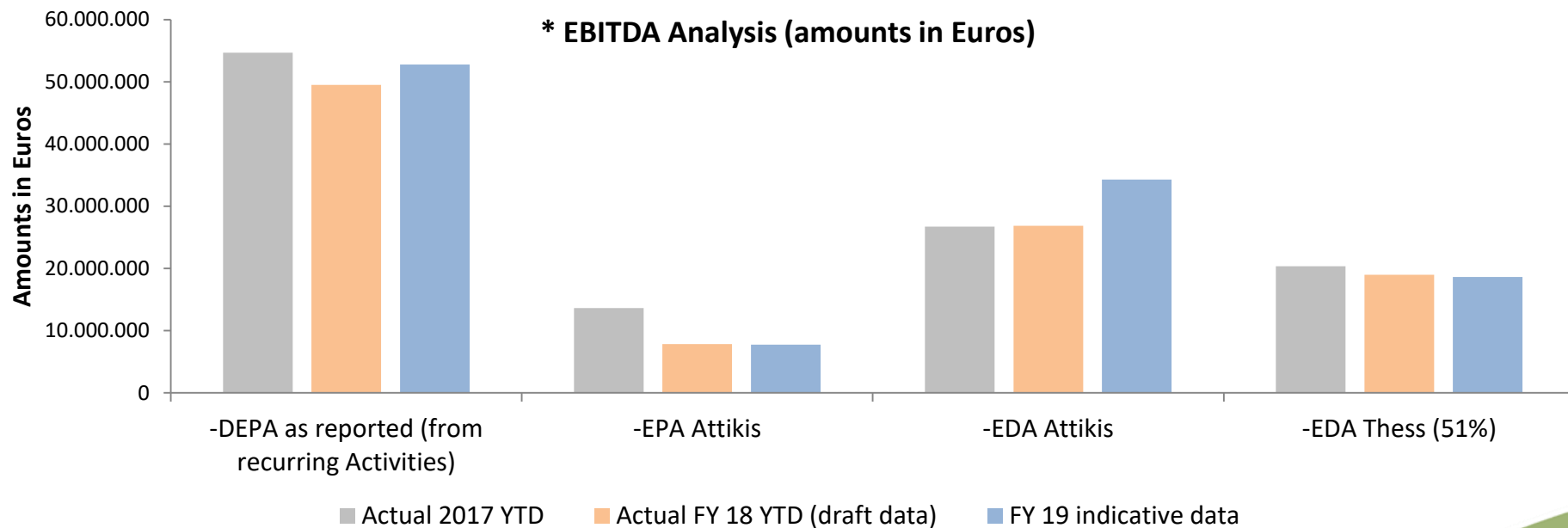
albeit the fierce competition (2018 draft data)

- DEPA Group is enhancing Greece's economic development. At its 30 years history has **invested € 3 billion** in the development of Greece's Gas Infrastructure, ensuring the **Security of Supply**
- The 2018 Group financial results were very successful as a **turnover of € 0,93 billion** was held with an **EBITDA of € 166 million**
- These Financial Results have been achieved with **optimal management of Equity**
- Having completed the transformation process, now finishing the demerge, DEPA will continue to assume an important role in the Greek Economic development, preserving a **leading position** in the liberalized, competitive new environment of the **broader region**, following the mandate for **gasification** for most of Greece, continuing its role in **International Projects**



Key Financials (cont'd)

