

# *«The changing landscape in the Greek natural gas market»*

*Presentation to IENE's 22<sup>nd</sup> Energy Conference  
«Energy & Development 2017: Energy Markets in Transition»*

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# Overview

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- The position of Gas in the Global energy market
- New landscape in the Greek energy market
- The role of DEPA in the new environment

## The position of Gas in the Global energy market



# Climate Targets

At the Paris climate conference in 2015 195 countries signed an agreement to limit global warming to below 2°C. Meeting this goal requires a rethink of how we all use and consume energy.



**20%**  
Reduction in  
GHG emissions<sup>1</sup>



**20%**  
EU energy from  
renewables



**20%**  
Improvement in  
energy efficiency

By the year  
**2020**



**>40%**  
Reduction in  
GHG emissions<sup>1</sup>



**>27%**  
EU energy from  
renewables



**27%**  
Improvement in  
energy efficiency

By the year  
**2030**



**60%**  
Reduction in GHG  
emissions<sup>1</sup> by 2040



**80-95%**  
Reduction in GHG emissions<sup>1</sup>  
by 2050 (all sectors contribute)

**2050**  
Low-carbon  
economy

<sup>1</sup> Greenhouse gas emission reduction targets from 1990 levels

# Our Renewable Energy Future

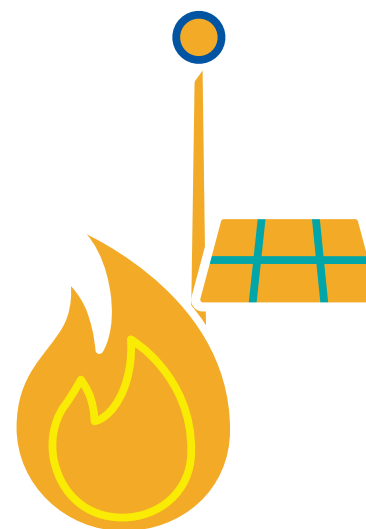
## Gas, wind and sun – providing Europe with clean heat, electricity and transport.

Quick wins for the climate are possible when renewables are combined with gas. The required technology and infrastructure is already in place to switch to gas in all sectors – heating, power generation and transport.

Gas provides the flexibility which is needed with an increasing share of variable renewables. When there is too little wind and sun, modern gas power generation supplies you with the electricity you need.

And when there is surplus electricity, innovative power-to-gas technology provides the ideal storage as well as renewable gas.

And what's more, in tomorrow's decentralized energy system micro-CHPs and fuel cells produce your own, clean, reliable heat and electricity at home – an ideal partner for rooftop solar panels.



# Gas Reserves

Gas is abundantly available in and around Europe.

