

# ENERGY VISION

Region: Borsod-Abaúj-Zemplén and Heves counties  
English version

prepared by  
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PANEL 2050 – Partnership for New Energy Leadership 2050  
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Vision Statement



CENTRAL EASTERN EUROPEAN  
SUSTAINABLE ENERGY NETWORK

**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.**

## Vision Description

The two counties published their 2030 climate strategy (with outlook to 2050) in 2017-2018. The calculated current GHG emission is 5 614 thousand CO<sub>2</sub> equivalent. Contrary to the Regional Energy Profile (REP), the calculation also includes the GHG emissions from waste management, however, this value is 5% lower than the amount calculated in the REP, which is 5 898 thousand CO<sub>2</sub> equivalent. The applied methodology of the county-specific climate strategies is not known, however, this 5% difference between the two GHG inventories is not an influencing factor regarding long-term GHG emission reduction efforts and targets.

Mainly due to the collapse of the heavy industry by the end of the Soviet era, the current GHG emission is 40% less than it was in 1990. The level of emission from 1992 until 2008 has stagnated (at around 60 million t CO<sub>2</sub> equivalent/year), after which it has decreased significantly due to the economic crisis. However, in the last years it increased again to the current level of 54,2 million t CO<sub>2</sub> equivalent/year (data from 2015). Because of this hectic trend, it is difficult to set up a BAU scenario on local level. Also, the energy consumption is closely linked to CO<sub>2</sub> therefore not suitable to be the basis of a BAU scenario. According to the [EU Reference Scenario](#), the CO<sub>2</sub> emission can be reduced by 60% from the current level (by around 50% compared to the 1990 level), only by assuming that the legally binding GHG and RES targets for 2020 will be achieved, and that the policies agreed at the EU and Member State level until December 2014 will be implemented.

**During the development of the energy vision, a 70% GHG emission reduction target compared to 1990 levels was defined.** CEE region is lagging behind in the energy transition compared to Western Europe: the national 2020 targets are among the lowest, and in the ongoing Clean Energy Package trilogue negotiation, usually it is the CEE countries that are against the reforms which are essentials to meet the aim of the Paris Agreement. Also, as the REP pointed out, the CO<sub>2</sub> emission per capita (6.15 t/cap/year) is significantly higher than the country average (5.52 t/cap/year). Therefore even to reach the reduction trend of the EU-level BAU scenario, huge efforts are needed from local stakeholders. Fortunately REP showed that the unused renewable energy potential is significant in the region, and also the higher CO<sub>2</sub> emission per capita can be reduced with the enhancement of the ongoing energy efficiency measures.

## Addressed barriers

The energy transition cannot happen overnight, and to reach the energy vision, ideal supportive and consistent circumstances are needed on the long term. To create this supportive environment, the first step is to identify what are the factors which endanger the energy vision. The most significant local level barrier raised by most local stakeholders was the **economic backwardness and its consequences: lack of public awareness, bad energy consumption behaviours and the lack of professionals**. The most frequently mentioned barrier on the national level was the **government's excessive commitment to the traditional centralized energy system** and its consequences: insufficient financial support scheme for the renewable energy, corruption and the insufficient regulatory environment. Interestingly, the high price of the renewable energy technology was only mentioned by one stakeholder.

## Contribution to national and regional targets

Since there is no long term regional or national renewable energy or energy efficiency/saving target, the vision specific target was determined in GHG saving, which is comparable with the regional and national goals.

## Contribution to climate change mitigation

The revised National Climate Strategy (which was not approved by the parliament yet) sets a 52-77% GHG reduction target by 2050 compared to the 1990 level (Hungary already reached -40% reduction), the two county-level climate strategy (only available in Hungarian) sets a 60% goal, respectively. Comparing to those, the 70% reduction goal set by the stakeholders is ambitious, however, the current EU target is 80-95%.

## Required data for scenario development

Renewable energy technologies and the other elements of the future smart grid (smart meters, energy storage, etc.) are among the fastest growing technologies. The steep learning curves of these technologies support the reach of the energy vision. However, because of the fast development, it is extremely difficult to make an educated assumption regarding the learning curve of these technologies.

Support scheme could provide stable support environment, however, it is only true in a limited extent in Hungary<sup>1</sup>.

## Involvement of stakeholders

The involvement of the stakeholders into the development of the energy vision was ensured in two ways. In one hand, meetings were held with municipalities where the main objective was the outreach to additional CEESEN members, and the energy vision perspectives were also discussed. On the other hand, questionnaire regarding the vision statement, the GHG reduction target, and the barriers were circulated among the current 62 Hungarian CEESEN members. This applied method could successfully replace the physical workshop which would have been difficult for the most active stakeholders to attend due to the relatively large geographical area and the difficulties with finding suitable time. The following members provided input to the vision development process:

- Municipalities: Kazincbarcika, Teresztenye, Parád
- MIKROVIRKA (Bükk-Leader Association)
- Borsod-Torna-Gömör Leader Association
- Miskolc Holding Zrt.
- Zemplén Country Development Association
- Environmental Planning and Education Network
- Zemplén Regional Enterprise Agency
- Tisza-Tarna- Rima-Mente Association
- Tree of Life Organization

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<sup>1</sup>For instance the Hungarian government, through the government decree No 81/2018 (IV.20) has unexpectedly terminates the feed in tariff for PV projects ranging from 50 to 500 kW.