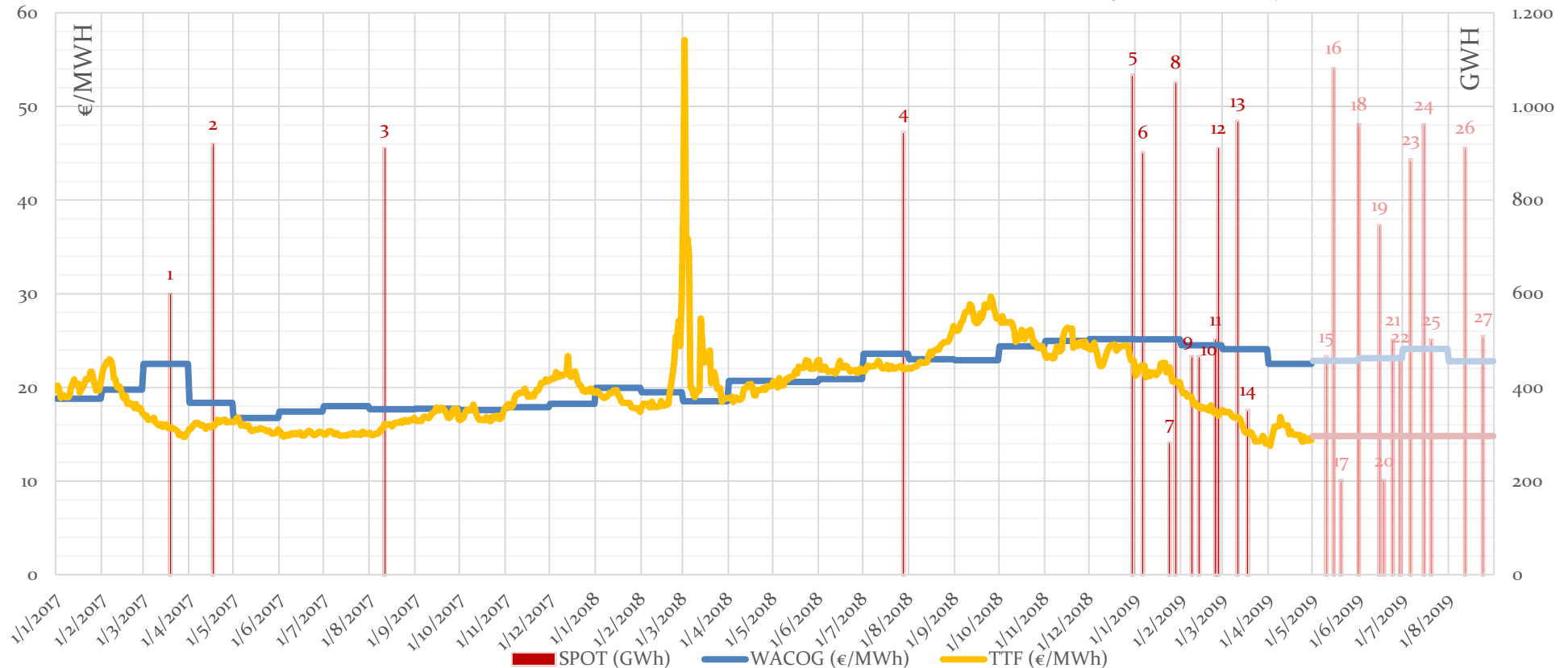
(2018 draft data, indicative for 2019)



* per Standalone Entity for DEPA, EPA Attikis, EDA Attikis, EDA Thess (51%)

Greek imports agile to prices

TTF / WACOG / SPOT (01.01.2017 - 31.08.2019)



Spot LNG cargoes flourish at Revithoussa terminal, as hub prices slump

Greek and SEE market under transformation, creating risks, but also opportunities



NATURAL GAS DEMAND GROWTH

- **Stronger role of gas** expected in Greece mainly driven by lignite production reduction and distribution network expansion, although **potential threat from RES**



SEE «REGIONAL HUB» DEVELOPMENT

- **Greece to become a gas regional hub** (strategic positioning in SEE area) and more interconnected to **EU hub, increasing cross-border trading** in the mid-term



LIBERALIZATION AND NEW MARKET RULES

- **Regulatory changes promoting competition**, threatening incumbent mkt share and fostering **full-fledged market mechanisms** (EU power “**target model**”)



MORE COMPETITIVE WHOLESALE MARKET

- **Wholesale market** with increasing space for **new importers** (especially LNG), both among DEPA's competitors and large users trying to disintermediate supply



DOWNSTREAM PLAYERS & OFFERING

- Trend towards a **dual fuel “playing field”** with open competition between gas & power incumbents and IPPs leading to increasing switching rates

Targets:

- Enhance trading capabilities and portfolio (flexibility, hedging tools)
- Expand at regional level (SEE) – started successful in Bulgaria
- Create a “service provider” platform for B2B (VAS, Efficiency)

→ Seeking strong partnerships!

