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They test and research to help entrepreneurs

Where to check the condition of your PV panels and what does a thermal phantom have to do with testing clothes? How to build to reduce greenhouse gas emissions and convince local communities to build wind farms? It was discussed on Thursday at the Kielce University of Technology by stakeholders of the BIOWIND and MonitorEE projects, as well as university researchers and representatives of the Office of the Marshal of the Świętokrzyskie Voivodeship – a partner of both international projects.

Thursday's 2nd Meeting of Regional Stakeholders and project partners: BIOWIND and MonitorEE was opened by **Anna Kucharczyk**, deputy director of the Department of Investment and Development.

A detailed offer of cooperation between science and business of the Science and Implementation Center of the Kielce University of Technology, implemented, among others, through consulting, expertise and access to advanced research equipment, presented by **Anna Depczyńska** from the Technology Transfer Center of the Kielce University of Technology.

– We are here to connect the world of science and business, not only by implementing the ordered research and development services, but also by helping to shorten the entire red tape process – said **Anna Depczyńska**, who gave examples of specific cooperation between PŚk (the Kielce University of Technology) and companies from all over Poland, e.g. when developing a concept of rolling bearings, stand-alone photovoltaic modules, or optimizing the structure through, among others, identification of destructive processes in materials using acoustic emission techniques.

How to renovate old buildings, build new ones and convince them to adopt the so-called windmills?

Tomasz Gałucha from the Investment and Development Department and **Magdalena Pokora**, manager at the Department of Nature and Climate discussed the main assumptions of MonitorEE and BIOWIND and summarised the good practices presented by the Paris

Climate Agency and those that had been developed in the country. During the meeting, as part of the MonitorEE project, the French partners presented the comprehensive activities they used to modernise a building from the 1960s: including: installation of monitoring of the heating system – Efficap, controlling the boiler, sunlight, the state of non-use of heating and insulation of the heating and hot water installation, modernization of the roof and installation of solar panels. In turn, when building a new housing estate, the investors in Paris levelled population density and installed geothermal and solar energy units.

Magdalena Pokora from the Department of Nature and Climate recommended good practices developed in Poland on the example of wind farms in the communes of Pawłów and Bogoria and Choczewo and in the Lublin Voivodeship, implemented by Trade OFF. Investors placed emphasis on cooperation and talks with local associations and on co-financing the investments most expected by residents, e.g. school renovation.

Thermal mannequin and photovoltaic panel simulator

The meeting was combined with a study visit to facilities using renewable energy sources at the Kielce University of Technology. Employees of the CENWIS Building Physics, Solar and Water Energy Laboratory presented a thermal phantom used for comprehensive analysis and testing of clothing, “always ready for work” at temperatures from -20°C to 50°C. Thanks to this state-of-the-art tester, you can objectively measure the thermal insulation of clothing. To take a step towards energy transformation and shorten the process of getting from product to production or, for example, to check for damage on photovoltaic panels, you can order tests in the field of obtaining energy through radiation absorbers and assessing the efficiency of photovoltaic modules and cells.

Their research offer was also presented by: dr hab. engineer Jolanta Latosińska from the Solid Biomass and Biogas Energy Laboratory and dr hab. engineer Artur Bartosik from the Industrial Laboratory of Low-Emission and Renewable Energy Sources at the Kielce University of Technology.

About MonitorEE

The main goal of the project called *Improving energy efficiency through smarter management systems* is the development by MonitorEE Partners in their regions of a way to monitor the energy efficiency of buildings after modernisation. Simply replacing energy sources with renewable ones does not produce the expected results. Buildings in Europe are responsible for 40% of energy consumption and 36% of greenhouse gas emissions. Less than 0.2% (annually) of buildings undergo renovations that reduce energy consumption by

at least 60%. The *Renovation Wave Strategy* developed by the European Commission as part of the European Green Deal provides an action plan with various measures to accelerate the renovation of buildings. Its main goal is to double the annual rate of energy renovation of buildings by 2030. Thanks to the roadmap that will be created as part of the MonitorEE project, the government will be able to more effectively monitor and intervene in the construction process to reduce greenhouse gas emissions by 80%. The MonitorEE project, of the INTERREG EUROPE 2021-2027 programme, is co-financed by the European Union under the European Regional Development Fund (Specific objective: 2.1 Promoting energy efficiency solutions).

About BIOWIND

The aim of the BIOWIND project is to increase social acceptance of wind energy in EU regions through environmental and social planning. Wind energy is the technology most expected to contribute to achieving the EU's renewable energy target, enabling EU regions to meet the climate targets set out in the Green Deal. The BIOWIND project will enable partners to address two main factors hindering the uptake of wind energy:

1. opposition from local communities and
2. complicated permitting procedures resulting from concerns about biodiversity and impact on social relations.

The goals are:

- unlocking over EUR 30 million to support projects relating to wind farms, energy cooperatives, biodiversity protection and community support structures,
- greater awareness and consensus building among civil society groups, environmental protection agencies, public administration and wind energy stakeholders in BIOWIND partner regions