

AMERICAN HELLENIC CHAMBER OF COMMERCE

2018 GREEK ECONOMY CONFERENCE

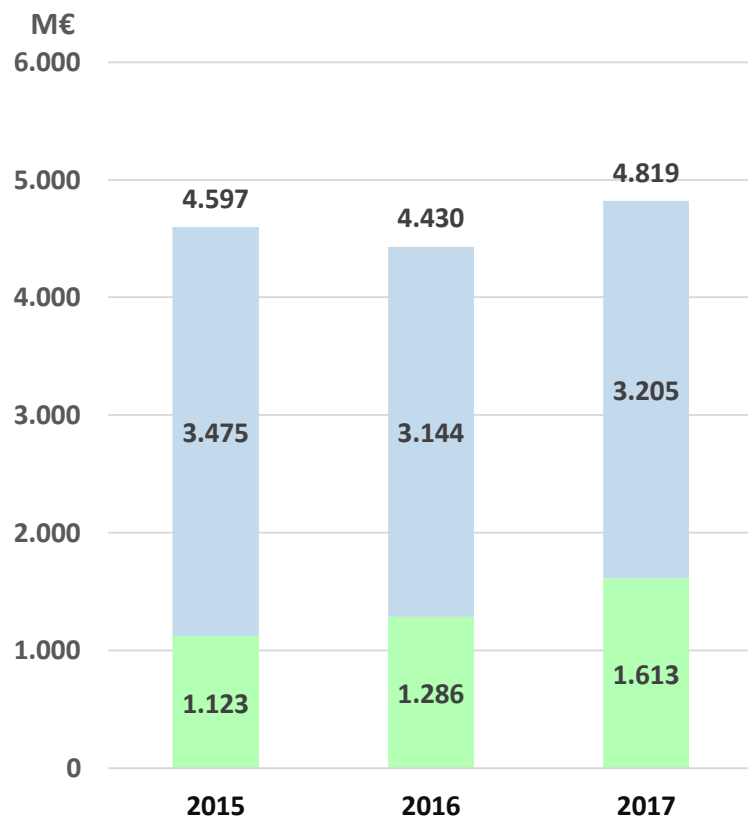
The energy sector as a pillar of economic development

Athens, 3 December 2018

- **Importance of Energy sector**
 - **A changing landscape**
 - **Timing & signaling**
-

Importance of the energy sector

Energy Sector Contribution to GDP



- Refined petroleum products
- Electricity, Gas, Steam & A/C supply

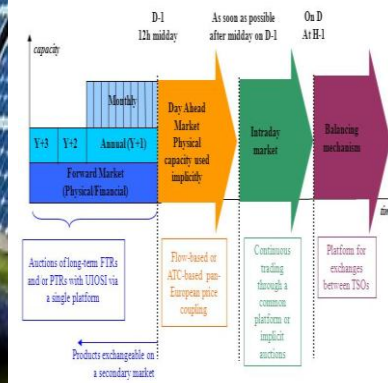
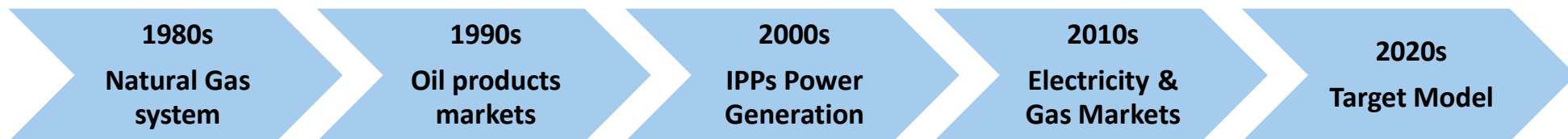
Source: Elstat

Refining Sector Contribution



Source: IOBE

Market models transformation



**TRANSITION FROM A GOV'T CONTROLLED INDUSTRY MONOPOLY
TO
OPEN MARKET WITH STRONG REGULATION AND FREE ACCESS**

Changes ahead of us



The EU has long established a goal to lead the world in addressing global climate change

2020

20% GHG reduction
10% biofuels in Transport

2030

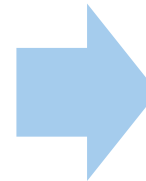
At least 40% GHG reduction
14% biofuels in Transport

2050

80-95% GHG reduction in EU
60% GHG reduction in Transport

Regulatory

- CO2 targets (ETS)
- EU reference model
- Cleaner energy sources
- Energy exchange markets



