The new Greek natural gas market

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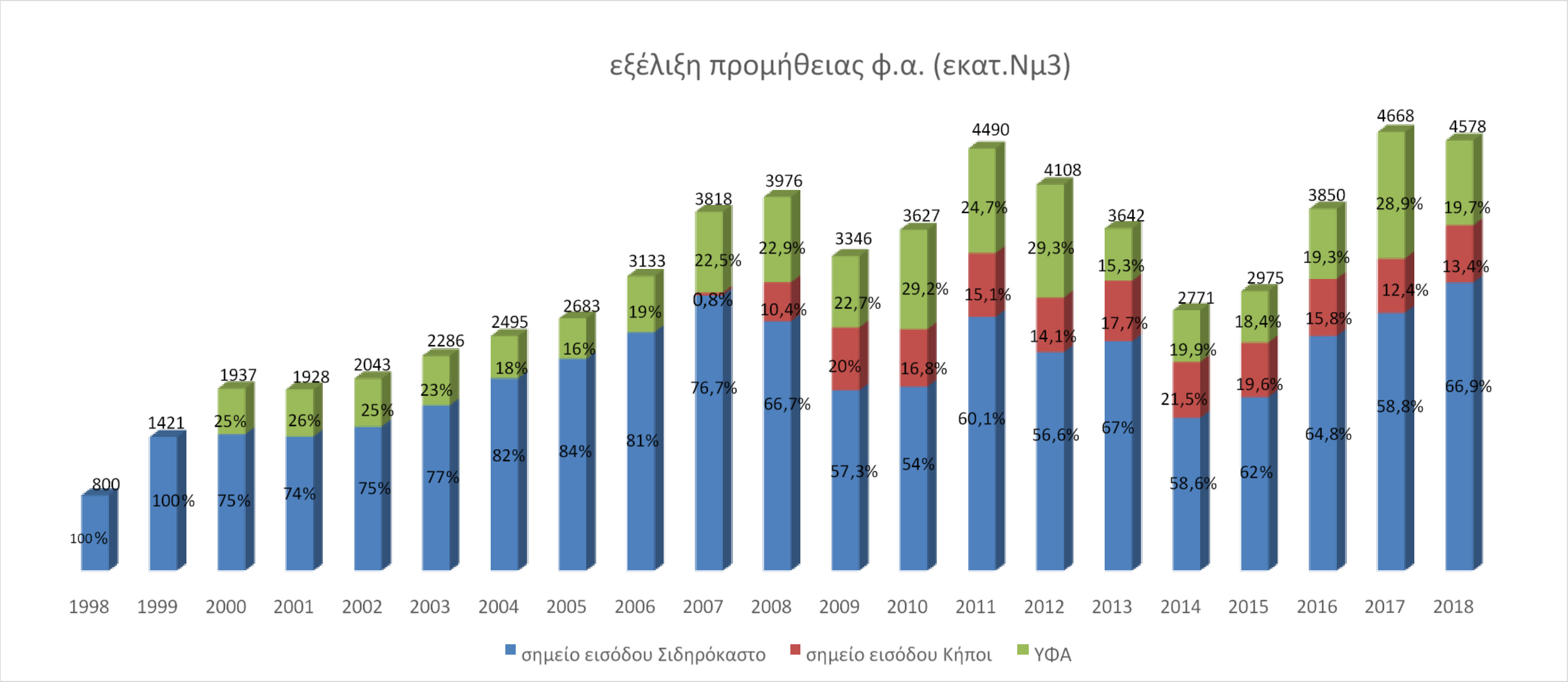
A well functioning natural gas market needs…

- Diversified sources of gas (Pipeline and LNG)
- Interconnected infrastructure
- Trading Platform
- Open access to interconnections and trading platform
- Size of Final Consumption (Market Scale)

