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GEOthermal Technology for economic Cooling and Heating



GEOTeCH

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Collaborative Project

D4.1. Dual source heat pump design

Executive Summary

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Lead beneficiary	UPVLC
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1. PUBLISHABLE EXECUTIVE SUMMARY

The present document is the deliverable D4.1 “Dual source heat pump design” which describes the system proposed, for each of the three prototype, as a potential solution to meet all the requirements established in the project for the dual source heat pump definition.

The objectives of the design are mainly the following:

- More efficient and environmentally friendly than the average geothermal heat pumps currently in market.
- The cost of the system has to be competitive in the market
- The system has to be simple in order to be reliable.
- The system has to be designed in such a way that can be installed accordingly to the concept of Plug & Play proposed in the project.

To this end the innovative idea of the project consisted on proposing a dual source heat pump. The challenge is now to design this system to satisfy all the stated requirements.

The deliverable describes in detail the system proposed, the description of all the components and the estimation of the performance. In each of these sections, it is included a discussion of all the alternatives proposed along the task development by all the involved partners.

The design analysis and performance analysis have contributed to propose new solutions and modifications to the current design that will improve the quality and performance of the final heat pump.