



Deliverable D5.3

Report on data collection, preliminary design of the building and/or the HVAC system with related costs of the virtual cases

WP5

Grant Agreement number	792355
Project acronym	GEO4CIVHIC
Project full title	Most Easy, Efficient and Low Cost Geothermal Systems for Retrofitting Civil and Historical Buildings
Due date of deliverable	31/03/2020
Lead beneficiary	PIETRE EDIL SRL
Other authors	GEOGREEN, RGS, UNIPD, SUPSI, CNR, UNESCO, CRES, GE-OSERV, PIETRE, UPV, FAU

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 Deliverable 5.3, “*Report on data collection, preliminary design of the building and/or the HVAC system with related costs of the virtual cases*” is a Confidential report, that aims to **(1) collect all the relevant data of the virtual demo cases, using the same methodology previously applied in D 5.2 and (2) to present the preliminary design of the GSHP system, applied in the real demo sites buildings.**

All the collected data will be used as inputs to the DSS (WP4), for the final evaluation of the performance in the real and virtual demonstration facilities (Task 5.5), for WP6 (environmental analyses), for WP7 (business models, cost-benefit analysis and exploitation of the market) and for WP8 (dissemination).

Each partner responsible for the virtual cases, contributed to the collection of all data and completion of the case study template. The virtual cases responsible, delivered the preliminary details of the retrofit intervention works, including the costs and details of the terminals and distribution system, together with the energy requested for H&C before and after the renovation.

The data collected in this deliverable are focused on: *the main characteristics of the building (morphological and geographical variables, latitude and elevation, volume of the building, average U-value for the opaque/glazed structures, type of terminals used, average temperature of the location, energy costs for fuels and electricity etc.), specific data of geometrical and thermal characteristics, climate and environment, weather data of each site, measured values and Test Reference Year (TRY) for each virtual case, ground and underground properties, preliminary details for intervention work, energy requested before and after renovation, installation characteristics and cost details (installation, running and maintenance).*

The preliminary design of the real demo sites buildings and/or the HVAC system and related costs have been elaborated, evaluated and included in D 5.3, by each site responsible.

The deliverable has fully reached the proposed objectives.