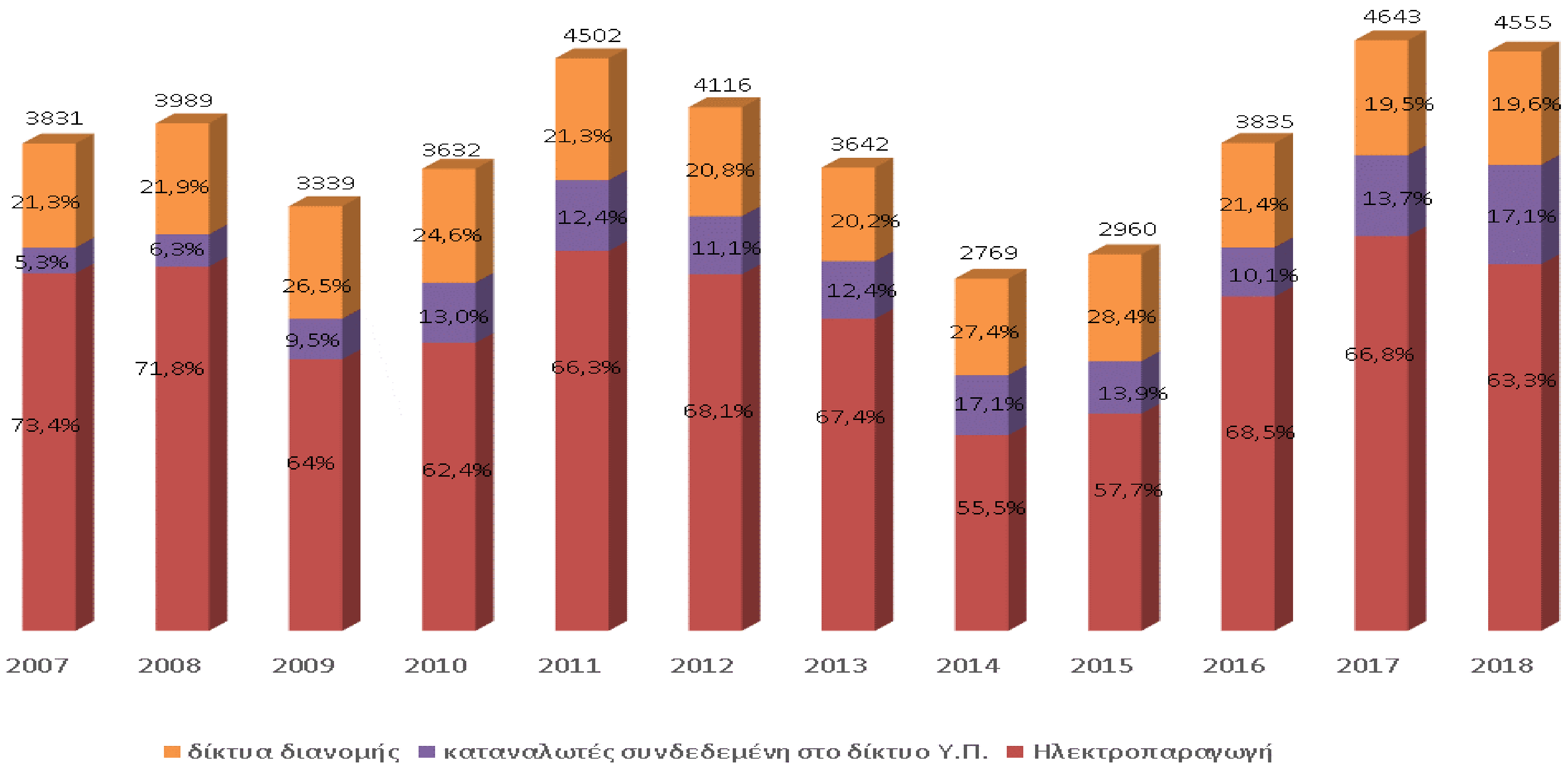
The Greek Natural Gas System, Current Map

- ➢ 3 entry points (with almost the same price)
- ➢ 1 reverse flow exit point
- ➢ 1 LNG Terminal
- ➢ 1 Virtual Trading Point

