GeoBOOST Newsletter

Issue 5

In this issue:

Guideline for Simplifying Licensing Barriers Procedures

How to Reduce the Permitting Processes for Geothermal Heat Pumps (GHP) in Open-Loop or Closed-Loop Systems?

This question addresses one of the main obstacles to the widespread adoption of this technology. For this reason, the GeoBOOST project team explores this issue in one of its latest reports: "Guideline for Simplifying Licensing Barriers Procedures," which proposes practical solutions to simplify the licensing and management processes for geothermal heat pumps (GHP).

How to Reduce the Permitting Processes for Geothermal Heat Pumps (GHP) in Open-Loop or Closed-Loop Systems?

This question addresses one of the main obstacles to the widespread adoption of this technology. For this reason, the GeoBOOST project team explores this issue in one of its latest reports: "Guideline for Simplifying Licensing Barriers Procedures," which proposes practical solutions to simplify the licensing and management processes for geothermal heat pumps (GHP).

Co-funded by the European Union

Highlights:

- *The report critically analyses the administrative, regulatory, and licensing barriers in the GeoBOOST partner countries as well as in other European Union countries. This analysis shows the importance of incorporating digitalization, inter-institutional coordination, and the standardization of procedures to reduce administrative complexity.*
- *The review of licensing practices highlights successful cases, such as the digital one-stop shop, the definition of clear deadlines, and effective collaboration between institutions in Sweden and the Netherlands. In contrast, countries like Spain face fragmented processes due to the decentralization of competencies and the lack of homogeneous frameworks.*
- *The Guideline proposes concrete and gradual recommendations to optimize the licensing procedures for GHP systems, both open-loop and closed-loop. These recommendations are aimed at authorities responsible for regulation and permit issuance at the local, regional, and national levels, as well as, technical bodies in charge of supervision and regulatory compliance.*
- *Additionally, an implementation and monitoring strategy based on progressive phases is proposed, with mechanisms for periodic follow-up and active feedback among key stakeholders. This seeks to ensure the effectiveness of the measures and their suitability to local realities, encouraging the adoption of clearer, more efficient, and harmonized regulatory frameworks.*

The report emphasises that simplifying licensing processes is relevant to drive the adoption of GHP systems, facilitate investment decisions, and ensure the sustainable management of resources. Furthermore, the recommendations are designed to serve as a reference beyond the participating countries, promoting the dissemination of best practices and cross-border cooperation among European Union Member States.
Overall, this Guideline aims to support both authorities and the private sector, fostering greater understanding and coordination among the stakeholders involved in the planning, regulation, and implementation of geothermal projects. In this way, it contributes to the goal of more sustainable and efficient regulatory frameworks throughout Europe.

https://gogeothermal.eu/projects/geoboost/

Co-funded by the European Union

Specialization in Shallow Geothermal Energy: Skills Development and Training Across the EU

As part of the GeoBOOST Project, a new European Massive Open Online Course (MOOC) has been developed to provide high-quality, standardized training in shallow geothermal energy and Geothermal Heat Pump (GHP) technologies. This course supports the wider adoption of sustainable energy solutions by equipping professionals, policymakers, and students with the knowledge and skills needed to strengthen the geothermal sector across Europe.

Who is the course for?

The training is designed for a broad audience, including drillers, planners, installers, designers, consultants, policymakers, and anyone interested in renewable energy. No prior experience with geothermal systems is required—the course builds from fundamental concepts to applied knowledge, making it suitable for beginners and technically oriented participants alike.

Learning methods

Participants will engage with a variety of learning materials and interactive activities:

- Video lectures to explain core concepts.
- Reading materials including technical documentation.
- Interactive quizzes and exercises such as multiple-choice, true/false, matching, and fill-in-the-blank knowledge checks.

https://gogeothermal.eu/projects/geoboost/

Co-funded by the European Union

Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible.

By completing the course, learners will:

- Gain a solid understanding of geothermal energy and heat pump technologies.
- Explore different GHP systems, including Borehole, Groundwater, and Horizontal solutions.
- Learn how to integrate GHP into energy-efficient buildings and renewable energy systems.
- Acquire knowledge of geological parameters, drilling methods, and site selection.
- Understand environmental, legal, and permitting frameworks across the EU.
- Practice monitoring, maintenance, and troubleshooting techniques.
- Study EU guidelines that support harmonized qualifications and best practices in geothermal deployment.

This MOOC empowers participants to build professional expertise in shallow geothermal systems while contributing to a more sustainable energy future for Europe.