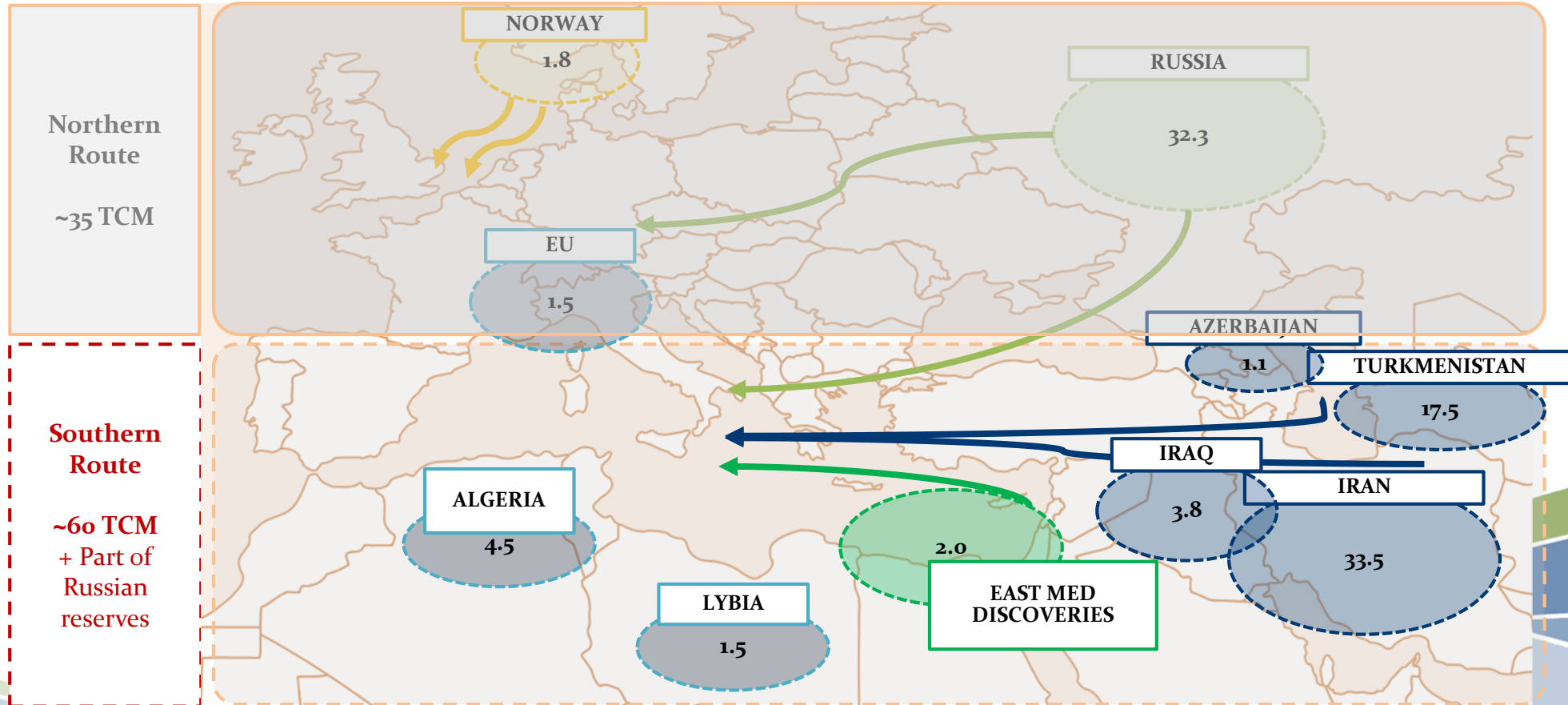
International Projects: GREECE, a gateway to Europe