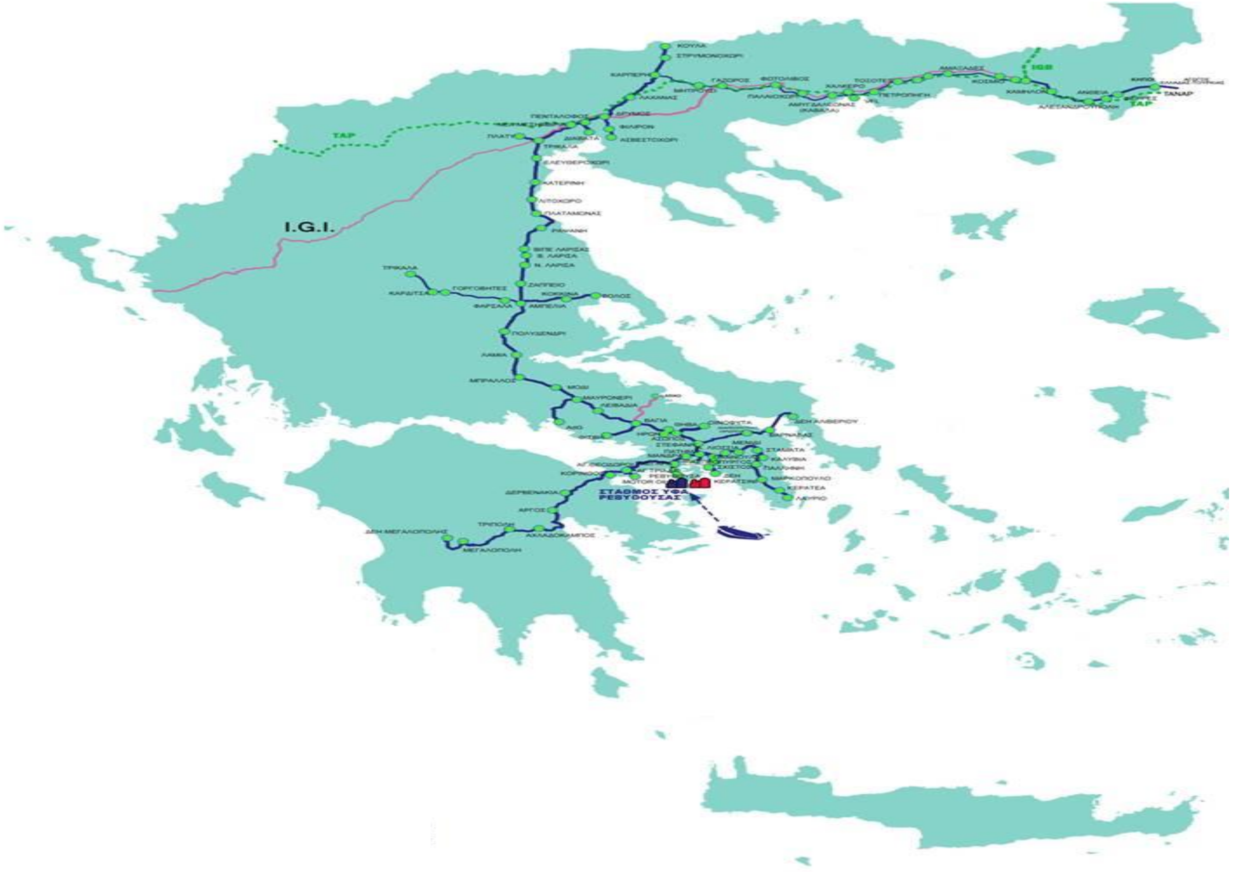
Natural gas import per entry point (%)



Percentage of natural gas end consumption in Greece (%)



The Greek Natural Gas System, New Map



- 8 entry points
- 4 exit points
- 3 LNG Terminals
- 1 Storage Facility
- Gas Products sold at the energy exchange

Trans Adriatic Pipeline (TAP)

Important role in the Greek Natural Gas Market

- Enhancing Security of Supply by connecting Energy Markets
- Enhancing gas source diversification for Greece and Europe
- Opening up the Greek Market to new gas participants

Important aspects

- Close cooperation with adjacent TSO in order to build the new interconnection points
  - Komotini IP - Connection with IGB
  - Nea Messimvria IP – Connection with DESFA
  - Kozani, Kastoria and Pella exit points for future connection with local distribution networks
- TAP will offer commercial reverse capacity to allow shipping gas from Italy to Greece in virtual flow at a very low transmission price (5% of firm forward flow)

Interconnector Greece Bulgaria (IGB)

ICGB INTERCONNECTOR

Natural Gas Interconnector Greece - Bulgaria

Important role in the Greek & SEE natural gas market

- Increase the transit capacity to SEE counties (exports)
- The Bulgarian system currently relies almost exclusively on a single source (95% of the whole market) and on a single North to South route for its supply and market needs. IGB will be the first Bulgarian Cross-Border route that will be at disposal to every shipper interested.
- Diversification of gas imports in Bulgaria through Greece with gas from the Caspian Sea and LNG through the new Alexandroupolis LNG Terminal
- Enabling the access of the SEE markets to the Southern Corridor.

