



Project idea form - small projects

Version 2.1

Registration no. (filled in by MA/JS only) _____

Project Idea Form

Date of submission 02/06/2025

1. Project idea identification

Project idea name	BALTGEOTHERM – a joint initiative for advancing geothermal energy exploration and utilisation in the Baltic States
Short name of the project	BALTGEOTHERM
Previous calls	yes <input type="radio"/> no <input checked="" type="radio"/>
Seed money support	yes <input type="radio"/> no <input checked="" type="radio"/>

2. Programme priority

3. Climate-neutral societies

3. Programme objective

3.2. Energy transition

4. Potential lead applicant

Name of the organisation (original)	Eesti Geoloogiateenistus
Name of the organisation (English)	Geological Survey of Estonia
Website	https://egt.ee/en
Country	EE



Type of Partner	National public authority
	ministry, etc.

Contact person 1

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Which organisation(s) in the planned partnership take part in a project within the Interreg Baltic Sea Region Programme for the first time? Please list the respective partners.

Project partners, taking part first time in the Interreg Baltic Sea Region Programme are: Geological Survey of Estonia (F.R. Kreutzwaldi 5, 44314 Rakvere, Estonia; registry code: 77000387; <https://egt.ee/en>) and Geological Survey of Denmark and Greenland (<https://www.geus.dk>).

5.1 Specific challenge to be addressed

The European Union (EU) has committed to ambitious climate and energy goals, including achieving climate neutrality by 2050 and reducing greenhouse gas (GHG) emissions by at least 55% by 2030 compared to 1990 levels. A key strategy in reaching these goals is the decarbonisation of energy systems through increased reliance on renewable energy sources. In this context, the development of geothermal energy plays a significant role in supporting EU-wide climate objectives.

Geothermal energy, a clean and sustainable energy source derived from the Earth's internal heat, offers a low-carbon alternative to fossil fuels. The Baltic region holds considerable potential for shallow and medium-depth geothermal applications, both for heating individual buildings and for use in district heating systems. By integrating geothermal systems into municipal heating networks, the Baltic countries can reduce their dependence on imported fossil fuels, notably natural gas. The wider use of geothermal energy directly contributes to the EU's Renewable Energy Directive, which promotes increased uptake of renewables in heating and cooling sectors. EU funding mechanisms and initiatives, such as the European Green Deal and the Just Transition Fund, support the deployment of geothermal technologies in the Baltics.

A key challenge to accelerate the implementation of geothermal energy is the lack of accessible,

harmonised, and comprehensive data on subsurface conditions, geothermal potential, and existing infrastructure across the Baltic region. This data gap hinders the ability of target groups to assess geothermal opportunities and make informed investment or policy decisions.

To address this, the proposed project “BALTGEOTHERM – a joint initiative for advancing geothermal energy exploration and utilisation in the Baltic States” will develop an intuitive web-based platform to disseminate available subsurface data, geothermal potential maps, and information on existing geothermal installations.

Target groups include residents in rural and urban areas; municipalities and local authorities; geothermal drilling companies and system installers; research institutions; and national policymakers. In sum, geothermal energy development in the Baltic region creates multi-level value—economic, environmental, and social—across a broad range of stakeholders, aligning local and national interests with the EU’s decarbonisation agenda.

5.2 Focus of the call

The growth of geothermal energy in the Baltic countries plays a vital role in supporting the cohesive development of small towns and rural areas, directly contributing to the Baltic Sea Region Interreg Programme Priority “Climate-neutral societies.” This is reflected through several impacts: 1) revitalizing communities facing aging infrastructure, depopulation, and limited economic opportunities; 2) lowering heating costs for residents, businesses, and public buildings, which can attract investment and help reduce social and economic gaps between urban and rural areas; 3) enabling integration with other green technologies (e.g., solar, biomass, heat pumps) to create cost-effective hybrid systems; 4) encouraging cross-border cooperation and knowledge exchange, including potential repurposing of disused oil and water wells for geothermal use; and 5) driving growth among SMEs involved in geothermal implementation in the region. Expanding geothermal energy is not only a climate-friendly solution but also strengthens local economies and improves the resilience of rural communities. It aligns well with the Central Baltic Interreg Programme Priority 3 “Climate-neutral societies” and supports Objective 3.2 “Energy transition,” aimed at accelerating renewable energy production in the Baltic region.

