The Greek Energy Market: Reforms, Challenges and Regional Developments

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* Any views expressed are personal.
Evolution of Energy Mix in Greece
Fuel Market Shares in Electricity Generation, 2014 - 2019
Transformation of the Greek Energy Sector (I)

More competitive, compliant and connected.

Anti-trust measures on incumbents: Electricity Auctions, Gas Release Programme.

New Investors in TSOs (ADMIE, DESFA), Gas DSOs and Suppliers.

New Market Roles: Aggregators, Paper traders, Clearing parties, EV service providers.

Cross-border Infrastructure
Gas: TAP, IGB, East Med.
Electricity: Euroasian, Maritsa East.

Harmonized market rules.
Gas: Capacity Auctions and Balancing Platform.
Electricity: New Markets - Target Model.

Transformation of the Greek Energy Sector (II)

More resilient and on clean energy transition.

- **LNG Terminal Expansion and Upgrading.**
  - FRSU Alexandroupolis.
  - Underground Storage in Kavala.

- **Preventive Action Plan.**
  - Cost-efficient measures were adopted.

- **RES Market Share**
  - > 23% in electricity production.

- **Transition from Feed-in-Tariffs to Feed-in-Premium.**
  - 8.5 bil € investments up to 2030.

- **Gas Network is expanded.**
  - 250 mil € investments.
  - Island interconnections and small-scale LNG.
Indicators of Market Evolution

- PPC Retail Share: 74% vs. 98% in 2015. 50% in Medium Voltage.
- Gas share: 45% vs. 20% lignite in July 2019.
- LNG utilization exceeded 40%.
- Reverse flow from Greece to Bulgaria.
- Consumers switching electricity supplier: 338,000 in 2018 vs. 186,000 in 2017.
- Access to gas: 1500 km network development. CNG in 9 regions.
- Alternative gas suppliers: 50% of new connections in Attica.
Power Derivatives Market

- Risk hedging.
- Multiples the value of physical market.
- Rulebooks under public consultation.
- **Product**: Financial derivatives contract based on average spot price over delivery period.
- **Option of physical delivery** on Day-ahead Market, via Priority Price-Taking Orders.

**Advantages of a financial contract with the option of physical delivery**

- Appealing both to financial and non-financial entities.
- **Liquidity** is gathered into a single pool.
- Counterparty risk is **minimised**. Clearing by EMIR-authorised CCP.
- Not required for both buyer and seller to request physical delivery.
- Common practice (e.g. EEX, HUDEX).
NOME Electricity Auctions

- 20 suppliers. 12 auctions.
- Total Volume: 41.62 TWh. Average Price: 48.29 €/MWh.
- Total benefit: 566 mil € (Dec 2016 - July 2019) on wholesale market cost.

Source: ADMIE
Retail Prices: Transparent, Well-explained, Comparable

- Price Comparison Tool: Essential for Consumer Protection.
- Time-varying surcharges: reflecting fluctuations of SMP, wholesale costs, or CO2.

Example of Retail Tariffs Differentiation, if SMP-varying surcharges are fully activated.
Regional Cooperation: Essential at Several Levels

- Risk assessment and crisis mitigation both for electricity and gas.  
  Solidarity obligations: in progress.
- Capacity mechanisms: Cross-border participation is a key element.
- Regional Operational Centers: reserves requirements and sharing.
- RES Schemes: Participation in RES tenders from other Member States.

Still, regional challenges emerge in SEE.

- Efficient co-operation on gas framework and infrastructure projects.
- Coupling of electricity markets: Delayed. But, positive momentum.
- Electricity Interconnections: Limitations.
- From market fragmentation towards coupling and Power Exchange mergers.
Price Convergence? Market Coupling Potential

Market Coupling Benefits in SEE: 15 - 28 mil € / year

Cross-border trading: 280 mil €

Source: Energy Community Secretariat (2016)
Trans-Balkan Joint Risk Assessment
RAE: Co-ordinator

1. Risk Identification
2. Risk Analysis
3. Risk Evaluation
New Regulation 941/2019 on Risk-Preparedness in Electricity

- Regional and bilateral measures to prevent and mitigate crises.
- Crisis coordinator, tests, trigger points for non market-based measures.
- Assistance mechanisms.

- 5.1.2020. Member States designate the Competent Authority.
- ENTSO-E submits to ACER proposed methodologies for regional electricity crisis scenarios, short-term and seasonal adequacy assessments.
- European Commission may issue guidance on fair compensation in assistance mechanisms.

- 5.3.2020. ACER approves the above methodologies.
- 5.4.2021. Draft Risk Preparedness Plans are completed. Consultation and Submission to ECG.
RES support arising from auctions - Competition drives down prices

Auction for PV <= 1MW (2 July 2018)
Challenges for the Sector and Consumers Bills

- **Cost efficiency**
  - **Production costs**: Mining activity at a loss of 200 mil € in 2018 (PPC unbundled financial statements).
  - **Network costs**: CEER Benchmark Study for European TSOs.

- **DSO Charges**: Accumulated under-recovery of 100 mil €.

- **RES Account**: Reduction of RES levy for LV consumers -> ~ 200 mil € deducted from RES Account.
  - Withholding of 4 mil ton allowances in July 2019 (Market Stability Reserve) ->
  - ~ 60 mil € reduction of inflows to RES Account.

- **PSO Account**: Essential to be financed by state budget to avert deficit.

- **Gas tariffs**: Level of socialization of infrastructure.

- **Key Drivers of Future Developments**:
  - **Target Model**: Implementation Dates, Market Parameters, Surveillance.
  - **Capacity mechanism** (strong impact on PPC new lignite plant).
  - **NOME auctions**.
  - **Structural measures** (Decision on Lignite Case, DG Comp investigation).
  - **PPC restructuring**. Privatizations.
Retaining Order in a Profound Transformation

- From Market Design and Structural Changes -> Cross-sectoral synergies.

- "Phase transitions create order in an expanding universe" (Physics).
- "Instead of two opposed polarities, there is a continuous spectrum" (Mathematics).