

The role of shallow geothermal energy in transition to low carbon energy systems in Slovenia

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Forum topics	<input checked="" type="checkbox"/> Energy in 21st Century	<input type="checkbox"/> Cultural Heritage in Digital World
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Abstract:

Problems - Issues / Challenges-Needs	The deployment of geothermal energy systems can contribute significantly to climate change mitigation and play part in transition to low carbon society based on renewable energy by 2050. The challenge is not only to identify the amount of technical potential of possible exploitation, but to determine the amount of economically viable potential as an individual heating system, new district heating systems or as support to existing ones.
Solutions - Methods / Results - Findings	The framework for role outline must consist of: <ul style="list-style-type: none"> • heat density map, • approach to determine shallow geothermal energy potential for water to water and brine to water systems, • approach to identify new areas for DH networks and • methods for determination of economic potential for DH system and for individual systems. Results of the analysis can: <ul style="list-style-type: none"> • establish a role of shallow geothermal energy systems in scenarios leading to low carbon society, • support local and national energy plans by using GIS mapping for steering decision-making processes.
Novelty - Value / Relevance to ...	<ul style="list-style-type: none"> • Determination of economically viable shallow geothermal energy potential on a hectare level. • Development of cost effective area model for district heating. • Outline the role of shallow geothermal energy for the transition to low carbon society.
Forum statement	Shallow geothermal energy in Slovenia can in economical way play a pivotal role for individual heating systems and supply base load power in district heating systems.

Keywords:

district heating, geothermal energy, spatial constraints, heat density, GIS

Graphics:

