

# Internal Energy Market

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# Is energy a „special“ commodity?

- Crucial input to the economy (strategic in economic and military terms).
- Highly capital intensive (entry barriers, difficult operation).
- Dependency on fixed networks (natural monopoly).
- Limited number of suppliers.

= substantial economies of scale, benefits of co-ordination of production, transmission and distribution → tendency to vertical and horizontal monopolization, politicization of the sector.

# Traditional (pre-liberalization) paradigm

- Model of government - energy industry relation that emphasizes stability, reliability of supply, and public service, it is a model of technical organization involving the central control over a synchronized network.
- The certain way of organizing government relations with electricity and gas industries, a set of ideas about the scope of competition and the appropriate legal and institutional methods to achieve public policy aims.
- Role of a consumer is limited.

# Traditional (pre-liberalization) paradigm

## Essential characteristics

- Exclusive rights to build and operate networks.
- Closure to competition.
- Detailed regulation.
- Remuneration based on historical costs.
- Centralized control over planning.
- Limited participation of consumers.

# Ownership model of utilities

## **State-owned or privately owned but regulated monopolies**

- Taxpayers bear most investment risks. Overinvestment, security of supply.
- Poor accountability to consumers or shareholders, low sensitivity to customers needs, limited incentives to improve services. No customer choice.
- Limited incentives to engage in (technology) innovations.
- Price subsidies.
- Politicization of utilities – social, environmental aims, linkage to the governments.
- Risks borne by consumers.
- (In growing economies governments with no sufficient resources).

# (Economic) liberalization

- Fewer govt. regulations and restrictions in the economy in exchange for greater participation of private entities.
- Greater efficiency and effectiveness that would provide greater profit for everybody.
- Removal of controls, to encourage economic development.

# (Economic) liberalization

Expected effects of liberalized (= competitive) market:

- Allocative efficiency – the resources invested in direction preferred by consumers.  
To reduce the risk of low or non-existing demand.
- Innovation - adjustment to changes of consumer preferences.
- Cost reduction – to keep the costs and prices down.
- Progress – country committed to competition enjoys advances in efficiency and utilisation of resources.

# Drivers of change in regulatory paradigm

- Ideology and politics.
- Sympathetic regulators.
- Technology (gas turbines, now RES).
- Public debt.
- Inadequate investment in infrastructure.
- Poor accountability.
- Decentralized decision-making.



# Liberal paradigm

- Stresses a greater reliance on markets.
- It sought to introduce competition whenever possible, encouraging openness, decentralized production with network access, and profit based on the market prices, not costs (regulation for competition).
- Some basic characteristic:
  - Separation of activities to facilitate the competition (unbundling).
  - Freedom of entry and investment into competitive activities, instead of a centrally-planned approach.
  - Freedom of contract and competitive formation of prices.
  - Access to the network and infrastructure.
  - Supervision of the model by an independent regulator.

# Liberalization – pros and cons

- Prices are set by the market and competition drives prices lower vs market pricing (manipulations with prices).
- Prices are 'real', reflects the costs, demand and supply vs. inability of some customers to buy them (public service obligation).
- Stress on profit (effective allocation of sources) may weaken the incentives to some investments vs. long-term stability, reliability and security of supply.
- Sources are not wasted on non-profitable projects vs. private utilities don't reflect the interests (social, environmental) of state.

# Specific features of gas and electricity industry

- Network (grid) = natural monopoly.
- Some specific characteristic of electricity:
  - Lack of storage potential.
  - High cost of outages.
  - Volatile production.
  - Lack of import dependence (in the EU) – but interconnectors are poor and missing.
- Some specific characteristic of gas:
  - Geopolitics.
  - Gas chain.
  - Storage.