• There will be mentioned a few current challenges for Lithuanian district heating (DH);
• However, our colleagues in neighbour countries can face with similar problems also;
• Challenges is a good reason to have research and invent new ideas;
• Collaboration of experts in this process is essential...
Statistics

- 52 percent of dwellings in Lithuania and 75 percent in cities are connected to DH networks;
- Length of DH pipelines – 2890 km;
- Installed heat production capacity – 10’170 MW;
- Amount of heat supplied to DH networks (2014) – 8’565 GWh;
- Consumption (2014) – 6’995 GWh.
District heating market development in large Lithuanian cities

- District heating market was organised as vertically integrated monopolies and captive consumers;
- Lithuanian district heating market has been (and still is) under very deep regulation;
- Lack of investments into new efficient heat production capacity and transmission pipelines;
- The increase of natural gas prices stimulated investment to biofuel boilers;
- Independent heat producers (IHP) was allowed.

Competition in heat generation began.
What happened?

- In cities where the municipalities did not have artificial barriers for new independent heat producers to arise, competition among heat producers significantly increased in just **three** years.
- Heat trade using an auction procedure was a successful step. Price drop of heat productions due to competition is evident.
- However, existing heat trading rules reached its limit in the cities with advanced competition background and it should be improved.
Decreasing of heat consumptions due to renovation of buildings

- Lithuanian situation: approximately 80 percent of the multi-apartment buildings are in poor technical condition and have poor insulation;
- Practice: after renovation of the building the demand for space heating decreasing by ~ 50 percent;
- Lithuania has no long-term national plan for sustainable renovation of multi-apartment buildings.

Possible solution: long term plan of complex renovation by blocks for every town. DH role in this process is important due to renovation of DH transmission pipes.
Decreases DH heat sold volumes due to penetration of decentralised generation units into buildings

- Installation of Heat pumps, Solar collectors during renovation of buildings;
- How and when this will affect the DH system?
- How it will change the dispatching of the DH system?
- How this will affect pricing (from single rate (Eur/kWh) towards two-part tariff (Eur/kWh, Eur/kW); Different packages for different users)?
• Technical issues of DH system transformation from centralised system with one (or very few) heat producer into system with many (small scale) producers.
• The role of DH as intermediary between users of the network and as a storage.
State regulation of DH sector is still very deep

- Lithuanian DH is regulated by 100 laws and ~1000 acts of secondary legislation;
- Regulation lag to real life is significant;
- Governmental institutions are not willing to work hardly on preparation of secondary legislation acts in advance. In most cases new procedure appears only when actors in the market have trouble and loss.
Directive 2012/27/EU implementation

- Directive on energy efficiency 2012/17 ES was adopted by European Parliament in October 2012;
- A lot of requirements for DH system actors are claimed by the act;
- Responsibilities of actors, measures the extent of implementation, enforcement mechanisms are not yet drowned;
- National specific and practice should be estimated.
Implementation of ESCO model in Lithuania

• The need for the ESCO model is very high in sectors of municipal property and multi-apartment buildings;
• Lithuania still does not have legislative base for ESCO;
• The project of preparation of documents for standardized typical ESCO in Lithuania and testing it on a few governmental buildings was started in Autumn 2014;
• The project is financed by the EBRD;
• Experts are wondering about project progress and has doubts that the documents produced will be possible to adapt for ESCO in multi apartment and kindergarten buildings.
• Improving technologies from renewables,
• Distributed generation,
• Storage,
• Digitized solutions,
• Energy efficiency management services
are hot topics in the discussion about the future of power sector.

When and how all those will go to the district heating?

Or maybe it already happened?
Let’s discuss about it...

Thank you

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