6. Transnational relevance

Implementing a joint transnational Baltic Sea Region Interreg project which focuses on advancing geothermal energy exploration and usage in the Baltic countries, offers significant and wide-ranging benefits to all participating project partners. One of major benefits is knowledge change and capacity building between the project partners which enables to gain access to shared expertise, data, and best practices across borders. All this accelerates learning and enables knowledge transfer on geothermal energy topics from neighboring countries to local contexts.

Secondly, transnational cooperation enhances innovation and technical development whereas partners can jointly pilot new geothermal technologies in the follow-up joint projects, such as low-temperature district heating systems, heat pumps or advanced drilling methods, leveraging combined resources. This shared effort increases the quality and scalability of technical solutions, reducing costs and improving implementation success rates.

As all Baltic countries have rather similar subsurface conditions, the collaborative framework allows partners to align regulatory frameworks, planning procedures, and permitting processes related to



geothermal energy exploration and utilization. This reduces barriers to cross-border investments and sets the foundation for a more integrated Baltic energy market, in line with EU directives on renewable energy and decarbonisation.

Additionally, joint communication and dissemination activities increase visibility and stakeholder engagement, improving public acceptance and political support for geothermal projects. The joint project management also allows to build long-lasting institutional relationships.

In conclusion, participating in a joint transnational Interreg project on geothermal energy empowers partners to accelerate the clean energy transition in the Baltic countries through shared innovation, aligned policies, and strengthened regional cooperation.

7. Specific aims to be addressed

Building trust that could lead to further cooperation initiatives

Effective joint project management in an Interreg project plays a crucial role in building trust among partners, creating a strong foundation for long-term collaboration and future joint initiatives. Trust is not only essential for the success of a single project but also for sustaining meaningful transnational partnerships beyond its duration. Open, consistent, and honest communication is central to successful joint project management. Beyond formal meetings and reporting structures, joint project activities create opportunities for personal interaction and informal networking. Such personal relationships often serve as the seedbed for future joint proposals, partnerships, and innovation alliances. In short, effective joint Interreg project management is more than coordination – it is a relationship-building process for future transnational cooperation.

Initiating and keeping networks that are important for the BSR

The Baltic Sea region faces several energy and climate challenges, including high dependence on imported fossil fuels, rising energy costs, and the urgent need to reduce greenhouse gas emissions in line with EU climate goals. Advancing geothermal energy exploration and usage in the Baltic Sea region supports directly the EU Green Deal and the Baltic Sea Region Interreg Programme's goal of building climate-neutral societies. The Baltic Sea region has historically been heavily reliant on imported energy, particularly on natural gas. Geothermal energy, as a domestic and stable natural source, reduces dependence on external suppliers and enhances energy sovereignty.

Initiating geothermal networks creates opportunities for cross-border cooperation, research, and innovation, particularly through Interreg and other EU programmes. Countries in the region can share experiences, co-develop technologies, and align policies to overcome technical and financial barriers to geothermal deployment.

Bringing the Programme closer to the citizens

The availability of a public web portal indicating pan-Baltic geothermal opportunities and guidelines will be a direct result of the Programme and its Priority 3 and Objective 3.2, thus bringing the Programme closer to the citizens.

Allowing a swift response to unpredictable and urgent challenges

Reduces the impact of electricity scarcity in the winter period, since commonly used air source heat pumps (ASHPs) have lower coefficient of performance (COP) than ground source heat pumps (GSHPs).

8. Target groups

The proposed BALTGEOTHERM project focuses on advancing geothermal energy exploration and usage in the Baltic countries (Estonia, Latvia, and Lithuania) and therefore the target groups will be carefully selected to ensure both strategic alignment and practical implementation capacity. The major target groups in Estonia, Latvia and Lithuania will be: 1) national ministries, 2) national geological surveys and research institutes, 3) municipal and local governments, 4) geothermal energy developers and corresponding technology providers, and 5) public organisations involved in geothermal energy development and environmental associations.

