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Energy Efficiency in District Heating in Latvia

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Headline EE targets for 2020 - EU vs. LV

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- EUROPE 2020 - A strategy for smart, sustainable and inclusive growth:
  - National Reform Programe of Latvia for the implementation of the “Europe 2020”strategy;
  - Energy Strategy 2030;
- Energy Service Directive:
  - Energy Efficiency Action plan - energy savings of 0.668 Mtoe in consumption of primary energy resources;
- Renewable Energy Directive:
  - 40% share of RES energy in total final energy consumption by 2020 (in comparison to 32,6% in 2005; 2013 - 37,1%);
  - 10 % share of biofuels by 2020 (in comparison to less than 2 % in 2006, 2013 – 3,1%)

Energy Strategy 2030- Projection of Primary energy consumption till 2030

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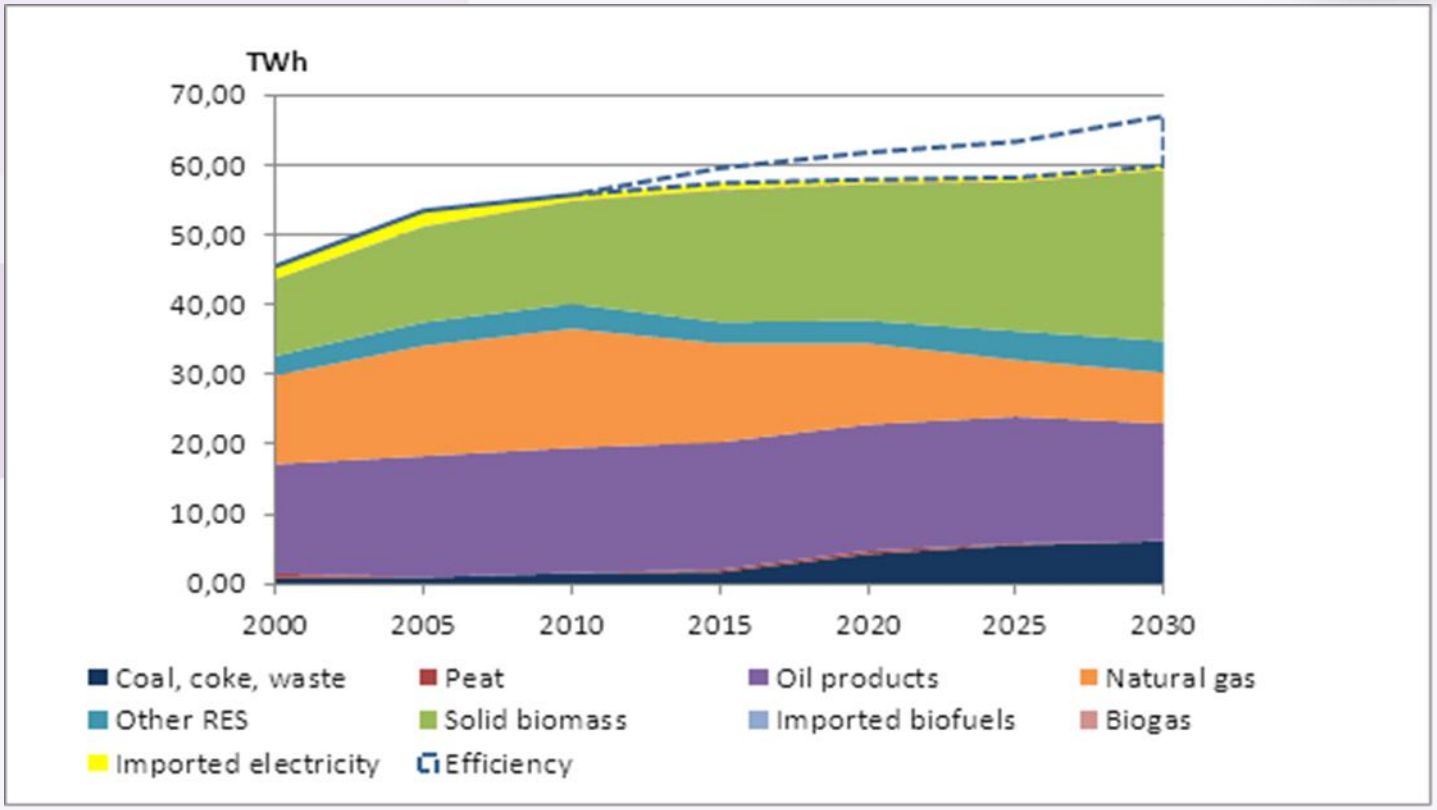

Energy Strategy 2030- DH

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- To promote energy efficiency in DH by:
  - *defining more rigid requirements for DH in respect of the reduction of heat loss in networks* - benchmark for 2030 - 10% (now – 17%);
  - *stimulating the connection of new consumers to efficient DH systems.*

- To promote renewable energy sources in DH by:
  - securing direct high intensity support in the district heat supply systems for transfer to RES;
  - to provide support for the development of RES within the scope of the national scale energy financial mechanism, especially in research and development (R&D) projects.

DH sector in Latvia :

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- In 2014 the thermal energy for DH was produced by 631 boiler houses and 175 CHP plants that produced 7.51 TWh of thermal energy
- The total length of heating pipelines is ~2000 km and
  676 km out of those are in Riga;
- In the recent years in Riga DH heat losses reduces to 13%, while in other DH systems the heat losses can reach even 30%;
- Most of DH systems have been built more than 25 years ago.
- Production of heat energy in DH: 62,9% - CHP; 37,1% - BH
- Main heat energy consumption sectors in DH:71,1% - households, 2,2% - industry; 26,7% - other consumers

Main challenges to achieve the energy efficiency in DH

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- Reduction of heating bills for consumers by ensuring energy efficient district heating;
- High potential for energy performance contracting and diversified energy services;
- Low energy efficiency in the final energy consumption and insufficient participation of society in energy efficiency improvement measures;
- Obtaining of the significant for the national economy energy efficiency potential in the district heating.
- First assessment of potential of district heating required by Article14 of Directive 2012/27/EU in process

Financing of EE in DH and results

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- Programming period 2007-2013: ~ 84,4 mln EUR, 79 projects realized, 55 projects in process (grant component ~50%)
- Planned results: renovation of 302,51 MW of heat capacity and 149,72 km of DH networks

- Programming period 2014-2020: ~ 53,2 mln EUR
- Planned results: renovation of 70 MW of heat capacity and 70 km of DH networks (49 000MWh/year savings)

There is no calculations of energy savings in DH!

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- According to the requirements of former directive 2006/32/EC DH is not a final energy consumer but transformation sector.
- According to the regulations DH companies are not obliged to report energy savings to ministry but only renovated capacity and lengh of renovated DH network.
- DH are obliged to provide statistical information to Statistical bureau on yearly bases.
- According the Freedom of Information Law if there is only one or two DH companies in the city or village information regarding heat production in DH network is confidential and information is awailable only for region.

Further steps

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- New regulations for Programming period 2014-2020 including renovation of DH with the requirement to report on projected energy savings, not only on technical issues
- The assesment of the pontential for the application of high-efficiency cogeneration and efficient district heating are in process
- Energy savings catalog: https://www.em.gov.lv/lv/nozares_politika/energoefektivitate_un_siltumapgade/energoefektivitate/energijas_ietaupijumu_katalogs/
- Elaboration of additional methodologies for calculation of energy savings for different energy saving measures in process

Thank you for your attention

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