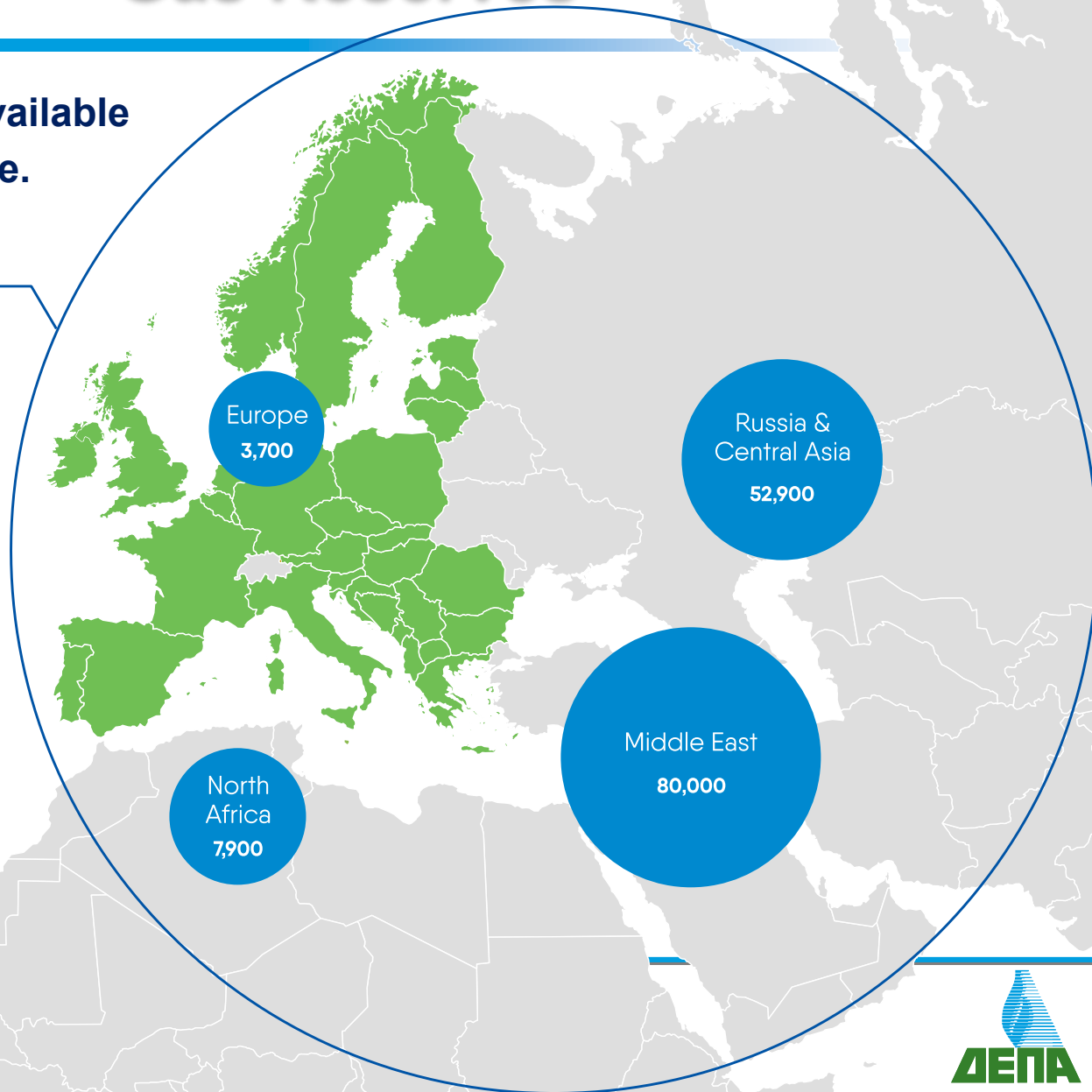
Radius ~3,000km

~80%

of global proved gas reserves lie within 3,000km of European shores

413

Annual European gas demand