Please use the drop-down list to define up to five target groups that you will involve through your project's activities.	Please define a field of responsibility or an economic sector of the selected target group	Specify the countries and regions that the representatives of this target group come from.
1. National public authority	National ministries set national energy policies, regulations and strategic priorities for economic development and public welfare. Their support is crucial for advancing geothermal energy development	Estonia, Latvia and Lithuania
2. National public authority	National geological surveys and academia maintain thermogeological databases and have expertise on subsurface conditions needed for geothermal energy mapping and exploration.	Estonia, Latvia and Lithuania

3. Local public authority	Municipal and local governments are responsible for local planning as well as often operate local district heating systems and develop public infrastructure.	Estonia, Latvia and Lithuania
4. Small and medium enterprise	Geothermal drilling companies, renewable energy consultants and proper technology installers have technical know-how and are involved in designing and commercializing geothermal technologies	Estonia, Latvia and Lithuania
5. NGO	Public organisations involved in geothermal energy development as well as environmental associations may help in public engagement and awareness-raising of renewable geothermal energy benefits	Estonia, Latvia and Lithuania

9. Contribution to the EU Strategy for the Baltic Sea Region

Please indicate if your project idea has the potential to contribute to the implementation of the Action Plan of the EU Strategy for the Baltic Sea Region (<https://eusbsr.eu/implementation/>).

yes ☒ no ☐

Please select which policy area(s) of the EUSBSR your project idea contributes to most.

PA Energy
PA Innovation
PA Education



The MA/JS may share your project idea form with the respective policy area coordinator(s) of the EUSBSR. You can find contacts of PACs at the EUSBSR website (<https://eusbsr.eu/contact-us/>).

☐ If you disagree, please tick here.

10. Partnership

The proposed Baltic Sea Region Interreg initiative to accelerate geothermal exploration and deployment in Lithuania, Latvia and Estonia will benefit greatly from a consortium of national geological surveys, universities and SMEs. These partners offer complementary expertise that is vital for a successful, transboundary development of geothermal energy in the Baltic region. The national geological surveys in Estonia (EGT; <https://egt.ee/en>) and Latvia (LEGMC; <https://videscentrs.lv/gmc.lv/lapas/sllc-latvian-environment-geology-and-meteorology-centre>) act as central hubs in maintaining and providing access to historical and present geological and geophysical data, including data needed for geothermal energy potential assessments.

The Kaunas University of Technology (KTU; <https://en.ktu.edu/university>) as a public research university is one of top science education centres in Lithuania. The KTU Faculty of Mathematics and Natural Sciences (<https://en.ktu.edu/scientist/mayur.pal>), is a leading institution in the Baltic countries in applied research in geothermal technology, modeling, and energy systems integration in Lithuania. KTU currently involves several PhD students working on data driven assessment of Lithuanian geothermal energy production potential (https://en.ktu.edu/research/research-at-divisions/rg_geo-energy-research).

The Geological Survey of Denmark and Greenland (GEUS; <https://eng.geus.dk>) has for several decades been involved with research, advisory and consultancy services both for shallow and deep geothermal energy potential in Denmark. The survey's particular responsibility has been modelling and predicting the distribution of suitable geothermal energy reservoirs. This work has led to the development of several public webportals, such as shallow thermal conductivity assessment potential maps (<https://eng.geus.dk/products-services-facilities/data-and-maps/evaluation-of-the-thermal-conductivity-of-the-near-surface>).

The BALTGEOTHERM project partnership includes: 1) Geological Survey of Estonia / EGT (Lead partner; national public authority), 2) Latvian Environment, Geology and Meteorology Centre / LEGMC (partner; state limited liability company), 3) Kaunas University of Technology / KTU (partner; higher education and research institution) and 4) Geological Survey of Denmark and Greenland / GEUS (partner; national public authority). The roles of project partners in project implementation are described in the project Workplan section.

