

Main Highlights of the Project Renewable Energy Mapping for Rural Development (RenewMap)

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P2 - Greener and low-carbon border region

Specific Objective

2.1S. - Promoting energy efficiency and reducing greenhouse gas emissions

Empowering local public authorities, businesses, and homeowners across the Hungary-Croatia border region with precise energy intelligence. Potential of renewable energy sources and the possibilities of energy efficiency in buildings

24-Month Interreg HU-HR Supported Project (2026–2028)



Interactive Cross-Border Map

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Cross-Border Synergies (HU-HR)

Shared Strategic Objectives

-  **Awareness Campaigns:** Joint regional stakeholder events. (Workshop in Osijek)
-  **Knowledge Transfer:** Cross-border scientific publications.
-  **4 Key Settlements:** R&D activities centered in Osijek & Pécs, with targeted testing and investment prep in Erdut & Keszthely.

Partner Institutions

LEAD: ELTE Centre for Economic and Regional Studies (Institute for Regional Studies, Pécs - LP) &
FERIT Osijek (Faculty of Electrical Engineering, Computer Science and Information Technology).

Website: www.renewmap.eu

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Key Regional Planning Hurdles



Fragmented Data

Lack of localized, centralized data on available renewable capacities.



Legal Complexity

Navigating distinct Croatian and Hungarian regulatory frameworks.



Non-Expert Barriers

High complexity in calculating ROI for building renovations.

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CORE MANDATE

Measurable Impact Goals

2

Innovative IT Tools

GIS mapping platform and smart assessment app.

GHG

Emission Reduction

Accelerating local clean energy adoption.

85%

EU Co-Financing

Interreg VI-A Hungary-Croatia funding.

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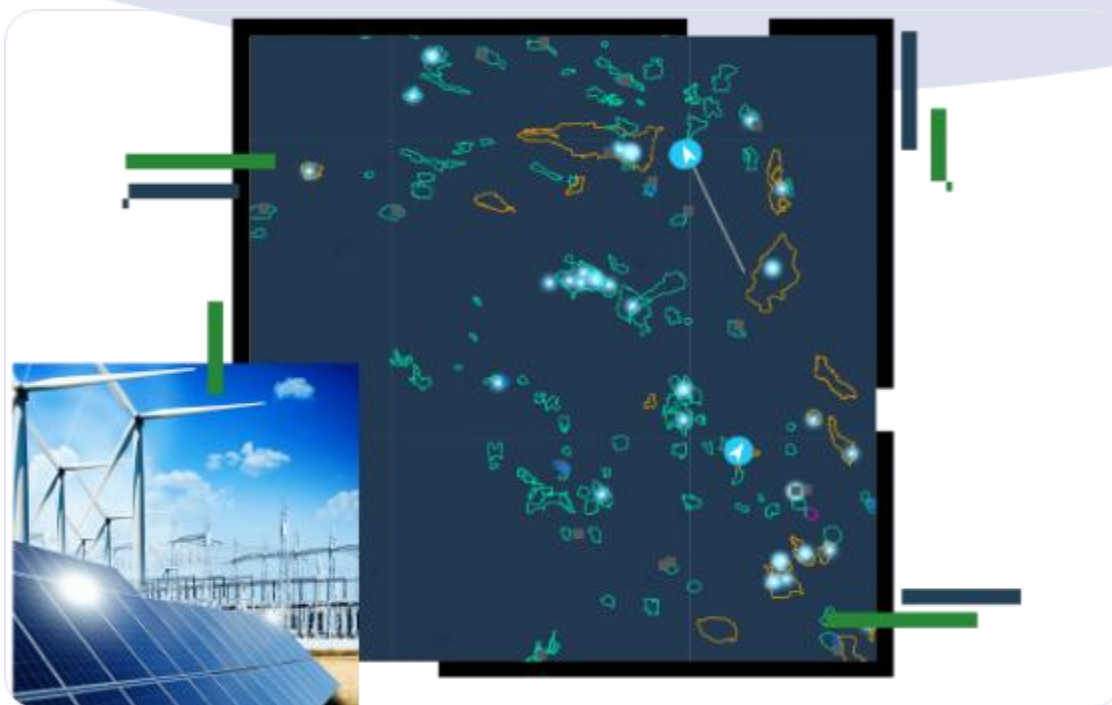


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INNOVATION PILLAR 01

Hungary – Croatia

RenewMap GIS Infrastructure



Searchable Resource Layers

Filterable visualization of solar, water, wind, geothermal, and biomass potential.