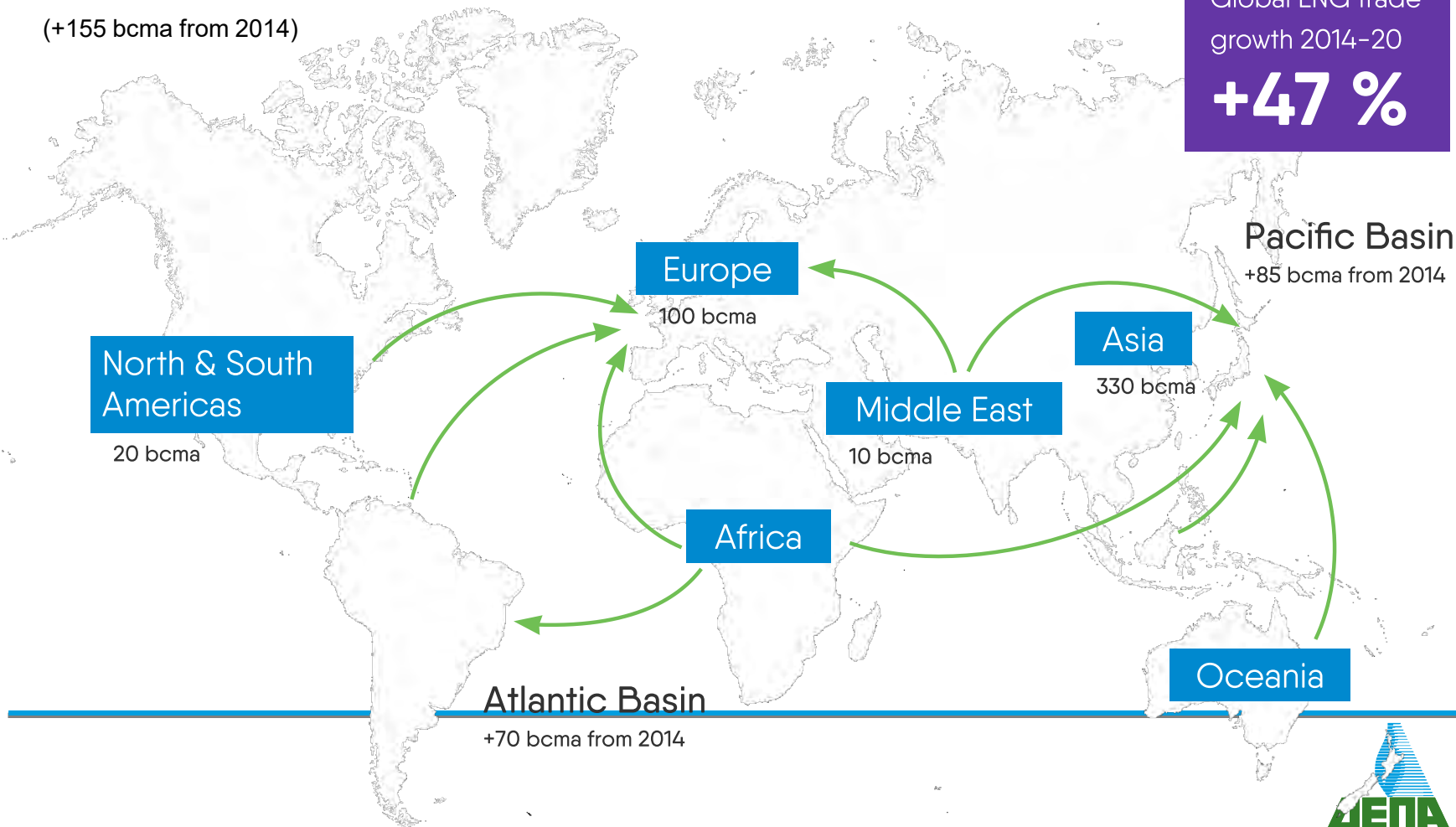
# Liquefied Natural Gas

## New supply sources for Europe

Seaborne LNG trade in 2020: more than 450 bcma  
(+155 bcma from 2014)