Latest Geoboost events

18 March 2025

At the Seminar for Geothermal Heat Pumps in Warsaw, the Polish Geological Institute and PORT PC presented the GeoBOOST project interim results.

The following objectives were presented:

- To analyze the European GSHP market and identify opportunities for wider adoption.
- To monitor and report on geothermal heat pump deployment across Europe.
- To catalogue existing and innovative technical solutions for GSHP systems.
- To develop training and educational resources, including Massive Open Online Courses (MOOCs), to strengthen skills and specialization in shallow geothermal energy.

https://gogeothermal.eu/projects/geoboost/

Co-funded by the European Union

The project provides detailed guidance on:

- Different geothermal systems (borehole and groundwater heat exchangers, thermal energy storage, horizontal collectors).
- System design, drilling methods, installation standards, and safety procedures.
- Integration of GSHP with renewable energy and low-temperature district heating networks.
- Strategies for energy efficiency in buildings using GSHP, including heritage buildings.
- Environmental, legal, and regulatory considerations for GSHP deployment.

10 June 2025

The first day focused on project management and coordination under WP1 (led by EGEC), covering organisation, meetings, working groups, and internal communication. The session then moved to WP3, where partners gathered for a **workshop on market data and modelling hosted by GEK.** Discussions centred on the geothermal heat pump (GHP) market situation in partner countries, national frameworks, and available market statistics. Partners also explored state-of-the-art approaches to data acquisition and treatment, aiming to improve modelling methods for energy policy strategies at both national and European levels.

11 June 2025

The second day opened with WP6 (communications and outreach, led by EGEC), highlighting objectives and deliverables such as the dissemination and exploitation plan, project webpage, brochure, and a series of webinars and events. A brainstorming session generated ideas for both online and in-person engagement to mainstream geothermal heat pumps, alongside planning for brochures, videos, and the "Geothermal Stories" online catalogue.

The agenda then moved to WP4 (financial frameworks, led by GBA) with a **workshop on financing and competitiveness.** Partners discussed the proposed affordability score, influencing factors, and data acquisition needs, aiming to outline financial schemes that reflect the true value of GHP utilisation.

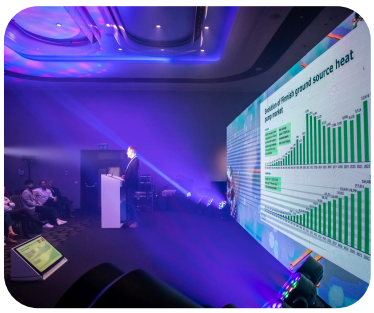
Finally, under WP5 (technology and business solutions, led by UPV), participants reviewed upcoming deliverables and milestones and held a dedicated workshop on the development of a European Modular Course System (MOOC) to expand and optimise the GEOTRAINET training framework.

https://gogeothermal.eu/projects/geoboost/

12 June 2025

The 13th PORT PC Congress 'AI and heat pumps – the energy foundations of the future' took place Under the motto "AI and heat pumps – the energy foundations of the future', the 13th PORT PC Congress – the most important annual event of the heat pump industry in Poland – took place in Warsaw on 12th of June.

This year's edition focused on the role of artificial intelligence and heat pumps in the development of intelligent, low-carbon and efficient heating systems that fit into the energy model of the future. It was also a great opportunity to talk about the cost of energy used in buildings, as AI opens up completely new possibilities in this area.



The year 2025 is a time of extremely important legislative decisions in the European Union: the EPBD, RED III and EED directives are being implemented, investments related to the decarbonisation of the heating industry are gaining momentum, and the requirements arising from the EU taxonomy of sustainable financing and ESG criteria are becoming an everyday reality for companies in the construction and installation sector – emphasises President of PORT PC, Paweł Lachman. – This is accompanied by a very strong trend related to the rapid development of artificial intelligence, which – importantly for our industry – is starting to play one of the key roles in modern energy systems, but also in buildings themselves, both on the consumption and energy management side.

A natural beneficiary of the development of AI is heat pumps, which, according to analysis by the International Energy Agency (IEA), will account for more than 60% of new heating installations in developed countries by 2030. Combined with AI, they can already create proactive systems that not only heat and cool buildings, but also learn, anticipate and communicate with the environment, increasing occupant comfort and optimising energy consumption and costs.
– It is in this broad context that we want to discuss the challenges, opportunities and possibilities of the industry at this year's Congress. – said Lachman.

This bilingual event benefitted also from the possibility for participants and speakers to use a dedicated app, with a number of convenient functions. Using it, they were able, among other things, to get in touch with other participants, arrange a meeting or ask questions during the session.

https://gogeothermal.eu/projects/geoboost/

Co-funded by the European Union