Multi-Scale Spatial Modeling

Accurate area-based calculations for regional and urban scales.



Installed vs. Potential Data

Direct comparison between active plants and unexploited resources.

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RenewMap GIS Infrastructure



Survey of the renewable resources

We survey the possible categories of renewable resources, identify suitable databases, and examine methods for their quantification.

We categorize them in light of the Croatian and Hungarian legal frameworks.



Modelling the potential for the eligible area

We model the potential for the eligible area. We develop calculation schemes for quantifying area-based renewable energy potential at different spatial scales.


Interactive Cross-Border Map

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RenewMap GIS Infrastructure



Develop the GIS-based mapping system

We display the data calculated from the modeling on a searchable and filterable map, enabling users to perform calculations for different renewable energy potentials.



Extension of the information on the calculated renewable potential

We use the calculated data from the potential map and integrate it into the decision-support App.



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Intelligent Decision-Support App (RenewM-App)



Investment Estimates

Market-calibrated capital requirement calculations.



Payback & ROI

Financial payback timeline projections.



Phased Roadmap

Priorities related to energy efficiency and renewable energy sources.

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APP WORKFLOW

Hungary – Croatia

User Input Profile Parameters



Building Type

Public, residential, or industrial classification.



Dimensions

Floor area and construction quality metrics.



Current State

Insulation baseline and current heating systems.



GIS Location

Solar, geothermal, and biomass micro-data.

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APP OUTPUTS

Hungary – Croatia

Actionable Financial & Energetic Audits



Capital Breakdown

Detailed cost calculations based on real-time market indices.



Payback Period Projections

Return on investment timelines factoring in energy savings.



Prioritized Renovation Sequencing

Logical steps: insulation upgrades before heat pump or PV sizing.

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Empowering Key Decision Makers



Public Authorities

Data for municipal energy strategies and public building retrofits.



Property Owners

Simple preliminary estimates without requiring technical expertise.



Regional Planners

Identification of unexploited cross-border renewable resources.

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Implementation Phases (2026 – 2028)

PHASE 01

Data Survey

Collecting regional energy and legal datasets.

PHASE 02

GIS Modeling

Quantifying spatial potential across borders.

PHASE 03

App Launch

Deploying the decision-support App tool.

PHASE 04

Adoption

Stakeholder training and knowledge transfer.

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WORK IN PROGRESS

Hungary – Croatia

What have we done so far?

Opening Conference and Stakeholder Workshops held in Osijek

24 April 2026 in Osijek, Croatia.



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Hungary – Croatia

What have we done so far?

Opening Conference and Stakeholder Workshop held in Osijek

Dr. Cecilia Mezei – RenewMap
HU-HR Project Summary



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What have we done so far?

Opening Conference and Stakeholder Workshop held in Osijek

Dr. Viktor Varju – Stakeholder Workshop –
Collection of Information for the RenewMap
tools



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Dr. Matej Žnidarec - Renewable Energy
Potential



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Hungary – Croatia

What have we done so far?

Opening Conference and Stakeholder Worksop held in Osijek

Dr. Hrvoje Glavaš - Energy efficiency in
buildings



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Hungary – Croatia

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Workshop – Dr. Viktor Varju



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Workshop - Ágnes Óvári



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Workshop – Dr. Cecilia Mezei



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What have we done so far?

Activities in progress

3 - Mapping Renewable Potential

- Collecting legislative data from Hungary and Croatia
- Comparison report of renewable energy legislation - joint report
- Comprehensive database with local information on renewable energy – joint report
- Questionnaire and interview templates
- Database of survey results (gender equality and thematic)
- Categorize renewable energy potential for various settlements within the eligible area

4 - Developing of a Complex Investment Supporting System

- Collect data from energy certificates, audits, and national legislation - joint report
- Categorize technical aspects of buildings for energy assessment - joint report
- Methodological description - joint report
- Background calculation tables for the online decision making system
- Decision-making matrix for energy investments (list of required data, potential investments etc.)

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