Global LNG trade  
growth 2014-20

**+47 %**

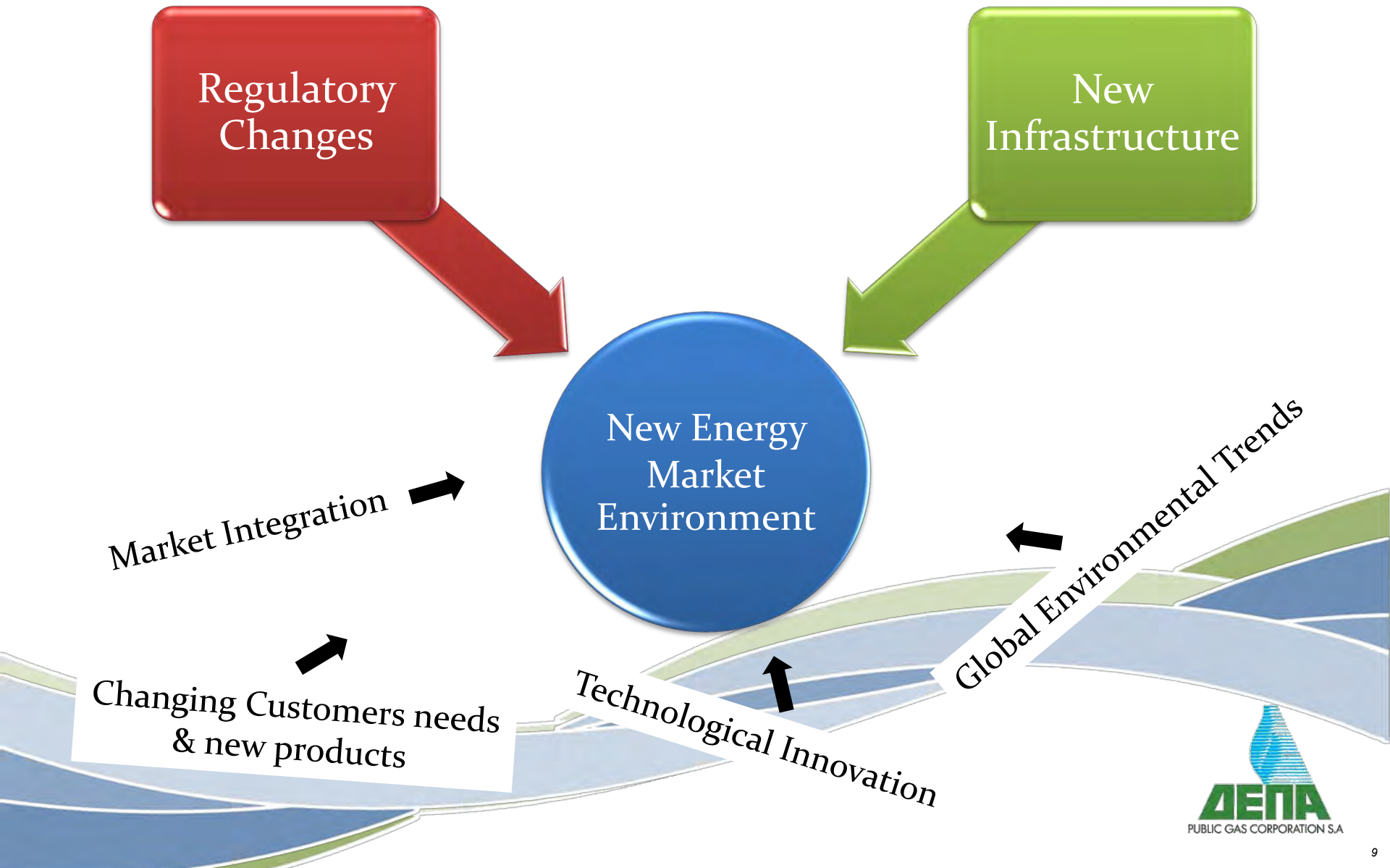


## New landscape in the Greek energy market





# Drivers of change of the Greek energy market

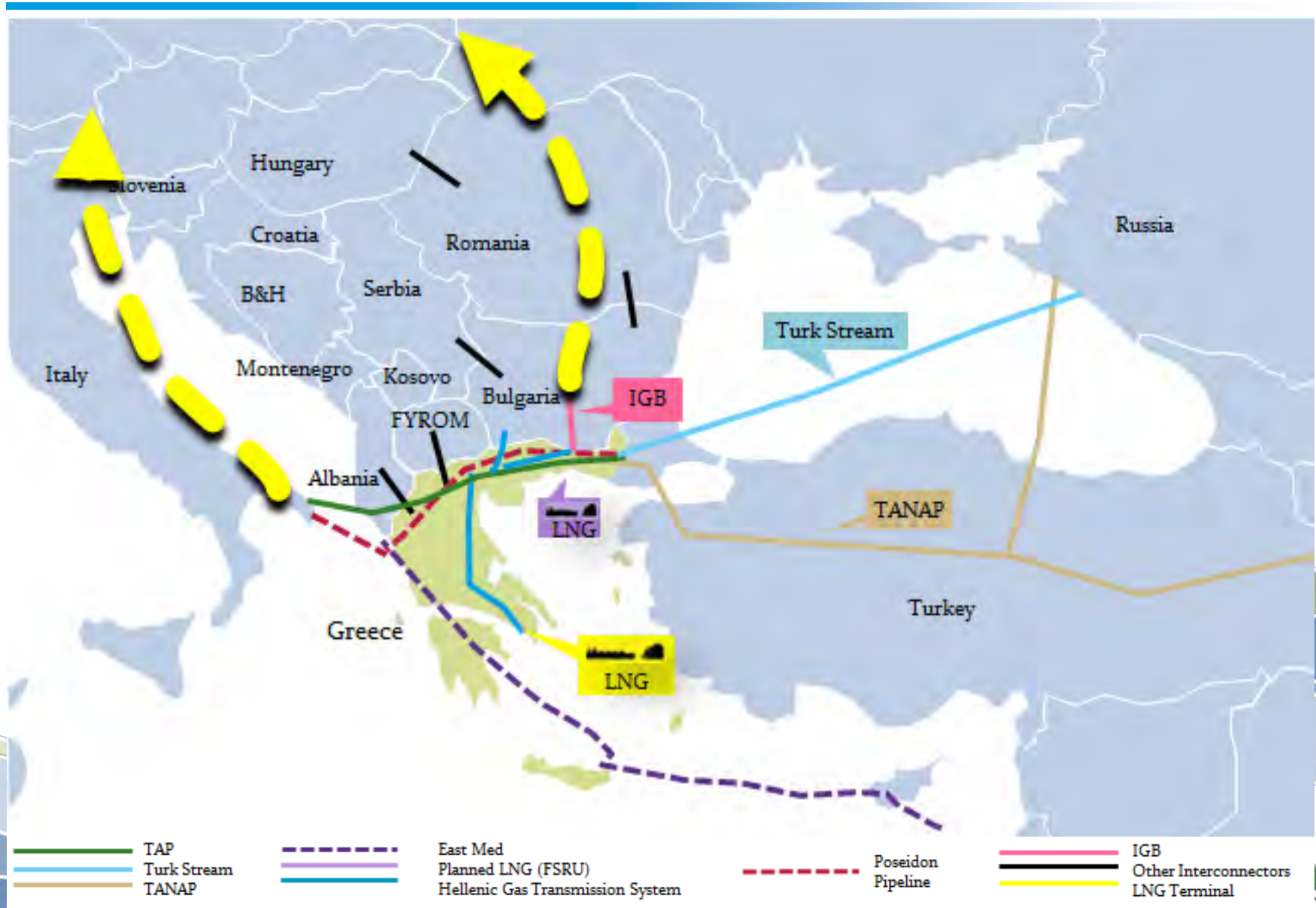


# Recent Regulatory changes

- ⚖️ Availability of capacity for third parties in all entry points. 33% Sidirokastro, 45% Kipi, 60% Revithousa.
- ⚖️ Increase of DEPA'S gas release volumes from 10% in 2016 to 16% in 2017 and gradually to 20% in 2020.
- ⚖️ Full legal unbundling between distribution & supply as of 01.01.2017
- ⚖️ Further liberalization of gas supply to reach full gas retail market opening by 2018
- ⚖️ “EU Target model” targeted to be implemented in the Greek electricity market within 2018, substituting the current “mandatory pool” market
- ⚖️ Further liberalization of the Greek electricity retail market on the way, with the objective of bringing PPC's retail market share below 50% by the end of 2019. Electricity auctions of lignite and hydro generation adopted as an intermediate measure facilitating the reduction of PPC's retail market share.

# New infrastructure

## Greece: From destination to transit country



# Main pillars for an efficient Gas Market

## Main Pillars

### Effective Competition

- Sizable available capacity to third parties at entry points Sidirokastro, Revithoussa.
- Gas Retail sector open to competition by January 1st, 2018.
- New entrants are large vertically integrated energy companies, foster effective competition.

### Security of Supply

- Gas & RES are catching up lignite (in line with global trends & climate targets)
- Energy security comes to gas supply security
- Prices should reflect the real value of gas and electricity when they are scarce

### Market Expansion

- Current Oil prices and environmental targets set by EU favor gas in power generation.
- Low gas use compared to avg.EU.
- Development of New gas networks are leading to new customer connections
- New uses as CNG and LNG for fuel in road and marine transportation and for use in remote areas (power, industry, local networks).

### Outward-looking

- New regional infrastructure developments convert Greece from a final user import country to a transit market in natural gas, providing international growth opportunities for Greek companies
  - TAP pipeline
  - IGB pipeline
  - FSRU in Northern Greece
  - EastMed
  - Poseidon Pipelines

