The role of the regulator in developing sustainable energies

Prof. Vidmantas Jankauskas
Major areas of economic regulation

- Price- and tariff regulation - Access pricing
- Service quality regulation - Minimum service quality standards + incentives for development
- Regulation of entry and exit - Licensing
- Market monitoring / regulation
New regulatory tasks raised by liberalisation

- Regulate access to essential facilities - networks, storage...
- Detect market power and promote efficient competition through ex-ante obligations - assisting antitrust
- Entry and exit - Regulators’ role in promoting the contestability of markets and new entrants
- Supply security - New dimensions
New regulatory tasks raised by sustainable energy sector development

- Renewable Energy Regulation;
- Energy Efficiency & Energy Savings;
- Vulnerable Customers;
- District Heating;
- ??

Comment: though some of them distort competition
While the authority of implementing environmental regulations remains mostly the job of environmental regulators, energy regulators also have to understand their impacts and the new regulatory challenges which are the followings:

- Design and implementation of the RES support schemes (optional);
- Tariff development (in case of feed-in tariffs);
- Development of rules for grid connection, access, balancing and settlement;
- Licensing and monitoring RES-E;
- Green certificates
Renewable Energy Regulation: Choice of RES support schemes in the EU

Source: Rickerson et al. (2007)
Energy Efficiency (EE)

Why does energy efficiency require regulatory measures? EE is often cost effective, however, regulatory measures are necessary to compensate for market failures:

- Insufficient political commitment to reduce investment insecurity;
- Insufficient incentives for consumers and suppliers to tackle high upfront costs and the split incentives problem;
- Insufficiently developed markets for energy efficiency improvements;
- Low awareness of energy saving opportunities.
Vulnerable Customers

In general, issues of consumer protection and the needs of vulnerable customers are social issues rather than energy policy issues. And in the EU it is the Member State Governments’ responsibility to define the tools. It is not a regulatory issue BUT even on the EU level this is a problem which has to be solved:

- **Directives 2003/54/EC and 2003/55/EC:**
  - Special protection for “vulnerable customers” declared;
  - Definition of the term “vulnerable customers” not provided

- **“Third Package” (Directives 2009/72/EC and 2009/73/EC):**
  - MS have to define a concept of vulnerable customers on national level;
  - To be applicable in the Energy Community Contracting Parties
Vulnerable Customers: Customer protection mechanisms

Consumer protection mechanisms may be designed in different ways:

- General support system (social network)
- Support systems within the energy sector:
  - economic support systems
  - non-economic support systems
Vulnerable Customers: Support systems in the energy sector

Economic support systems for certain customer groups:

- specific regulated prices
- discounts on the network tariff
- state heating aid
- social tariffs
- rebates and trust funds
- grants for home energy efficiency improvements
- governmental subsidies
Support to Vulnerable Customers in the EU Member Countries

- **Non-economic Support Systems**

  *Most common means for non-economic support: protection against disconnection: about 60% of all EU countries*

- **Other non-economic support schemes:**

  Special services, such as 1) more meter readings (for those of pensionable age, disabled, chronically sick, blind, partially sighted, deaf, hearing impaired…); 2) bills read via phone or in Braille

  Information duties (requirement to individually inform customers with special needs and people whose survival depends on medical equipment running on electricity, before planned interruptions)
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District Heating (DH)

All methods of regulation applied in the district heating (DH) sectors of various countries could be relatively classified as:

1. **Market driven regulation** (Finland, Sweden, Germany …mainly in the countries - old members of the European Union);

2. **Social regulation** (China, Russia, Belarus… mainly in the former “socialist” countries);

3. **Economic regulation** (Denmark, Lithuania, Poland, Czech Republic…mainly in the countries – new members of the EU)
DH: Social type of regulation

Is prevailing in the INOGATE partner countries

Easy regulation:
- Minimal regulation, less administration cost;
- No needs for measurement of energy consumption;
- High availability of heat, hot water and similar due to low prices and unlimited usage;
- Low social pressure due to heating expenses;
DH: Social type of regulation

Disadvantages:

- No incentives for efficient heat production and consumption—often aim is to boost cost;
- Unpredictable investment environment – not reliable and risky for private investors due to political decisions;
- No incentives for renovation and development;
- Low efficiency, high cost or warn out main facilities;
DH: Recent challenges for DH sector in general

- Expansion of cogeneration for primary energy savings (state policy);
- Wider usage of renewable fuels, waste heat etc.;
- Environmental issues;
- Introduction of new heating and cooling technologies;
- Energy efficiency targets;
- Increment of access to the DH networks;
- Fuel diversification - energy independence;
- Utilisation of a city waste etc.;
DH: Specific issues in the district heating of “transition” economies

- “Old” assets become warn out and growing volume of investments is required to maintain existing level of DH schemes (lack of investments);
- Increasing fuel prices, high energy consumption in the multi-flat buildings without individual regulation (thermal modernisation process is slow in most countries) and low economic power of heat consumers mislead to negative approach regarding district heating technology in general;
- State support to DH consumers tends to be reduced due to the crisis;
DH: General trends in regulation of district heating in countries with transition economies

- Conversion from “social” type regulation to economic regulation of the DH sector:
  - Law on Energy Savings, Heat Law (Russia);
  - Process of reforms in DH sector of China;
  - Law on Communal Services in Ukraine, etc.;
  - Introduction of licensing, planning, regulated development of energy infrastructure;
  - Formation of reliable economic background for self-support operation and development of DH schemes;

Capacity Building for Sustainable Energy Regulation in Eastern Europe and Central Asia

ENERGY COOPERATION BETWEEN THE EU, THE LITTORAL STATES OF THE BLACK & CASPIAN SEAS AND THEIR NEIGHBOURING COUNTRIES
DH: Optimal concept for regulation of DH sector in transition economies

- **State institutions** – general energy policy, basic principals of regulation, quality and technical standards, etc.;
- **Municipalities** – planning of local infrastructure, management of DH companies, price setting;
- **Energy regulator** – methodologies, norms, standards, licensing, dispute settlement, supervision of DH market, final control of price setting and usage;
DH: Role of state institutions

- Implementation of the state energy policy in the DH sector;
- General rules for licensing, contracting, planning etc.;
- Requirements and control of reliability, quality, efficiency, environmental issues etc.;
- Social support schemes for vulnerable consumers;
New regulatory tasks raised by sustainable energy development

Unpredictable incidents, political decisions

Fukushima, decision to close nuclear PP in Germany, dry consecutive years

Hard to predict CO₂ regulation

Increased investors risks in construction of new generation units

Regulatory implication

Stronger regional market integration, more room for energy efficiency actions

More regulatory comfort

Capacity market? Risk premium on the wholesale market prices?
Recent lessons learned by regulators (1)

Lesson

During economic and financial crisis the medium and large end-users are very sensitive to energy prices

End-user prices could strongly influence the national economy

Regulator

should balance between the short term (low end-user prices) and long term interest (stable, continuous supply) of customers

Set network/system tariffs adequately and avoid disturbing market based end-user prices for medium and large end-users!
Recent lessons learned by regulators (2)

Lesson

During these years of cutting (reducing) social safety-net the households are also very sensitive to end-user energy prices

Social welfare should be maintained but without sacrificing network reliability and future network development

Regulatory challenge

The necessity of network development (CB lines, smart grid) requires higher network/system tariff

New pricing regime could be necessary (especially, during the crisis)!

ENERGY COOPERATION BETWEEN THE EU, THE LITTORAL STATES OF THE BLACK & CASPIAN SEAS AND THEIR NEIGHBOURING COUNTRIES
Thank you for your attention!