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Newsletter No. 3



## New Energy Solutions in Carpathian Area



PARTNERSHIP WITHOUT BORDERS

### ENERGY LABORATORY FOR COMMUNITIES

University of Nyíregyháza, Hungary  
Szabolcs-Szatmár-Bereg County

The Energy Laboratory for Communities (ELC) was established at the University of Nyíregyháza, which is the result of the implementation of the cross-border project New Energy Solutions in the Carpathian Area - NESICA. The Energy Laboratory for Communities of Szabolcs-Szatmár-Bereg county carries out its activity within the Institute of Engineering and Agriculture in University of Nyíregyháza. The main goal of the laboratory is to promote energy efficiency and energy awareness and help in designing of renewable energy sources for the communities of the county, mainly through education and R&D activities. The laboratory will help communities in the county to plan for the use of renewable energy sources and determine the energy consumption and energy losses of existing buildings. The experts of ELC will provide

design and consultancy services to the representatives of the communities of Szabolcs-Szatmár-Bereg county regarding the implementation of renewable energy sources and best practices. The energy laboratory is equipped with modern specialized equipment for the fulfillment of its main goals.



**Building C at the University of Nyíregyháza, where the laboratory is located**

The project included the purchase of 2 meteorological measuring stations. These measuring stations will support further research work on renewable energies. The two monitoring stations are located at two different sites: one on the campus of the University and the other on the training farm 10 km from the University. The meteorological measuring stations measure and record the most important meteorological data, as well as wind direction, wind gusts, solar radiation and soil moisture. Additional specialised equipment is available in the laboratory: **FLUKE Ti32 IR Fusion Technology,**

### **VarioCam High Definition Thermal Camera.**



**One of the installed meteorological measuring stations**

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Data collected by the meteorological station are analysed. These analyses help for communities to plan investments in renewable energy. The data is also much more widely available, as the weather stations are networked and data from other stations can be retrieved.



Data provided by the meteorological stations of the laboratory

Thermal imaging cameras can be used to assess the energy condition of buildings and map where heat loss is occurring.



**FLUKE Ti32 IR Fusion Technology**



**VarioCam High Definition Thermal**

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