EU experience in energy market development – some possible options for Uzbekistan

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Agenda

• EU common energy policy
• Creation of an internal energy market
• Assuring sustainability:
  – Improving energy efficiency
  – Increasing share of renewable energy sources (RES)
• Ensuring access to energy to all consumers
The EU energy strategy

- Competitiveness
- Smart Infrastructure
- Competitive markets
- Diversified supply
- Energy efficiency
- Renewable sources
- Sustainability

Security of supply

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Energy 2020 - A strategy for competitive, sustainable and secure energy

Priority 1: Achieving an energy-efficient Europe

Priority 2: Building a pan-European integrated energy market

Priority 3: Extending Europe’s leadership in energy technology

Priority 4: Protecting consumers and achieving the highest level of safety and security

Priority 5: Strengthening the external dimension of the EU energy market
Priority 1: Achieving an energy-efficient Europe

- Making the most of National Energy Efficiency Plans
- Tapping into the biggest energy saving potential – buildings and transport
- Reinforcing the competitiveness of our industry
- Reinforcing efficiency in the supply side
Energy efficiency requirements to new buildings (2010/31/EC)

- Obligatory methodologies for energy use calculation in buildings for all MS
- Minimal energy efficiency requirements for new buildings
- Energy efficiency requirements for thermal modernisation (renovation) of buildings
- Energy passports (certificates)
- From 2020 all new buildings with almost zero energy consumption
Lithuania: heat energy consumption in buildings

- New: 5%
- Efficient: 17%
- Very bad: 22%
- Inefficient: 56%
Requirements for the new buildings in Lithuania

![Graph showing energy requirements for new buildings in Lithuania over the years from 1992 to 2022. The graph indicates a significant decrease in energy requirements, from 190 kWh/m² in 1992 to 9 kWh/m² in 2022.]
Co-benefits of improved energy efficiency in CEE buildings

• Employment creation
  – “producing” energy through energy efficiency or renewables is more employment intensive than through traditional ways
  – a 20% reduction in EU energy consumption by 2020 can potentially create 1mln new jobs in Europe

• new business opportunities
  – for developed countries a market opportunity of €5–10 billion in energy service markets in Europe

• Increased comfort
  – noise reduction, reduction in indoor pollution → reduced need for cleaning and improved health; property values increased

• Reduced energy costs will make businesses more competitive
Energy efficiency directive (2012)

- EU energy efficiency target clearly defined
- Indicative national targets for 2020 (to be set by Member States)
- Long-term strategies for building renovation
- Public sector to lead by example
Energy efficiency directive

- For all consumers: more accurate and frequent individual metering and billing
- For large companies: mandatory audits and push towards the introduction of Energy Management Systems
- For SMEs: incentives to undergo energy audits and apply the results
- Efficiency in energy generation
RES development in EU: installed and decommissioned capacities during 2000-2012

GW

- installed
- decommissioned
Priority 2: Building a pan-European integrated energy market

- Timely and accurate implementation of the internal market legislation
- Establishing a blueprint of the European infrastructure for 2020 and beyond
- Removing technical and regulatory obstacles to infrastructure developments
- Providing the right financing framework (innovative funding mechanisms for projects of ‘European interest’)
Electricity and Gas Directives

- 1st Electricity directive (1996)
- 1st Gas directive (1998)
- 2nd Electricity and Gas directives (2003)
- 3rd package: Electricity and Gas directives, Regulations (2009)
- Implementation of the 3rd package (2011)
- Competitive pan-European market? (2014)
Various models for competitive gas & electricity systems

Model 1
Monopoly

Model 2
Single buyer

Model 3
Wholesale competition

Model 4
Retail competition

Sector becomes more like any other commodity industry but:

• More complexity, regulation, IT infrastructure, etc.
• More structural change required
Unbundling requirements

First Directives, 1996-1998

Unbundling of accounts

Second package, 2003

Legal and managerial unbundling

Third package, 2009

Ownership Unbundling or ISO or ITO
Implementation of the internal energy market

- Effective and efficient unbundling – separation of transport and supply/production
- Transparency and consumer protection
- Market integration through framework guidelines and network codes
  - Agency for the Cooperation of Energy Regulators (ACER) in Ljubljana (Slovenia)
  - ENTSO-G/E

- Community-wide 10-Year-Network Development Plans as starting point for joint and consistent investment planning
Estimated effects of opening gas & electricity markets

Achieving a fully functioning and competitive European electricity and gas market can add an extra 0.6% - 0.8% to EU GDP by 2020, create employment and curtail inflation.
Already some benefits from higher competition

Average EU wholesale gas prices in €/MWh

Source: European Commission, 3rd Quarter 2012
Integration of the Baltic electricity market
Green paper on energy policy for 2030 under discussion

- How to devise a set of targets that is coherent to meet longer term objectives?
- How to ensure consistency and improve cost efficiency of combination of instruments?
- Competitiveness of the EU economy and security of energy supply
- Acknowledging differing capacities
- Need for a policy framework robust to energy developments which will remain key, but uncertain
Reduction of CO₂ emissions by 80%
Fuel poverty

- Fuel poverty exists when people do not have the ability to pay for energy, most often heating materials (Wikipedia)
- A household is said to be in fuel poverty if it needs to spend more than 10% of its income on fuel to maintain a satisfactory heating regime (usually 21 degrees for the main living area, and 18 degrees for other occupied rooms - WHO recommendations)
Mitigation strategies:

1. Reducing cost of energy supplies
   - Lifeline tariffs
   - Energy discounts
   - Energy subsidies
   - Privileges

2. Compensating consumers for the cost of energy supplies
   - Compensation up to a certain benchmark
   - Cash and in-kind transfers

3. Reducing demand for energy
   - Energy efficiency measures
   - Discounts on energy efficient equipment

4. Improving access to energy supplies
   - Lower connection charges
   - Relaxed disconnection procedures
Subsidies and public service obligations

- subsidies usually are not acceptable as they distort the market
- but support for low-income, vulnerable, remote consumers, protection of environment, support of the strategic goals of the country, security of supply, etc. could be accepted
- EU Directives allow various public service obligations, but require that they were transparent, fair, well-defined
- almost all countries support renewables, co-generation, etc.
Reducing costs of energy supplies

- lifeline tariffs are the most popular
  - two and three block tariffs
  - transparent, predictable and easy to administer
  - but poorly targeted
  - directly distort prices
- discounts and privileges
  - can be applied directly to bills
  - administratively complex and open to corruption
- energy subsidies are non-transparent and indirect
Example: residential electricity tariffs in Tbilisi

- 100 kWh or less: 11.42 tetri
- 101-300 kWh: 13.56 tetri
- 301 kWh and more: 14.99 tetri

(without VAT)

GNEWRC decision from 06.2010

(Comment: 100 tetri = 1 Lari, 1 Euro = about 2.15 Lari)
Compensating consumers

- Direct compensation up to a given benchmark
  - requires good information about which households are in need
  - does not distort prices
  - administratively complex, unpredictable and open to corruption

- Cash transfer programs
  - similar to direct compensation measures but are not linked to actual energy expenditure
  - administering cash transfer programs typically requires more information and administrative purposes
Social protection in Lithuania

- compensation of district heating expenditures exceeding 20% of the household’s income
- money are allocated from the state budget and administrated by municipalities
- costly administration
- not very well targeted
- the scheme was recently changed to evaluate the households personal estate
Thank you

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