Key projects will enhance national and regional energy security and may catalyze gas trading in SEE



Potential alternative gas sources, fostering security of supply and competition

Map of proven gas reserves “capturable” by European routes (tcm)



Southern Corridor:
Diversity through new sources of supply and routes for Europe
(instead of diverting to Asia)

Gas penetration in the Greek retail market

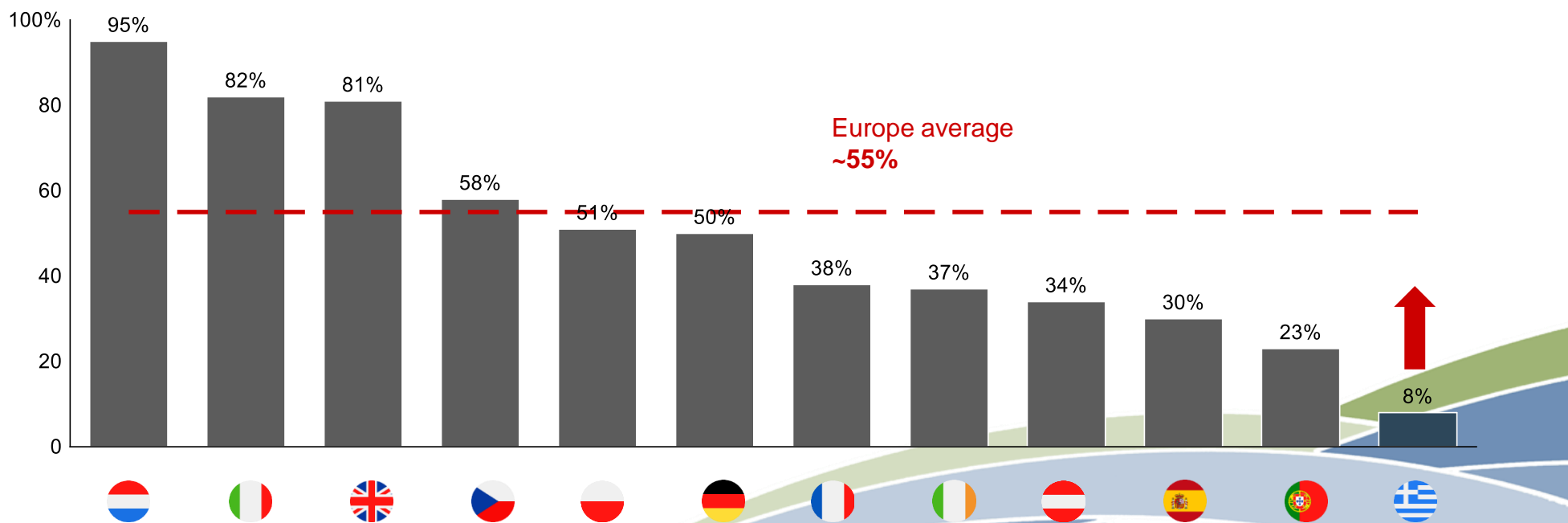


Area	Population	Gas penetration
Attika region (Athens)	c. 4.0m	
Thessaloniki region	c. 1.1m	
Thessaly region	c. 0.7m	
Rest of Greece	c. 5.0m	

