

# Regional visions for sustainable energy future

## Synthesis report on CEESEN regions

South Bohemian Region (CZ)  
Borsod-Abaúj-Zemplén  
and Heves counties (HU)  
Ignalina Nuclear Power Plant region (LT)  
Vidzemes Planning Region (LV)  
North-East Planning Region (MK)  
Mazovian Voivodeship (PL)  
Bucharest-Ilfov region (RO)  
Podravje Region (SI)  
Northern Bulgaria (BG)  
Estonia (EE)

English version

PANEL 2050 – Partnership for New Energy Leadership 2050

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CENTRAL EASTERN EUROPEAN  
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# Introduction

## About PANEL 2050 project and CEESEN

The PANEL 2050 project has the aim to create durable and replicable sustainable energy networks at local (municipality/community) level, where relevant local stakeholders collaborate for the creation of a local energy visions, strategies and action plans. The aim of these networks is to contribute to and actively work for the transition towards low carbon communities in 2050.

The PANEL 2050 partnership will provide support for the creation of first successful local energy networks in the CEE countries. In the course of the project, organisations from 10 CEE countries will collaborate on creating regional energy strategies and action plans.

## Energy Visions

Eastern European countries have been in constant transition process for the last three decades. We have experienced a rapid development in most aspects of our lives. This process has been influenced by the global economic forces and our own expectations for what we understand as 'a good life'. Only recently have we learned that many elements of that desired future can have profound negative effect to our quality of life. Main challenge for CEE countries in 21st century is to learn to live this good life without jeopardizing the richness of our natural environment and the wellbeing of our communities.

Creating a Vision is the first formal step towards energy transition. Vision helps to describe the desired outcome and spell out the desire to change. Visioning process, if done right, will help to build acceptance and support among the community for a change to happen. Vision will help to mobilize the people and investments to push the community to the right direction. Local Energy Vision is the first milestone of Roadmapping process in PANEL 2050 project.

PANEL partners working with their regional roadmap teams work towards developing long term energy visions. Key to the visioning process is obtaining feedback and input from as wide a range of primary, secondary and tertiary stakeholders as possible.

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## Vision statements by 2050 for CEESEN regions



### **Czech Republic**, South Bohemian region

By 2050 South Bohemia will exploit its natural and economical preconditions to become a centre for technology and knowledge in the sector of self-sufficient buildings, biogas utilization and advanced knowledge base for financial instruments focused on Energy Efficiency and Renewable Energy Sources investments.

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### **Hungary**, Borsod-Abaúj-Zemplén and Heves counties

In 2050, the population of Borsod-Abaúj-Zemplén and Heves counties will be healthy and climate aware, consume energy in an efficient way from locally available renewable energy sources, emit 70% less CO<sub>2</sub> than in 1990, and its economy will be based on innovative, green technologies.

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### **Lithuania**, Ignalina Nuclear Power Plant region

In the total final energy consumption renewable energy resources shall increase up to 30 % till 2020, up to 40 % till 2030, and up to 80 % till 2050; By 2030 the primary and final energy intensity shall be 1.5 times lower than in 2017, and by 2050 shall be about 2.4 times lower than in 2017.

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### **Latvia**, Vidzeme planning region

In 2050, Vidzeme planning Region is the region of smart solutions and climate aware population. Based on ICT and smart technologies & networks the Region effectively utilizes all kinds of available renewable energy resources (RES) and widely implement energy efficiency (EE) measures. The economy of the region is based on circular

economy principles and ensures competitive development and increased well-being alongside with minimal CO<sub>2</sub> emissions. The region in 2050 emit around 70% less CO<sub>2</sub> than in 2015, the emissions reduction is reached in all sectors of region economy. Regional and local governments implement highly competent governance aimed at sustainable use of natural capital and responding/adapting to climate change.

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#### **Macedonia**, North-East Planning region

In the 2050 the NorthEast Planning Region is recognised as a Green Region, with energy-efficient innovative businesses and households, and developed sustainable tourism and organic farming.

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#### **Poland**, Mazovian Voivodeship

In 2050 Mazovia is the region of Poland with 50% reduction of the emission of energy economy (measured by CO<sub>2</sub> emissions) in comparison to 1990.

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#### **Romania**, Bucharest-Ilfov region

In 2050, Bucharest-Ilfov will be the first energy-efficient region of Romania, a region that exploits sustainably the locally available renewable energy sources, using the region's solar potential and the development of intelligent energy distribution networks.

