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MAGAZINE

The geothermal map of Trentino is online

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The geothermal map of Trentino is online. The work, presented during a technical conference at Trento-based Fondazione Bruno Kessler (FBK), is the result of the GEOTERM project and is now available.

In short, it is possible to assess the Trentino areas where it is most convenient to install geothermal heat pump systems that would allow to fully meet all year round heating, cooling and domestic hot water needs in buildings.

The result was achieved thanks to the collaboration between the ARES (Applied Research on Energy Systems) unit of Fondazione Bruno Kessler, the Department of Geosciences of the University of Padua and the Geological Service of the Autonomous Province of Trento.

technologies”With the GEOTERM project”, said Luigi Crema, the Head of ARES (FBK) “Fondazione Bruno Kessler has provided a contribution to the evaluation of the geothermal energy potential in the Province of Trento, both from the point of view of the energy resource of the soil and with regard to the most interesting and suitable technologies for the specific cases”.

“During the work,” notes ARES FBK researcher Diego Viesi “the microclimate, heating needs, hydrogeological and thermo-physical characteristics of the subsoil and the geoexchange potential for the entire province of Trento have been analyzed and mapped. All this to the end of an efficient design. ”

The GEOTERM project

The GEOTERM project aims to assess the suitability and potential of the Trento Province to host heat pump geoexchange facilities for air conditioning across its territory, and to provide, cartographically, the results of the work. The new provincial geothermal maps, available in WebGIS mode, is a valuable tool for planning, as well as for the responsible and sustainable development of this technology.

Increasingly stringent regulations are driving energy design of new buildings and of buildings undergoing major renovation to the increasing integration of renewable sources. According to Decree No. 28/2011 of January 1, 2017 thermal energy production plants must be designed and manufactured so as to ensure at the same time compliance with the coverage, through the use of energy produced by plants fueled by renewable sources, of 50% of the expected use for hot water,

heating and cooling. For public buildings, integration requirements are 10% higher.

Geothermal heat pumps represent a financially attractive option, and can be applied almost anywhere, enabling the transfer of heat to and from underground, with high energy efficiency and fully meeting, in every season, heating, cooling and domestic hot water needs.

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