Gas penetration in European countries

Gas penetration in European countries, % of customers with natural gas in 2018

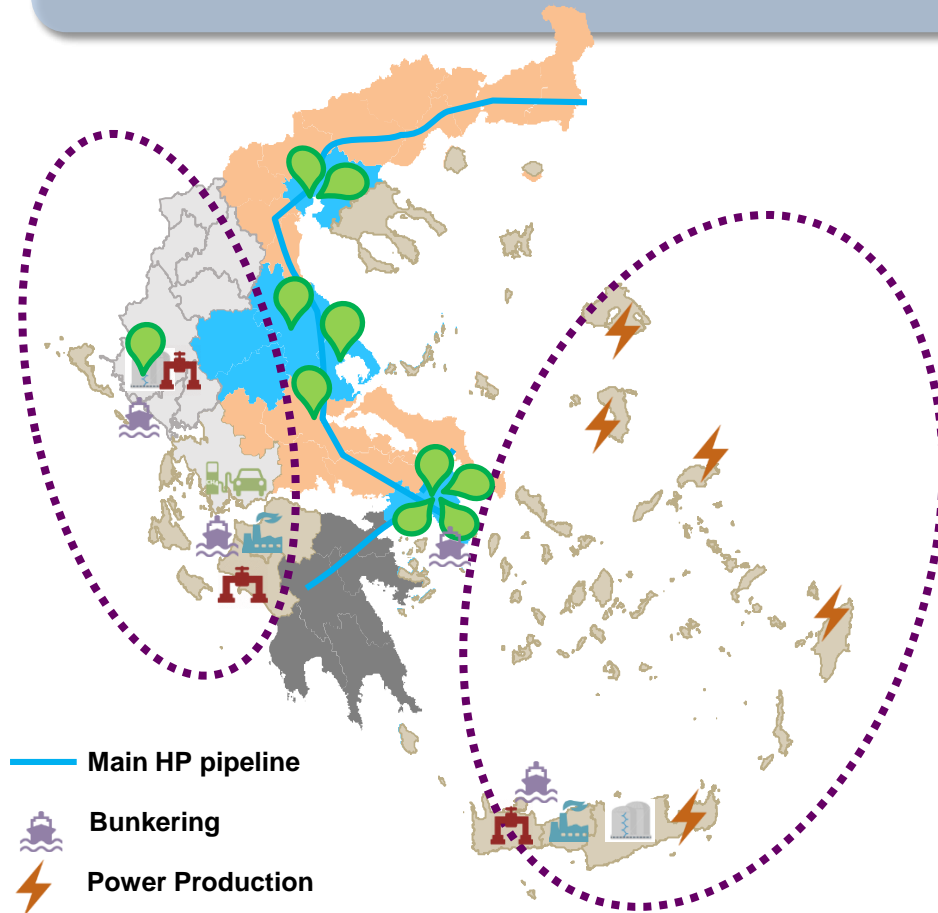
Gas penetration in european countries (%)









Source: Sedigás informe "año gasista 2016 y Perspectivas 2017"; BP Statistical Review of world energy 2017

DEPA in the new market environment:

Promotes market expansion & new uses / new gas delivery models



- Main HP pipeline
-  Bunkering
-  Power Production
-  Remote Industrial/Commercial Customers
-  Remote Distribution Networks
-  Distribution networks with LNG terminals
-  Gas for transportation

Existing
Regions

New Regions

• Network Expansion, Synergies:

- Expand in existing regions (network, customers)
- Develop new regions (network, customers)