More information on IGB

- Listed among the PCIs
- Exemption for 25 years from:

✓ Third party access – up to 1,57 bcm
✓ Regulated tariffs
✓ Ownership Unbundling

COD: 2021

Alexandroupolis LNG Terminal

gastrade

Important role in the Greek & SEE natural gas market

- Creating another entry point into Greece
- Offering new gas sources for the supply of the Greek and the regional SE European markets
- Promoting competition to the benefit of the end consumers
- Enhancing the security of supply in Greece and the Balkan markets
- Improving the flexibility of the Greek National Natural Gas Transmission System and of the regional and trans-European gas networks

More Information on the LNG Terminal

- The Alexandroupolis Independent Natural Gas System (INGS) project comprises of an offshore floating, storage and re-gasification unit and a subsea and onshore gas transmission pipeline connecting the FSRU with the Greek National Natural Gas System of DESFA
- Permanently anchored at a fixed location at a distance of 17.6 km SW from the port of Alexandroupolis
- Has applied for an exemption from TPA & Regulated Tariffs
- Binding Phase of Market Test to be launched soon

Dioryga Gas LNG Terminal

Important Role for the Greek Market

- Creating another entry point into Greece
- Offering new gas sources for the supply of the Greek and the regional SE European markets
- Promoting competition to the benefit of the end consumers
- Enhancing the security of supply in Greece and SEE
- Enhancing the technical stability to the NNTS due to its location (close to large gas consumption in the south)

More information on the LNG Terminal

- The Dioryga Independent Natural Gas System (INGS) project comprises of an offshore floating, storage and re-gasification unit and a subsea and onshore gas transmission pipeline connecting the FSRU with the Greek National Natural Gas System of DESFA
- Permanently anchored at a fixed location at a distance of 1.5 km from Motor Oil Corinth Refineries (Agioi Theodoroi)
- Operating under TPA regime

Underground Storage Facility in Kavala

Important role in the Greek Market

- Creating the first long term storage facility in Greece
- Enhancing the security of supply in Greece and SEE
- Improving the flexibility of the Greek National Natural Gas Transmission System
- Improving the management of the natural gas suppliers' portfolio
- Contributing to the establishment of the Greek Gas Market as a Gas Hub
- Enhancing gas-to-gas competition
- Storage will smooth out seasonal price fluctuations

More Information on the storage facility

- Exploiting the almost depleted underwater natural gas field of South Kavala as an underground natural gas storage (UGS).
- The underground gas storage capacity is estimated at 1bcm.
- The Annual Volume is estimated at 360 million Nm3 or 720 million Nm3 for one or two cycles per year.

DESFA 10 year development plan

Important new project

- New projects that are enhancing the operation of the system. Investments in compressors that will enable the transmission of gas from east to west and from the north to the south (Kipi, Nea Messimvria, Ambelia)
- New Interconnection to North Macedonia
- New CNG Compressors to connect TAP with Distribution Networks
- Virtual Pipelines (to Crete)

- Soon on Public Consultation

Natural Gas Distribution Networks

Incentive Schemes to increase the customer base

5 year development plans 450 million €

- ➢Development projects
- ➢Connection projects

	TOTAL 3 DSOs		
	2018	DEVELOPMENT 2019-2023	2023
CONNECTIONS	458.403	186.736	645.139
CONSUMPTION MWh	10.059.921	3.520.434	13.580.355

Natural Gas Supply to end-customers

2017

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ΕΠΑ ΑΤΤΙΚΗΣ

ΑΕΡΙΟ
ΘΕΣΣΑΛΟΝΙΚΗΣ

ΑΕΡΙΟ
ΘΕΣΣΑΛΙΑΣ

2019

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ΗΡΩΝ

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ΔΕΗ

Towards the future…

Gas Sources

- New sources (Bulgaria, Turkey, Italy, Azerbaijan)
- LNG sources
- Storage Facility

Interconnected Infrastructure

- Interconnection with Bulgatransgas, Botas, TAP, IGB, North Macedonia, (Reverse from Italy)
- 3 LNG Terminals

Trading Platform

- From Bilateral Contracts to DEPA, Auctions and VTP
- Feasibility Study regarding the development of HEnEx's activities in the natural gas market (including derivatives) is underway

Open access

- Approval of network & tariff codes regarding all infrastructure
- Revision of network codes regarding LNG Terminal Usage

Size of market

- Distribution Development Plans
- Environmental Targets

Thank you for your attention!

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Regulatory Authority for Energy