Deliverable D4.5

Enriched GEO4CIVHIC database for geothermal retrofit

WP4

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Project acronym	GEO4CIVHIC
Project full title	Most Easy, Efficient and Low Cost **Geo**thermal Systems **for** Retrofitting **Civ**il and **Hi**storic**a**l Buildings
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Dissemination Level

PU	Public	
CO	Confidential, only for members of the consortium (including the Commission Services)	**X**
CI	Classified, as referred to in Commission Decision 2001/844/EC	

Publishable summary

The aim of the GEO4CIVHIC project is to foster the retrofitting of civil and historical buildings by facilitating installation, reducing costs and increasing efficiency of the different components through shallow geothermal systems. This will be achieved, on one hand by improving drilling machines and methodology, optimizing GSHE design and materials, and using more compact and hybrid HPs for high and low temperature terminals. On the other hand, a set of software tools will be developed to provide a holistic engineering solution to optimise installation and operation of GSHPs. One of these tools is a Decision Support System (DSS) to provide sets of engineering solutions based on heating and cooling application relevant for the different ground and climate conditions across Europe.

The D4.5 “Enriched GEO4CIVHIC database for geothermal retrofit” is a confidential document delivered in the context of WP4, specifically of Task 4.2 - “Development of the database for retrofit solutions” with regard to the development of a database to assist decision making for geothermal retrofitting.

This document presents the structure and content of the databases that have been developed, including: a DSS database, with information regarding the functioning of the system; a simulation database, with simulation data to be used in the calculations; a data model database, with information regarding the environment and the technologies that needs to be taken into account in the calculations; and additional information repositories, with data to be presented to the user.