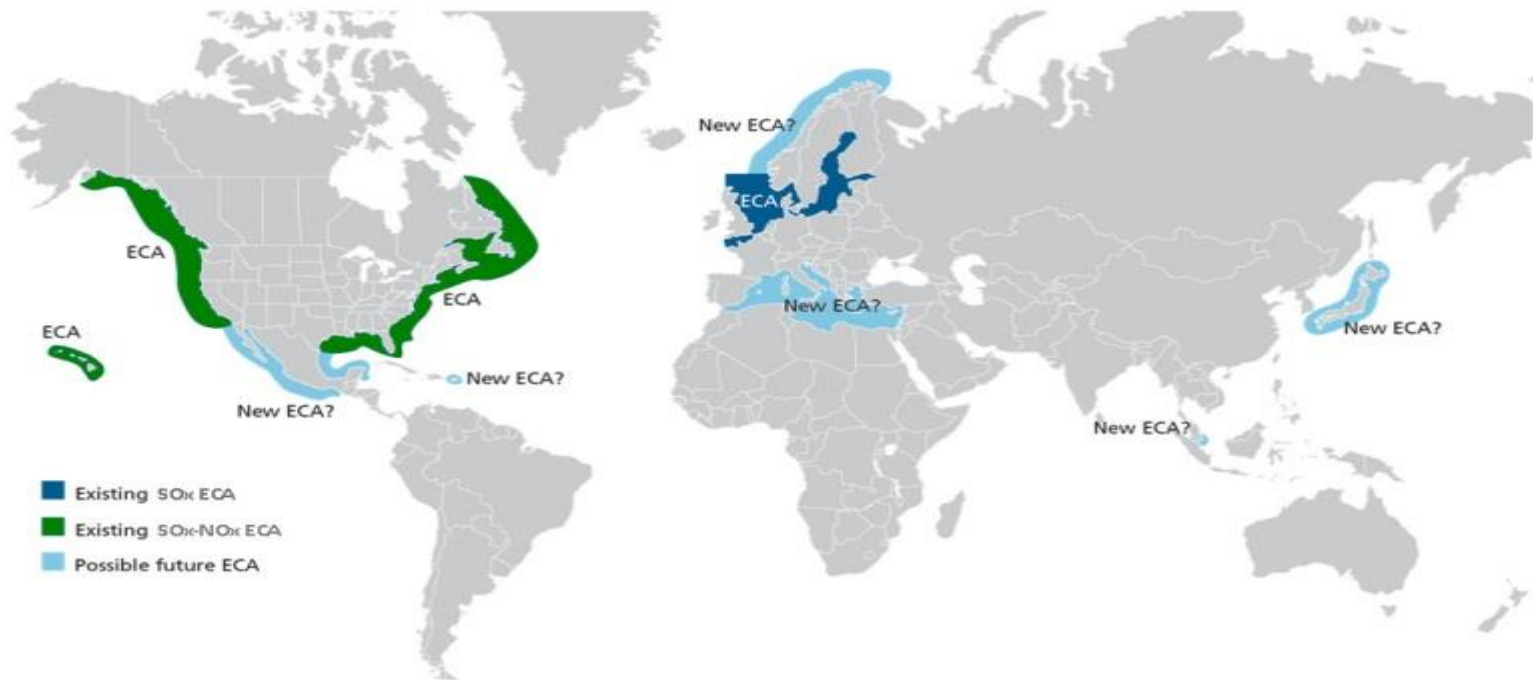


• New uses/ New Markets:

- Gas for road transport – developing CNG refilling stations national network
- Deploy CNG for remote regions
- Introduce Small Scale LNG for remote areas and maritime transportation - bunkering

High initial investment could be a barrier in the short term, **but synergies** provide a **possible way out**
Chicken-Egg? DEPA invests now!