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#### **Slovenia**, Podravje region

In 2050, Podravje will be a Smart region that exploits in a maximum and sustainable way the local available renewable energy sources, transforming the energy using innovative technology and distributing it through active networks. People in Podravje region will live in a clean and healthy environment.

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#### **Bulgaria**, Northern Bulgaria

In 2050, Northern Bulgaria will have a modern and developed low-carbon economy. The energy and electricity production from renewable energy sources will reach a minimum of 85% from the overall share of consumed energy and fuels. The region will implement a concrete plan with a set deadline for a transition to a 100% clean and future oriented zero carbon energy system, and so providing regional and national security and independence while ensuring environmental protection, and also contributing to the realization of the UN Sustainable Development, the Paris agreement and other strategic initiatives and processes in these areas.

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#### **Estonia**, whole country

The main goal for 2050 is to produce at least 80% of heat and at least 50% of electricity from renewable energy sources. This will be achieved by promoting higher renewable energy production that will be supported by the improvement of energy efficiency throughout all sectors.

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## Summary

The presented vision statements all refer to a development paths with a time horizon until 2050. The visions take into consideration already existing targets (national or EU-wide), e.g. for 2020 and 2030 – if possible, broken down to regional level). All visions contribute to the national and EU-wide climate change mitigation strategies and targets. In the formulation coherency of the vision with other policy documents was observed, e.g. economic and regional development, employment strategy, agriculture policy, etc. Consistent with the project objective the vision described the regional interpretation and contribution towards a low-carbon economy.

An analysis of the vision documents showed that the focus regions approach the path towards a low-carbon economy in different ways. The chosen development targets and paths strongly depended on the regional characterises. Both institutional framework conditions as well as geographical/resource-wise characteristics influenced the direction of the stated targets.

The 10 visions presented here focus each on specific region. Most visions (8 out of 10) directly mentioned the needed increase of the renewable energy share as essential component to reach the low-carbon economy. 6 of these regions also claimed increased energy efficiency as complementary condition. The role of innovative technologies and in particular the use and development support for smart energy production and consumption technologies was emphasized.

A couple of regions pledged to become forerunners in their countries and EU-wide, e.g. the region of South Bohemia (CZ) through setting the cornerstones for establishing off-grid buildings as building standard in South Bohemia, Bucharest-Ilfov region aiming to become the first energy efficient region of Romania, or the Podravje region (SI) becoming a forerunner in terms of smart energy systems.

Specific barriers were identified which are at the moment hindering the development towards a low-carbon economy and need to be addressed in order to reach the vision. A significant barrier for the realisation of the vision is the low availability of domestic expertise and consultancy services both for public and private sector. PANEL2050 already started to address this barrier through focused regional training during the project duration. Trainings and knowledge transfer will also play an important role in the future to realise the vision.

Moreover, there is a lack of awareness in the general population about climate change mitigation and the influence of the energy sector or individual energy consumption on GHG emissions.

Partners from the focus regions together with their stakeholders identified a certain lack of political will to support and implement a transition to a low carbon economy through legislation changes or strict and binding policy targets. At least 5 of the focus regions are encountering this problem. This includes also bureaucracy for approval of RES facilities, inconsistencies between policy strategies (e.g. environmental and economic development) and a strong commitment to conventional and centralised energy systems.

The visions were developed with strong involvement of different stakeholder groups. In almost all cases local municipalities were involved in the determination and formulation of the vision statement. In some cases, e.g. MK, also regional government

representatives were included to ensure the endorsement of the vision. Strong partners in the development process were experts from the energy sector as well as representatives of interest groups and NGOs. Where the private sector plays an important role for the implementation of the vision, e.g. in South Bohemia (CZ), Vidzemes region (LV) and Mazovian Voivodeship (PL), representatives of local businesses, including technology providers were included as well.

In conclusion, most of the vision documents already give a good indication, where the following Roadmap and Action Plans will lead. A few documents are still undetermined about the development scenario, which will lead to reaching the vision. There will be a special focus on that aspect during the preparation of the Roadmap and where needed too ambitious statements might need to be adapted. In general, the realisation of the set vision until 2050 is assessed as doable, provided the continuous support and commitment of policy makers and CEESEN members alike. For this reason, the endorsement of the following Roadmaps and Action Plans by implementing parties is key for the roadmapping teams.



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