HERON project national workshop: Enhancing energy efficiency scenarios in Estonia

23.03.2017, Tallinn

Summary

Stockholm Environment Institute Tallinn Centre (SEI Tallinn), a partner organization to the HERON project "Forward-looking socio-economic research on energy efficiency in EU countries" organized a national workshop on energy efficiency scenarios in buildings and transport sector for Estonia until 2030.

The national workshop took place on 23 March 2017 in Hotel L'Ermitage conference hall in Tallinn and brought together 14 experts from state, regional and municipal level experts on energy, transport and housing.

The core objectives of HERON project are:

1. To identify the policies and barriers to the energy efficiency and GHG reduction targets by 2030 in buildings and transport sectors.
2. To conduct a survey among national experts from the project partner countries on main barriers and policy measures in buildings and transport sectors.
3. To model energy efficiency and GHG reduction scenarios in LEAP software.
4. To identify the best policy measures to reflect the end-user behavior by integrating economic, social, educational, institutional and cultural factors into LEAP scenarios via application of Decision Support Tool (DST).
5. To propose appropriate policy measures to achieve the energy efficiency and GHG reduction targets by 2030 in buildings and transport sectors with the help of DST.

The workshop was started off by the presentation by Mr Madis Laaniste, the Head of Strategic Planning of the Ministry of Economic Affairs and Communications. Mr Laaniste gave an overview of the governmental policy and measures in energy policy, in buildings and transport sector, in particular. Kaja Peterson (SEI Tallinn) introduced the objectives and management of the Heron project. Tiit Kallaste (SEI Tallinn) introduced the results of the survey on energy efficiency barriers conducted among stakeholders in the project partner countries, including Estonia. Many of the respondents to the survey were also participating in the workshop, thus the final results of the survey and the comparative results from other countries were of interest to the participants.
Thereafter, Kerli Kirsimaa and Mari Jüssi (both SEI Tallinn) presented the energy efficiency and GHG reduction scenarios developed with LEAP software and the policy measures to overcome the barriers with DST software. The main measures considered

under the Estonian buildings (K. Kirsimaa) and transport sector (M. Jüssi) BAU (business-as-usual) and EE (energy efficiency) scenarios were as follows:

1)Buildings (BAU/already existing regulations and taken policies)	***1) Transportation (BAU/already existing regulations and taken policies)***
Minimum Energy Performance of Buildings for all the new buildings to be built between 2015-2020 (State Gazette, 03.06.2015, No 55)	Reconstruction of railway network and renewal of passenger train fleet, increasing the frequency of rail service
2010/31/EU Directive according to what all the new residential buildings to be built between 2021-2030 must comply with the nearly zero-energy performance requirements	Electric vehicle support scheme and quick charging network
	Reconstruction of tram lines and renewal of tram fleet in Tallinn
	Increasing fuel excise duty 2016-2018
	Supporting the production and take up of bio-methane in transport
	Energy labelling of new cars (2016)
2)Buildings (additional measures for the EE scenario per sub-scenario)	***2)Transportation (additional measures for the EE scenario per sub-scenario)***
Building shell improvement: 40% increase of the total single-family buildings floor area by 2030 and 58% increase of the total multi-family buildings floor area by 2030.	**Fuel efficient vehicles:** Hybrid Petrol share 2.5 times higher than in BAU Plugin Hybrid – 2.5 times higher share than in BAU Petrol, Diesel, CNG, Ethanol, Biodiesel Ideal Share will reach 40% by 2030 vs 20% in BAU Trucks – share of Hybrid and Electric 2 times higher by 2030
Efficient lighting: In Estonia the entire electricity usage in lighting should decrease about 2.5 times by 2030. 161.6 kWh/dwelling per year by 2030 (409 kWh/dwelling in BAU scenario). Assumption based on McKinsey& Company in 2011 „Lighting the way: Perspectives on the global lighting market“.	**Eco-driving:** 2.5% better fuel efficiency for petrol and diesel cars, 2.5% for diesel, CNG trucks and buses (Parameter changed under VKM intensity)
Efficient appliances: Electricity spent on the household appliances should be decreased 1.3% per year. 765.7 kWh/dwelling per year by 2030 (1026 kWh/dwelling in BAU scenario). Assumption based on Odyssee-Mure (2015) “Energy Efficiency Trends and Policies in the EU	**Urban Planning:** 5% lower transport demand compared to BAU: 1.11% growth rate Car load factor unchanged from BAU Rail share increases from 3% to 5% Bus remains 20% Freight demand change reduced by 2%
	Passenger Transport Modal Shift: Reallocation of space on major urban streets (reduces 10% car use in urban areas, assumed – 33% traffic evaporation, 33% shift to cycling-walking, 33% shift to PT) Investment into Cycling and Pedestrian Infrastructure – 1% less car use, shifted to walking and cycling Increased Public transport service (rail and bus): 20% increased rail and bus service; 6% less car mileage Parking management in urban areas: -12% of less car use in major urban areas 33% traffic evaporation, 33% shift to cycling-walking, 33% shift to PT Mobility Management: 1.9% less car mileage, 80% shift to PT, 20% walking and cycling All measures combined: Passenger transport demand growth rate: 0.8% compared to BAU 1.17%.
	Freight demand management: Includes introduction of distance-based HGV charging system in Estonia - 3% less ton-km 2020 onwards Share of rail does not drop 2020 onwards and remains 31%