Towards an efficient Gas Market

# Market Outlook

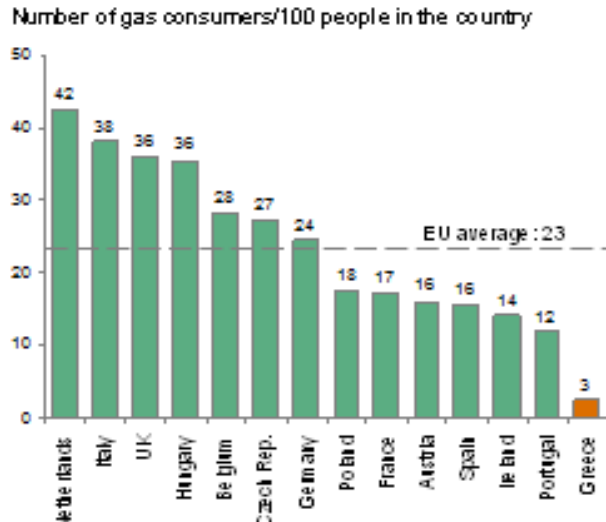


The increase in gas demand mainly due to power generation, driven from globally lower gas prices.

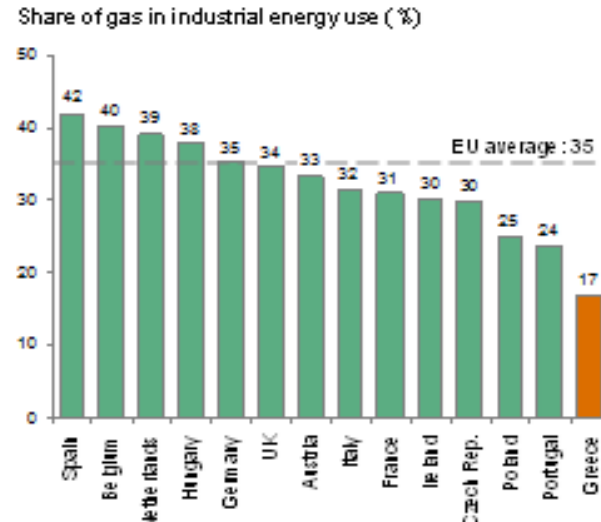
# Need for market expansion

Gas penetration in Greece is at the low end of the European benchmarks

## Residential



## Industrial



Large potential for further gas penetration

Households

Households consumers of natural gas

Households/consumers of electric power

## The role of DEPA in the new environment



# DEPA's strategic goals

*Ensure long-term leadership in a competitive energy market and capture growth in Greece and the region*

A

Maintaining a long-term sustainable leading position in an open and competitive domestic energy market.

B

Creating and realizing growth opportunities in Greece through increasing the penetration of gas

C

Strengthening regional position by focusing the development of strategic assets

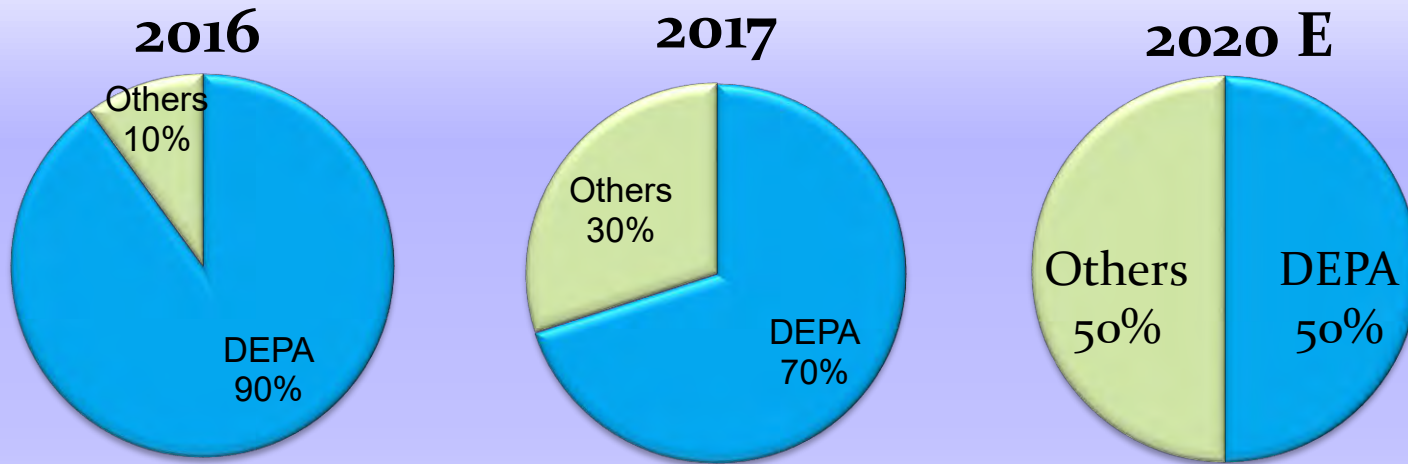
D

Transforming the way of doing business and the organization to tackle new challenges