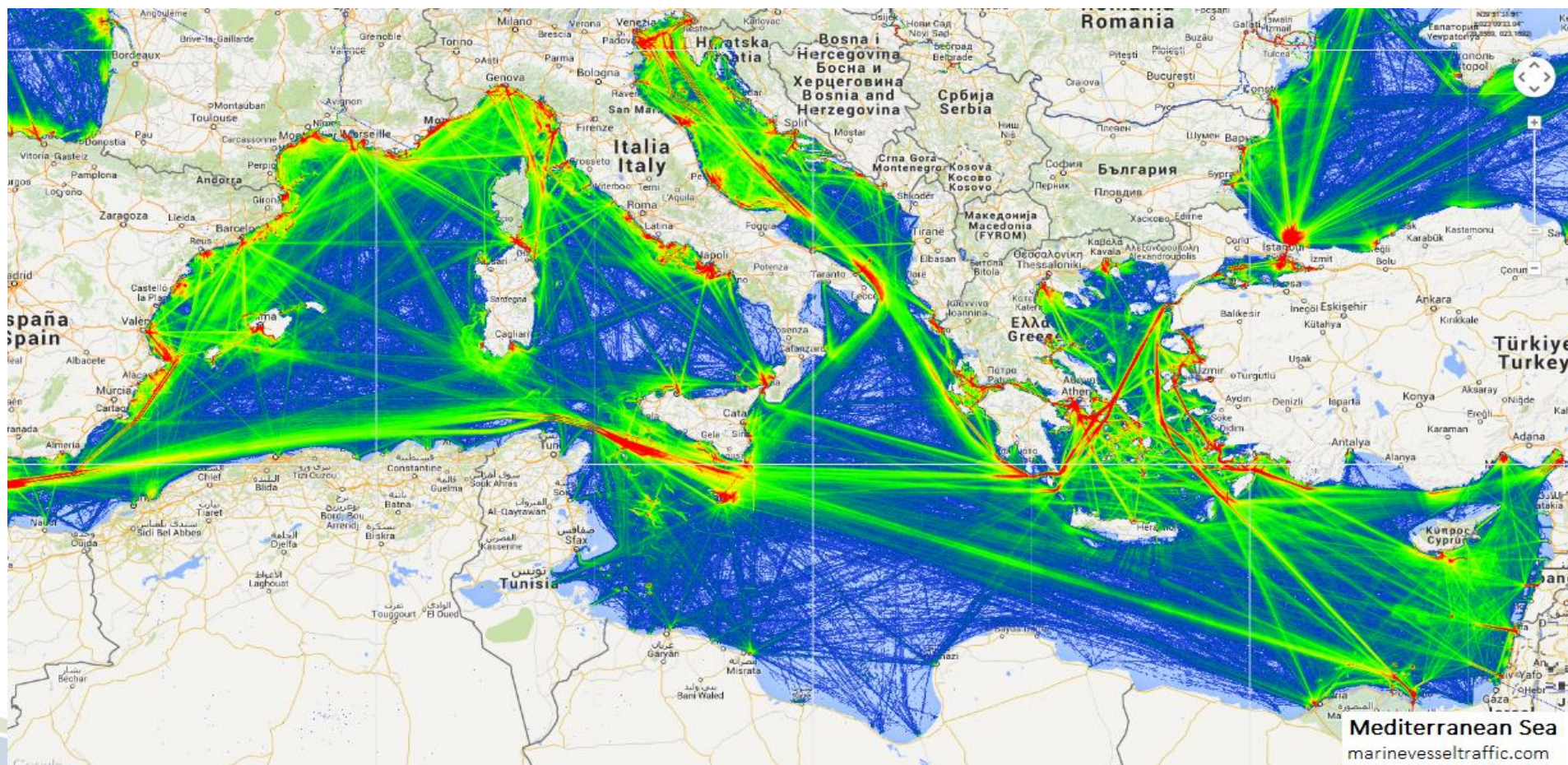
International regulation on the emissions control



...in ECA have used fuel oil with a sulphur content of no more than 0.10% since 1 January 2015.

...outside ECAs, the current limit for sulphur content of fuel oil is 3.50%, falling to 0.50% m/m on after 1 January 2020

