

**Auditing sustainability of energy -  
How energy price regulation influences sustainability of  
energy systems?**

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## Presentation covers:

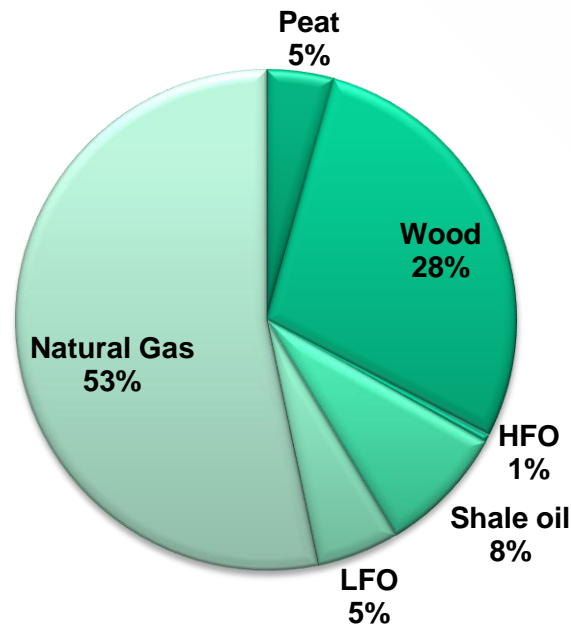
1. Audit on Sustainability of the District Heating (DH) Systems
2. Auditing energy price regulation



## Production of heat in Estonia in 2009

- Production of heat - 9,1 TWh
- 6,9 TWh of heat was delivered to consumers via district heating (DH) systems

### Fuels used in boilers in 2009



# Problems related with district heating systems

- DH systems exist in almost every city, town and districts of Estonia.
- DH-systems were mainly established during 1965-1990
- From 1990 to 2000 there were not enough investments made to the DH-systems, therefore quite a lot of them are worn-out.
- DH networks cause a huge loss of energy. The average loss is approximately 20%; in many cases over 25% and in severe cases it reaches up to 80%.
- Some DH systems will never be viable nor sustainable, because they have not enough consumers, networks are too long and cause loss. This increases prices for consumers. But in most cases they are still in use.

# Audit about sustainability of district heating systems

## Scope

- To analyse whether the district heating sector is sustainable:
  - systems are well maintained,
  - the DH- companies are self-sufficient,
  - produce less air pollution.

## Main questions:

- Do the legal acts create a framework that allows district heating sector to develop in a sustainable way?
- **Does the price regulation process assure the competitiveness and sustainability of DH-companies?**
- Does the state have a vision and measures for the development of DH-sector?

# Energy price regulation

- Due to the monopolistic nature of the DH market, almost the only way to protect heat consumers from the high prices and inefficiency is to regulate the price of heat (setting tariffs).
- The price regulation process has to protect consumers via controlling the expenses and the margin of profit of the company.

At the same time the price should allow the company to invest and maintain the energy systems in sustainable way.

# Heat price regulators in Estonia

Competition  
Agency

Companies with  
production over  
50 000  
MWh/year

**All DH-  
companies  
from November  
2010**

Local  
Municipalities

Companies with  
production  
below 50 000  
MWh/year until  
November 2010

## Sources for audit criteria

- 1) **Tariff Setting Guidelines, A Reduced Discretion Approach for Regulators of Water and Sanitation Services, World Bank, 2009**

<http://www.ppiaf.org/ppiaf/sites/ppiaf.org/files/publication/WP8-Tariff%20Setting%20Guidelines%20-%20CShugart%20IAlexander.pdf>

- 2) ***R. Green, M.R. Pardina “Resetting Price Controls for Privatized Utilities”, Manual for Regulators, World bank 1999***
- 3) **Estonian District Heating Act**



# Criteria

- Tariff setting has to be independent, handle all parties equally, assure consumers that the price is correct and fair. For that purpose the tariff setting has to follow clear guidelines, which are published.
- If changes are needed in the guidelines, the need has to be explained to the companies before they are applied.
- Regulation methods have to be precise and unambiguous.
- To gain and preserve the efficiency of energy systems, the set price must include necessary investments and expenses to meet the environmental, safety and quality requirements.

# Audit methodology

## We analyzed:

- 1) Documents, that describe the price regulation process in local municipalities and in Competition Agency in general;
- 2) Price regulation proceeding documents of 17 companies.
  - Applications for tariff setting
  - Correspondence between company and regulator
  - Decisions for tariff setting
- 3) Economic indicators of DH companies (How have they been managed?  
How big are their profits?)

# Preliminary results and recommendations

Audit will be published in November 2010

**Thank you!**

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