# The role of DEPA in the new environment:

## A. Facilitate competition



- DEPA market share, currently at 70% is expected to fall at 50% of total gas market, enticing wholesale supply competition.
- DEPA is in the process of restructuring its position in the retail market

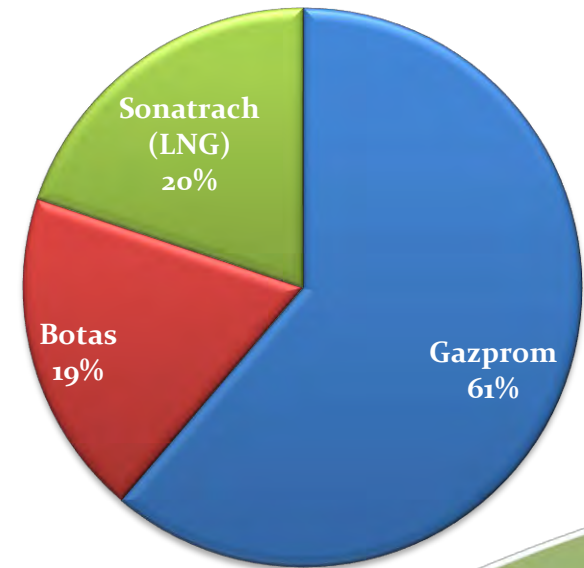
# The role of DEPA in the new environment:

## B. Support Energy Security

In Dec. 2016- Feb 2017 Greece's energy system was pushed to its limits during a European level energy crisis but overcame the challenge. The role of natural gas and DEPA was crucial.



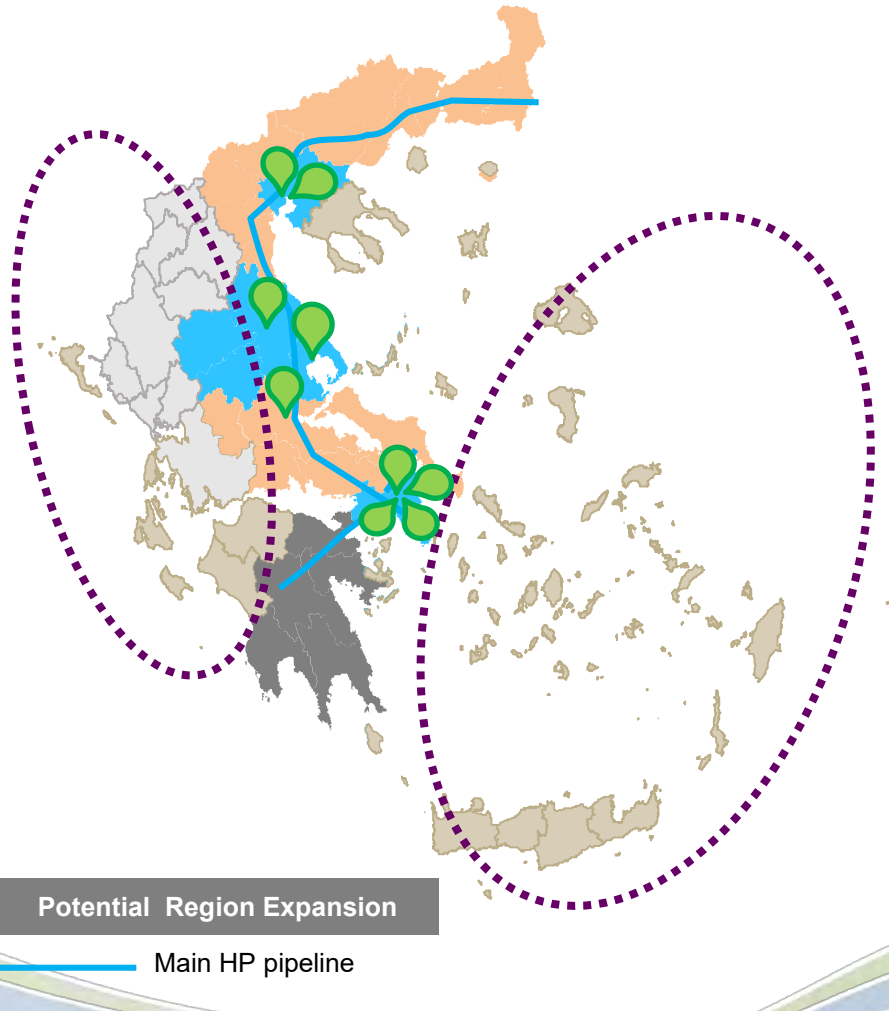
Supply Portfolio (avg. 2013-2017)