11. Workplan

The project workplan includes 7 tasks, leading to project outcomes.

Task 1: Data aggregation on closed-loop and open-loop geothermal energy installations in Estonia, Latvia and Lithuania, and developing proper contemporary databases for each country.

Deliverables: Databases to be created will be based on installation reports and contain both the installation location data, subsurface geology data, and main parameters of ground source heat pumps and vertical borehole heat exchangers.



Partners involved in implementation: EGT, LEGMC and KTU

Task 2: Aggregation of geothermal energy exploration data for Baltic countries and developing proper contemporary databases for each Baltic country.

Databases to be created will be based on information from historical and recent borehole and well drilling reports and include the relevant geological and thermogeological data

Partners involved: EGT, LEGMC and KTU

Task 3: Acquisition of new thermogeological data (thermal conductivity, porosity and permeability measurements) from drill core samples to assess the geothermal energy potential of most prospective geological formations and by running a limited number of Thermal Response Tests in boreholes of Estonia. These thermogeological data are needed to properly design geothermal energy installations.

Partners involved: EGT, LEGMC, KTU and GEUS

Task 4: Screening of unused or abandoned groundwater and oil wells for repurposing such wells for geothermal energy extraction. The screening results allow to determine and to create a database for most prospective sites for designing and building geothermal energy pilots in further project development stages.

Partners involved: EGT, LEGMC and KTU

Task 5: Developing a GIS-based public web portal to visualise the aggregated geothermal energy databases, separately for each Baltic country. This web portal can be used: 1) for local authorities as a major source for permitting new geothermal energy well and borehole drillings, 2) as public database for geothermal drilling companies to learn about subsurface geology in potential drilling sites.

Partners involved: GEUS, EGT, LEGMC and KTU

Task 6: Preparing geothermal energy exploration and utilisation guidelines for each Baltic country. These guidelines can be used by local authorities and drillers about cost-effective and environmentally safe geoenergy well drillings and heat exchanger installations. Similar guidelines have been developed for example for Finland and Sweden and they are publicly available in the Internet.

Partners involved: EGT, LEGMC and KTU

Task 7: Preparing country-wide geothermal energy potential maps for Lithuania, Latvia and Estonia by using thermogeological and lithogeological data for g-function calculations and numerical modelling. These overview maps enable overall estimation of maximal annually extractable geothermal energy (MWh) for planning and developing geothermal energy installations in most prospective areas.

Partners involved: KTU, EGT and LEGMC

12. Planned budget

ERDF budget (planned expenditure of partners from the EU)	EUR 500,000.00
Norwegian budget (planned expenditure of partners from Norway)	EUR 0.00
Total budget (including preparatory costs)	EUR 500,000.00

13. Project consultation

Please indicate if you wish to have a consultation (online meeting) with the MA/JS to discuss your project idea

yes ☒ no ☐



14. Questions to the MA/JS

Questions related to the content of the planned project	Do we miss any crucial topics not described in this Project Idea Form? Do we need to provide any proof on previous involvement in EU or ERDF funded projects? Is there a possibility to add a new project partner afterwards – e.g. BALTGEOTHERM project partner KTU might be interested in involving the Lithuanian GeoEnergy Association as a dissemination partner for the project?
Questions related to budgeting and expenditure	<i>(max. 1.000 characters incl. spaces)</i>
Any other questions	<i>(max. 1.000 characters incl. spaces)</i>

15. Additional information

The Geological Survey of Estonia is currently the lead partner in the EU Horizon Programme EGT-TWINN project (Grant agreement ID: 101079459) "Enhancing research capacity at the Geological Survey of Estonia to accelerate the country's transition to green energy" (<https://cordis.europa.eu/project/id/101079459>).

Your account in BAMOS+

Please remember that to officially submit your application you need to access our electronic data exchange system BAMOS+. More information about the process of applying for your account in BAMOS+ you will find here:

<https://interreg-baltic.eu/gateway/bamos-account>