Supply

- Fuel Source
- Fuel origin
- Production technologies

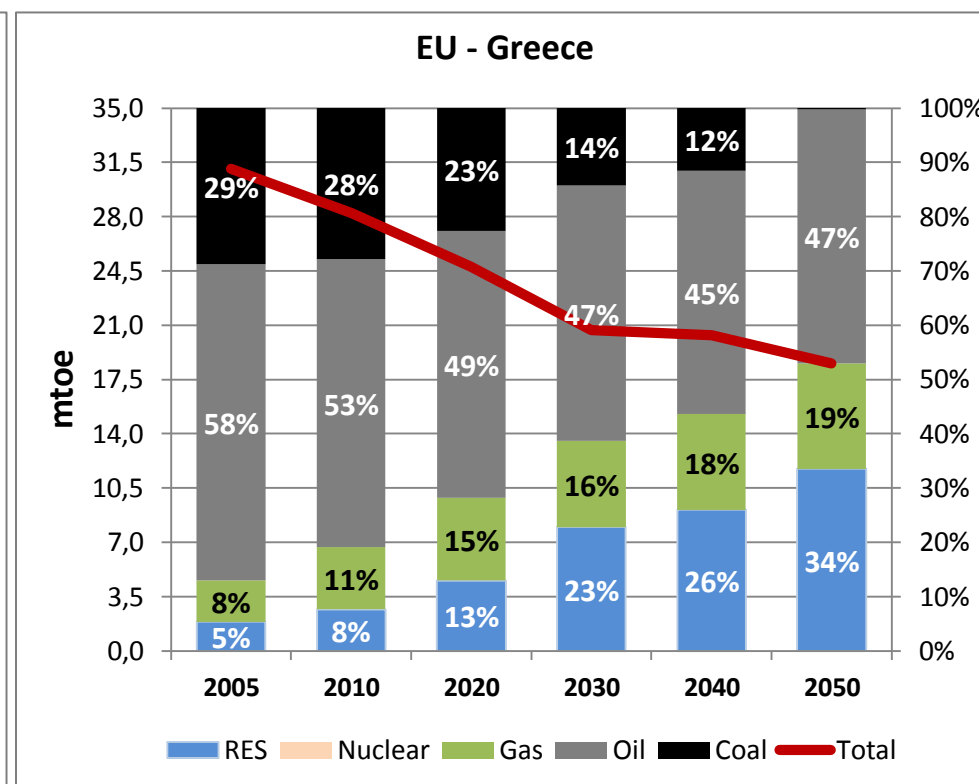
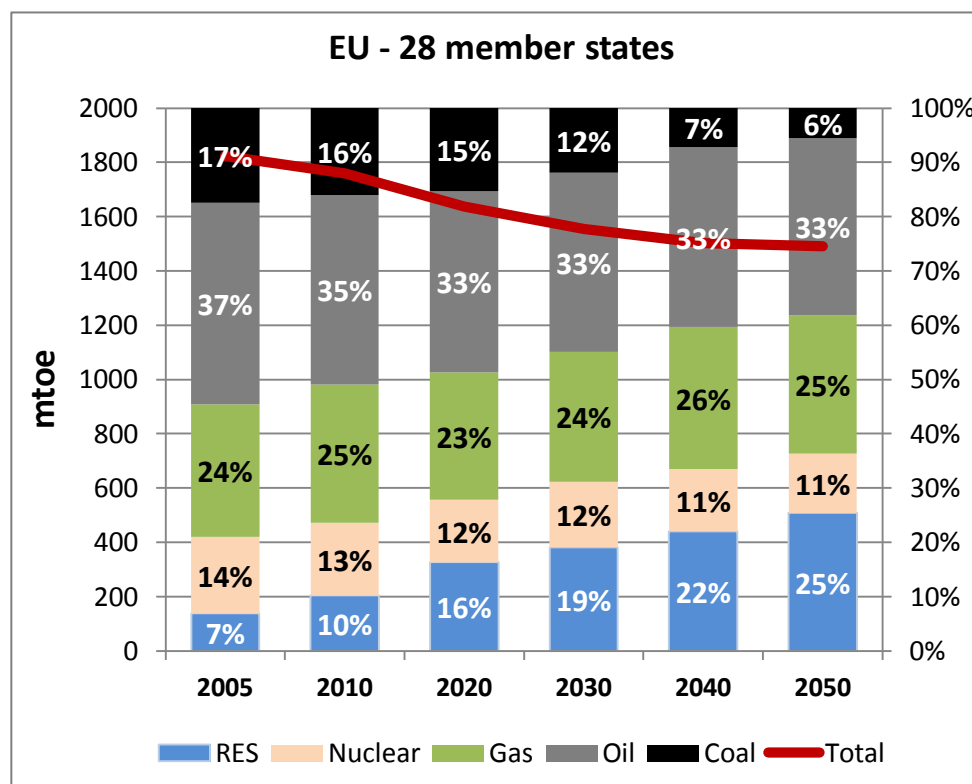


Demand

- Energy efficiency
- IoT
- EVs

European / Greek Energy Market Landscape

- EU projections show significant decline in energy demand (-18%) and switch of energy mix
- Greece projections point to the same conclusion but more aggressively (-27%)



Source: EU Reference Scenario 2016

Key Considerations for energy transition and contribution to the Economy

➤ **Lignite phase-out:**

Credible medium term plan to transition out of lignite taking into consideration all factors (Social, economic, security of supply).

➤ **Natural gas increase:**

Infrastructure establishment and alternative suppliers incl. domestic E&P

➤ **RES penetration:**

Large scale investment is needed rather than distributed small scale projects.

➤ **Biofuels:**

Technologically interesting, raw materials input challenge remains.

➤ **Refining industry:**

Pushing refinery industry out of EU is part of the problem not the solution.