Summary of the Roundtable Discussion:

A roundtable discussion was organized with an expert panel with Ms Pille Arjakas (Tallinn municipal energy agency), Mr Madis Laaniste (Strategy director of the Ministry of Economic Affairs and Communication), Prof Targo Kalamees (Tallinn University of Technology) and Mr Marek Muiste (Regional Energy Agency of Tartu county). The panel was moderated by Kaja Peterson (SEI Tallinn). The panel was asked to reflect on the results of the energy efficiency scenarios for Estonia. It was discussed whether the implementation of those scenarios is feasible and whether the proposed policy instruments would help Estonia to achieve its EU 2030 energy efficiency targets in buildings and transport sector.

The following two main questions were raised:

1. **Is it realistic for Estonia to renovate 40 % of residential houses and 50% of apartment buildings by 2030, as proposed by the energy efficiency scenario created by the HERON project? Which concrete policy measures should be implemented in order to achieve this?**
2. **Which policy measures are the most effective ones for obtaining the EU 2030 energy efficiency and GHG reduction targets in the transport sector?**

The general opinion of the panelists was that the proposed actions to achieve those targets are rather demanding. Regarding the housing sector, the conclusion of the panelists was that most realistically, by 2030 Estonia would perhaps achieve 20-30% of the proposed renovation rate, largely due to insufficient governmental financial support to housing societies and shortage of skilled engineering companies to work with the housing societies to apply for the funds and credit and manage the projects. It was argued that this could be changed through bigger and long-term government funding. It was also proposed that more positive examples of completed renovation projects with concrete outcome of reduced energy bills would also trigger interest by housing societies to apply for support funds. The representatives of regional and municipal energy agencies reported of good results in working with housing societies if a local person whom the society members trust become the spokesman of the project. Such an approach would possibly work better in Russian-speaking communities in the city of Tallinn and in the city of Narva.

Regarding the transport sector, the experts argued that the EU 2030 goal could be achieved through giving more power and responsibility to local governments on investing into cycling roads and public transport. And also integrating different modes of transport (rail, tram, bus and cycling) into an efficient system. All in all, it was concluded that both the government and municipalities still need to come up with specific measures to develop and promote sustainable public transport and non-motorized traffic. However, it was argued that the government should take the lead.

The HERON is a Horizon 2020 project coordinated by The Energy Policy and Development Centre KEPA (Athens, Greece). It is a 2.5-year project which involves seven partners from Bulgaria, Estonia, Germany, Greece, Italy, Serbia and United Kingdom. The project partner in Estonia is Stockholm Environment Institute Tallinn Centre. The project homepage is: http://www.heron-project.eu/

Appendix 1. The agenda of HERON national workshop

Scenarios to improve the energy efficiency in Estonia

Thursday, March 23, 2017

AGENDA

09:30	Registration and coffee	
10.00:10.15	The objectives of the energy efficiency and relevant policies in Estonia	Madis Laaniste, Head of Strategic Planning, Ministry of Economic Affairs and Communication
10.15:10.30	Introduction to Horizon2020 HERON project	Kaja Peterson, SEI Tallinn
10.30:11.00	What are the factors and policies that affect the energy efficiency? An overview of the HERON surveys. Questions-Answers.	Tiit Kallaste, SEI Tallinn
11.00:11.30	Are the energy efficiency targets of the 2030 achievable? An overview of the buildings sector in Estonia, including DST. Questions-Answers.	Kerli Kirsimaa, SEI Tallinn
11.30:12.00	Are the energy efficiency targets of the 2030 achievable? An overview of the transport sector in Estonia, including DST. Questions-Answers.	Mari Jüssi, SEI Tallinn
12.00:12.45	**Roundtable discussion:** *Are the HERON scenarios realistic and their implementation achievable? Would the EU 2030 energy efficiency targets of buildings and transport sector of Estonia achieved?*	Kaja Peterson (moderator) Panelists: Pille Arjakas, Madis Laaniste, Targo Kalamees and Marek Muiste
12.45:13.00	**Closing the seminar: An invitation to HERON project final seminar in Milan, Italy, Sept 28, 2017**	Kaja Peterson, SEI Tallinn

Appendix 2. List of participants

	Name	**Organization**
1.	Kaja Peterson	SEI Tallinn
2.	Katrina Ueni	SEI Tallinn
3.	Kerli Kirsimaa	SEI Tallinn
4.	Laura Remmelgas	Baltic Environment Forum
5.	Madis Laaniste	Ministry of Economic Affairs and Communication
6.	Marek Muiste	Tartu Regional Energy Agency
7.	Mari Jüssi	SEI Tallinn
8.	Pille Arjakas	Energy Agency of Tallinn city
9.	Sandra Oisalu	Baltic Environment Forum
10.	Targo Kalamees	Tallinn University of Technology
11.	Tiit Kallaste	SEI Tallinn
12.	Triin Reinsalu	Kredex (state financing agency)
13.	Ülo Kask	Tartu Regional Energy Agency
14.	Helen Saarniit	SEI Tallinn, communications