East Mediterranean: Shipping Traffic



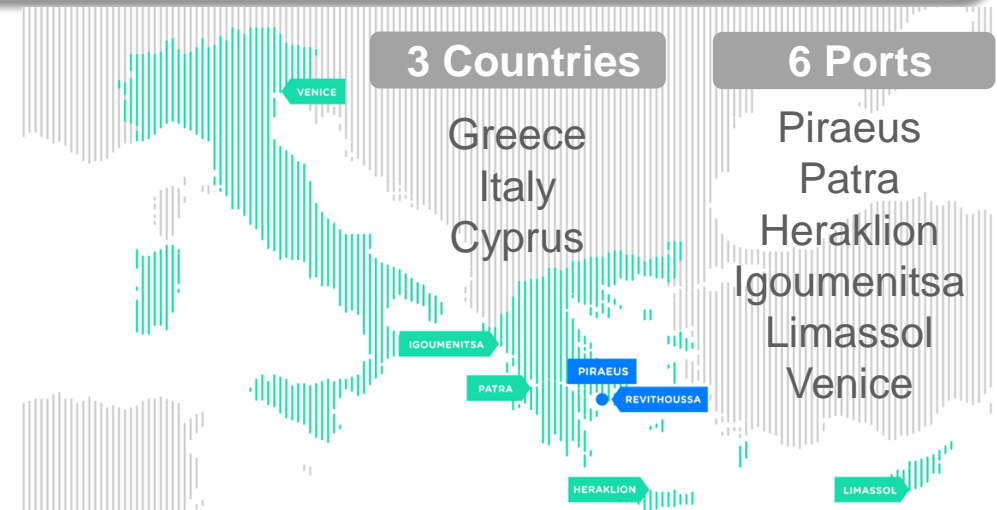
Mediterranean Sea
marinevesseltraffic.com

LNG Plants in wider (E) Med region

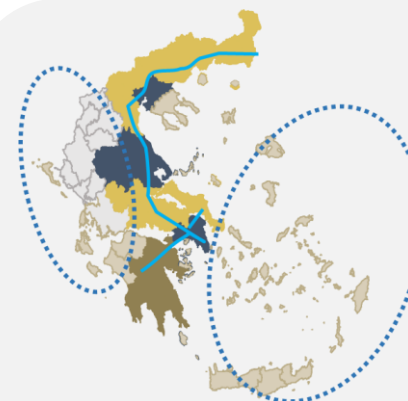


An effective development of a small scale LNG market is possible in the area

- Strategic geographical position
- Tradition in shipping- World leader
- Insularity - Important internal short sea activity (2500 Islands, 165 inhabited, 53 with >1.000 population)
- Need for LNG for other uses (gasification of remote areas)
- Non interconnected power generation plants
- Availability of LNG infrastructure for supply (LNG Terminal – Revithoussa)
- High density residential areas & large industrial & commercial customers in Western Greece & the islands



Poseidon Med II - a key EU project targeting the **adoption of LNG -as marine fuel- in the Eastern Mediterranean Sea.**



Existing Network Network under Development New Regions

Main HP System

Insularity Challenges:
LNG, a Pillar for
Territorial Cohesion

Towards Low-carbon Economy: Gas as transition fuel and beyond!

- Every “theory” should be treated engineer-wise: Myth or Math?
- EU Policy should differentiate from short-term measures (penalties, taxes) and rather focus on Long-Reach Outlook (R & I)
- Some quick wins from Efficiency: Heating (~45% of energy), transport → low CO₂
We are the last generation to burn fossil fuels ~1:1 calorie for heating
Heat pumps (even gas), co-gen, gas in transport could easily lower carbon footprint
- Will our networks become stranded? New gas, r-gas, d-gas, CCS... the era of H₂
- The gas networks will transform, blend RES: smart, bi-directional, energy coupling, central vs de-centralized (communities, ProSumers, district heating?), storage!
- The story of carbon fuels: Big Bang!
Fusion - H₂ - CH₄ – C_xH_y – Carbon/Lignite... now counting in reverse!

preservation & conservation
adaptation & evolution

Summary

- Greek energy market is now fully liberalized with increased competition
- The natural gas market has great potential and it is expected to grow significantly
- The new market environment (regional and national) and the newly reformed retail market are the most topical issues currently
- Greece is perfectly situated to allow several import routes into SEE and Italy, diversifying their sources and enhancing the energy security and the flexibility of the region; from destination to transportation to exploration!
- DEPA developed the gas uses in Greece, now has the historic obligation to advance
- Considering that DEPA is the incumbent player in the Greek market and that it is developing a strong regional profile and presence, the characteristics of a potential new Investor will potentially have a significant impact in the Greek market as well as in the entire region.

**Greece at the crossroad of energy routes
Tackling the changing landscape**

THANK YOU FOR YOUR ATTENTION!