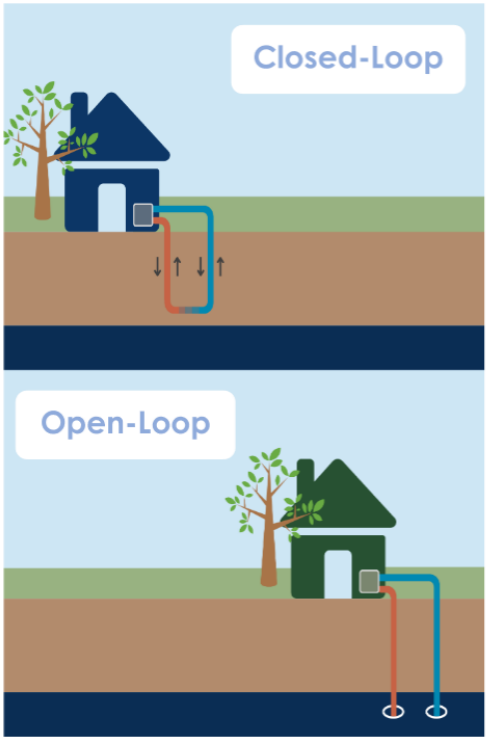
Project description

GeoBOOST seeks to increase the deployment of **geothermal heat pumps** and open-loop systems Austria, Belgium, Germany, Ireland, The Netherlands, Poland, Spain, and Sweden, as well, as provide products and tools relevant for consumers, suppliers, and planners in all markets across the EU.

The Fit for 55 Package, which outlined policy measures to deliver the EU Green Deal, calls for a greater than 40% target for renewable energy sources by 2030 in the Renewable Energy Directive (RED). It also calls for an increased primary (39%) and final (36%) energy savings to be achieved by the Energy Efficiency Directive (EED). Accelerating the penetration of cost-effective and energy efficient **renewable heating and cooling (RES HC) technologies** will be key to the successful achievement of these targets. However, RES HC is hampered by ineffective policy measures, institutional barriers, stop-and-go financial support schemes and incumbent power which has designed markets around fossil fuel utilisation rather than capital intensive RES HC solutions.

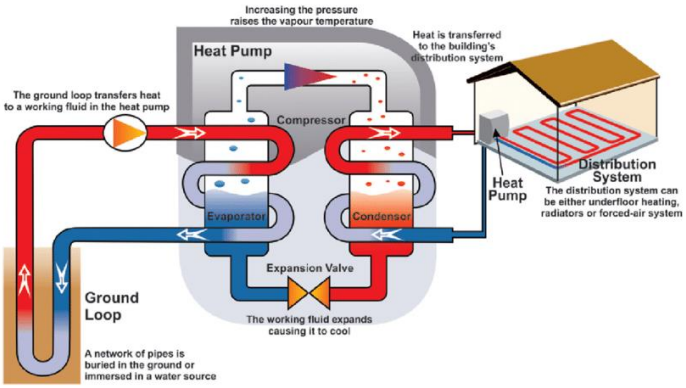


Geothermal heat pumps (GHPs); one of the **RES HC technologies**, are the most effective and versatile technology solution today to **lower the carbon footprint** and fossil fuel dependency (nowadays, over 75% of household heating demand energy in the EU is being covered by fossil fuels) in the heating industry**. High effectivity and broad scalability** hand in hand with the utilization of local and stable **heat** source are only a few advantages of the GHPs. Moreover, combined with passive **cooling** in summer, provide the GHPs practically time-unlimited heat source.

More than competitive are the GHP systems as well compared to the widely used classical air-water heat pump technologies. Despite significantly higher capital costs of the GHPs, higher effectivity of the GHPs and lower operating costs in most applications prevail. The **Seasonal Coefficient of Performance (SCOP) of the GHPs is typically between 2.7** (55 °C – demand side) and 8 (35 °C – demand side) **for heating** (air-water heat pumps between 2.5 and 4). Where **passive summer cooling** combined with subsequent heat energy storage is implemented, rises the combined SCOP of the GHPs up to 20. In such cases, the GHPs overcome the classical air-water heat pumps in efficiency four times.

The **GeoBOOST** project focuses on the steadily growing demand for renewable energy implementation in the heating and cooling sector. The project's **main goal** is to promote broader use of the **fast-evolving geothermal heat pump (GHP) technology**. To do so the following challenges will be addressed: lack of awareness, revalorising high upfront CAPEX costs, lack of data and monitoring standards, insufficient business models and financing, regulatory harmonisation and expanding the workforce.

GeoBOOST will improve statistical and market data for geothermal heat pump investments, **develop business models and financing schemes to help individual investors** to understand the opportunities and to measure the progress towards the EU's climate policy objectives. Besides a general raising of the awareness of geothermal heat pumps the project will work on a **regulatory framework toolkit** and a growing and upskilling of workforce.



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

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Projects partners