



Co-funded by
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Interreg Europe

Project idea title: GEO-POWERTY

Raising the level of energy independence of the European Union by researching the potential of geothermal energy as a renewable energy source

INTRODUCTION

In accordance with the European Parliament resolution of 18 January 2024 on geothermal energy (2023/2111(INI)), which determined the potential of geothermal energy and among others stresses the need to share best practices, technological know-how, results of research and innovation on geothermal technologies with partner countries and organisations that have already developed deep and surface geothermal energy on a larger scale or are in process of implementing ambitious plans to rapidly grow the geothermal energy sector, the Municipality of Mali Bukovec (Varaždin County, Republic of Croatia) as a Lead partner in the project that would deal with the potential of geothermal energy, is looking for partners in the project.

The exploration work on the "Lunjkovec-Kutnjak" geothermal field in the Municipality of Mali Bukovec was completed after two years of research in October 2023 and geothermal water of 142 °C was found in the geothermal reservoir at a depth of 2345m, which is enough to build a geothermal power plant that will produce electrical and thermal energy. According to the results of that research, the Municipality of Mali Bukovec must decide which is the optimal scenario of further investments into the exploitation phase, depending on the potential of electricity and thermal energy production on the surface. Therefore, we need project partners who, based on their experience, will provide examples of good practice or advice in which direction the municipality should develop. At the same time, some of the partners as a discovery partner will learn from all these examples in order to improve their policy instruments in the field of geothermal energy sector in their countries.

PROJECT OBJECTIVES

The goal of the mentioned Interreg Europe project is improving the implementation of regional development policies in the area of geothermal energy in partner countries, including Investment for jobs and growth goal programmes, which will be achieved by promoting the exchange of experiences, innovative approaches, dissemination and transfer of good (and bad) practices among partner countries.

In order to achieve the stated goal, a new Development Strategy for the Municipality of Mali Bukovec (the current version is from 2014) should be created in the part that refers to the exploitation of the potential of geothermal energy. and which strategy will affect the revision of the Development Plan of Varaždin County. It should be also aligned to the Development Plan of Geothermal Potential of the Republic of Croatia until 2030. This would further influence the Ministry of Economy and Sustainable Development of the Republic of Croatia to decide after the completion of this project whether the

Operational Program for Competitiveness and Cohesion 2021-2027 should be changed in the part concerning renewable energy sources in the period 2028-2034. Therefore, Varaždin County and the Ministry of Economy and Sustainable Development will participate in the project as Policy responsible authorities.

The new Development Strategy of the Municipality of Mali Bukovec will also be one of the results of the project. The strategy should elaborate and give guidelines in which area should the Municipality develop. Whether in the field of agriculture, tourism, industry or all of them in the next period of 7 to 10 years. Through pilot activity would be FEASIBILITY STUDY that should give an answer on this. The Feasibility Study should determine the possibilities of using geothermal water that exists in the area of Mali Bukovec.

The other partners in the project also should determine in their countries weaknesses of their policy instruments (strategies, regulations, laws) in the field of geothermal energy and its opportunities, and what will be the result of the project from their side.

TOPIC/ SUB-TOPIC

GREEN - Renewable energy

PROJECT ACTIVITIES

Through project it is also necessary to determine common activities and results that would be achieved at the end of the project implementation, such as:

- Study of the regional context of the potential of geothermal energy
- Analysis of the energy potential of geothermal energy in general and/or in relation to other renewable energy sources,
- Analysis of regional energy policies in the field of geothermal energy. In Croatia energy policies related to the Municipality of Mali Bukovec are:

[ENERGY DEVELOPMENT STRATEGY OF THE REPUBLIC OF CROATIA UNTIL 2030 WITH A LOOK AT 2050](#)

[Varaždin County Development Plan for the period from 2021 to 2027](#)

[Development strategy of the municipality MALI BUKOVEC](#)

- Analysis of financial and social impacts on the energy situation regarding the use of geothermal energy and the potential of energy savings and energy efficiency increases in the regions,
- Analysis of the possibility of financing locally produced geothermal energy and the impact on the local economy,
- Analysis of the improvement of regional policies in the field of geothermal energy based on the interregional learning process.

Joint activities to achieve project final results of all partners will be are: joint thematic analyzes of geothermal potential, interregional study visits, seminars, workshops, personnel exchanges, meetings with stakeholders (companies or persons engaged in the use of geothermal energy), development of action plans (if the policy instrument is not improved or not created 3 years after the implementation of the project) and pilot activities.

PROJECT PARTNERS

Partnership on the project will be as follows:

1. Lead partner: Municipality of Mali Bukovec (Croatia)
2. Partner 1: Local Energy Agency Pomurje (Murska Sobota, Slovenia)
3. Partner 2: Somogy County (Hungary)
4. Partner 3: managing authorities or intermediate bodies from the North region of Europe
5. Partner 4: managing authorities or intermediate bodies from the West region of Europe
6. Partner 5: managing authorities or intermediate bodies from the North/West region of Europe
7. Partner 6 (Discovery partner): Municipality of Obrenovac (Serbia)
8. Associated policy authority 1: Varaždin County (Croatia)
9. Associated policy authority 2: The City of Murska Sobota (Slovenia)
10. Associated policy authority 3 and Policy responsible authority in the case of Investment for jobs and growth goal programmes: Ministry of Economy and Sustainable Development (Croatia)

In the case of Investment for jobs and growth goal programmes in Croatia, the policy responsible authority will be the Ministry of Economy and Sustainable Development as the relevant managing authority and Level 1 Intermediate Body in Croatia which will be responsible for fulfilling eligibility criterion 6. *Focus on Investment for jobs and growth goal programmes (At least one policy instrument addressed in the application is an Investment for jobs and growth goal programme).*

4., 5., 6., 8., 9., and 10. Participants also cover criterion 7. *Participation of policy responsible authorities (The policy responsible authorities are involved as partners for at least 50% of the policy instruments addressed in the application. For any instruments where this is not the case, the relevant policy responsible authorities are involved as 'associated policy authorities').*

ABOUT US

The Municipality of Mali Bukovec is one of 22 municipalities and 6 cities in Varaždin County. It is located in its eastern part. On the western side, it borders the Municipality of Veliki Bukovec and the City of Ludbreg, on the north side with Međimurje County, and on the eastern and southern sides with the Koprivnica-Križevci County. According to the last population census in 2021, here live 1809 inhabitants. In its self-governing scope, the Municipality performs tasks of local importance that directly meet the needs of citizens, and especially tasks related to: arrangement of settlements and housing, spatial and urban planning, communal economy, childcare, social care, primary health care, education and basic

education, culture, physical culture and sports, consumer protection, protection and improvement of the natural environment, fire protection and civil protection, traffic in its territory and other tasks in accordance with special laws.

In the area of the Municipality, after two years of researching on the Lunjkovec - Kutnjak geothermal field, in October 2023 was confirmed that there are conditions for the construction of a geothermal power plant with a capacity of about 16 megawatts, which has potential to produce electrical and thermal energy. The research was conducted by the public company Bukothermal d.o.o. owned by Varaždin County (85%) and the Municipality of Mali Bukovec (15%). In view of these findings, the Municipality needs experience, good practices and knowledge from other partner countries where the potential of geothermal energy has already been explored, as well as the preparation of a feasibility study in order to be able to create a strategy for its development in the coming period of 7 to 10 years as a local policy instrument.

At the state level in the Republic of Croatia the field of energy is under the jurisdiction of the Ministry of Economy and Sustainable Development.

Mayor of the Municipality

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