Security of Supply

# The role of DEPA in the new environment:

## C. Promote market expansion & new uses



### • Network Expansion:

#### Existing Regions

- Expand in existing regions (network, customers) through EDAs

#### New Regions

- Develop new regions (network, customers) through DEDA



### • 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

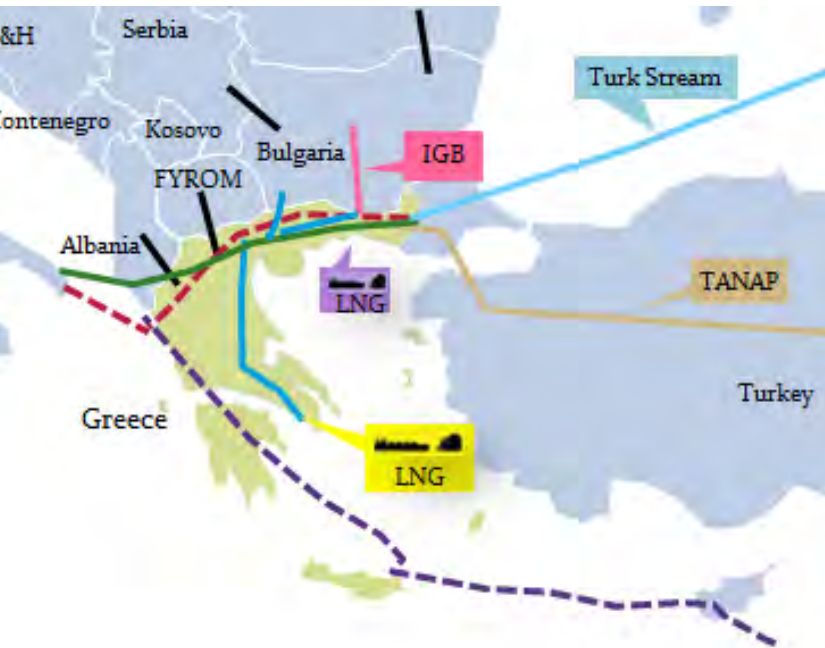
Total DEPA's 5year Investment Plan: 230 mil.€

# The role of DEPA in the new environment:

## D. Outward-looking

DEPA remains open and outward-looking

Taking part in various international projects



IGB

- Developed by the Bulgarian company “ICGB AD - Interconnector Greece - Bulgaria”
- Equally controlled by IGI Poseidon SA and Bulgarian Energy Holding EAD (BEH).

Poseidon Pipeline

DEPA participates with Italian Edison (50%-50%) in IGI-Poseidon SA, which is the project company for the realization of the Poseidon Pipeline (IGI) and the development of EastMed Pipeline.

East Med Pipeline

North Greece FSRU

DEPA supports the realization of the Alexandroupolis FSRU and is looking/ investigating its participation in the project

- - - - - Poseidon Pipeline  
— — — — — IGB  
— — — — — Other Interconnectors  
— — — — — LNG Terminal

# Conclusion

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- ❑ *Gas and power sector reforms support the creation of a competitive energy market, and the reduction of energy cost.*
- ❑ *Security of supply and infrastructure development are essential for an effective energy market, in a competitive environment.*
- ❑ *DEPA is playing a key role in the market transformation.*

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THANK YOU FOR YOUR ATTENTION!