

Geothermal District Heating has the potential to alleviate Europe's energy security crisis

PRESS RELEASE

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Over 25% of the EU population lives in areas directly suitable for Geothermal District Heating (GeoDH)¹. There is a large potential in Central and Eastern Europe, with GeoDH systems in operation in 22 European countries including Hungary, Poland, Slovakia, Slovenia, the Czech Republic, and Romania, where existing heat networks are well developed.

Geothermal district heating is a valuable and immediate option for the alleviation of Central and Eastern Europe's dependency on Russian gas.

Geothermal generation has its roots in Europe. In the EU, 180 geothermal district heating systems have a total installed capacity of 1.1 GWth, producing some 4256 GWh of thermal power, (i.e. 366 ktoe in 2012).

The main benefits of geothermal heating and cooling are provision of local, baseload and flexible renewable energy, diversification of the energy mix, and protection against volatile and rising fossil fuels prices. Using geothermal resources can provide economic development opportunities for countries in the form of taxes, royalties, technology export, and jobs.

The geothermal potential is recognised by some EU Member States in their National Renewable Energy Action Plans. However, the actual potential is significantly larger. In order to increase awareness, GEODH², an IEE project co-financed by the EU³ - has assessed and presented for the first time the potential in Europe on an interactive map.

From the map we can note that:

- GeoDH can be developed in all 28 EU countries;
- Geothermal can be installed with existing DH systems during extension or renovation, replacing fossil fuels;
- New GeoDH systems can be built in many regions of Europe at competitive costs;
- The Pannonian basin is of particular interest when looking at potential development in Central and Eastern Europe.

¹ Aalborg University, Halmstad University, Ecofys Germany, Plan Energi. *Heat Roadmap 2050, - Second Pre-Study for the EU-27, 2013, p. 50.*

² The GEODH project aims to promote geothermal DH in the EU. Information on resource assessment and many other useful documents can be found on the GEODH website www.geodh.eu

³ The sole responsibility for the content of this publication lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EACI nor the European Commission are responsible for any use that may be made of the information contained therein.

According to Eurostat, about one third of the EU's total crude oil (34.5%) and natural gas (31.5%) imports in 2010 originated from Russia. Of this, 75% of the gas is used for heating (2/3 in households and 1/3 in the industry). Geothermal DH technology has the potential to replace a significant part of that fuel. In order to enable such a development the specific proposals from the GeoDH consortium are to:

- Simplify the administrative procedures in order to create market conditions which would facilitate development;
- Develop innovative financial models for GeoDH, including a risk insurance scheme, and the intensive use of structural funds;
- Establish a level playing field, by liberalising the gas price and taxing GHG emissions in the heat sector appropriately;
- Train technicians and decision-makers from regional and local authorities in order to provide the technical background necessary to approve and support projects.



For further information contact:

Alexandra Latham

Communication officer, European Geothermal Energy Council

a.latham@egec.org / +32 2 400 10 27