

Social perception of geothermal heating and cooling networks

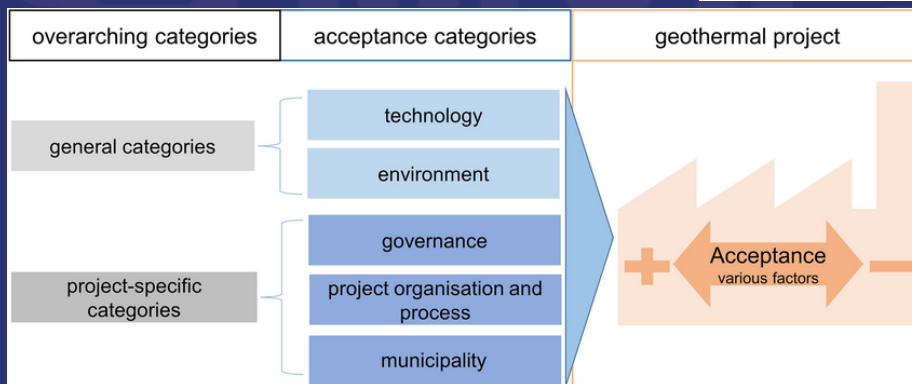
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Towards Decarbonized Heating and Cooling!

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Acceptance categories for GHC project

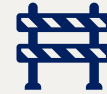


(Renoth et. all, 2023)

- The geothermal power production has significant role in mitigating carbon emissions and contributing towards a green and sustainable future.
- Social acceptance is considered as a strong prerequisite for successful implementation of geothermal power production projects

Social acceptability is attained if the project activities do not result in drastic changes from the regular conditions of the area and if the affected sectors can see some advantages issuing from the project.

Date of publishing: November 2023



Social barriers categories

- environmental risk of pollution of environment, fear of seismic activity etc.
- economic - fear of higher costs and low benefit etc.
- social - limited public knowledge about the technology, lack of accepting novel technologies etc.
- project management - untransparent project not involving all stakeholders and/nor the public etc.

Hurdles to remove

- Address following aspects: sociopolitical; community and market.
- Prepare an adequate communication strategy with the public as the a stakeholder in the acceptance process.
- Need for strong political acceptance for a successful completion of a geothermal project.



To overcome social barriers of geothermal projects, adequate project management methodology is required

Pathways towards social acceptance of GHCs in EU

- **Low temperature (4G to 5G) networks** provide efficient & climate change fit solutions for the urban built environment [heating & cooling]
- **Refurbishment of existing district heating networks** by reducing grid temperature is key for the integration of geothermal energy – the accessibility of geothermal significantly increases at grid temperatures below 100°C

Activities for overcoming social barriers can be:

- development of an environmental action plan;
 - appropriate environmental management and design practices;
 - procedures for ensuring compliance with health, safety and environmental standards;
 - creation of an environmental guarantee fund (in cases of rehabilitation and compensation for damages due to the project);
 - organization of environmental actions, (afforestation of affected, preservation of the ecosystem etc.);
 - plan to preserve cultural sites etc.
- Engagement activities should be a fundamental step in the overall development process of a geothermal project.
 - A socio-economic study of the area during the early stages of the project's development can contribute to overcome social barriers



CA18219 Geothermal-DHC Fact Sheet No.4

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1 Renoth, R., Buchner, E., Schmieder, M. et al. Social acceptance of geothermal technology on a global view: a systematic review. *Energy Sustain Soc* 13, 49 (2023). <https://doi.org/10.1186/s13705-023-00432-1>

2 <https://www.softwaresuggest.com/blog/major-or-project-management-challenges/>

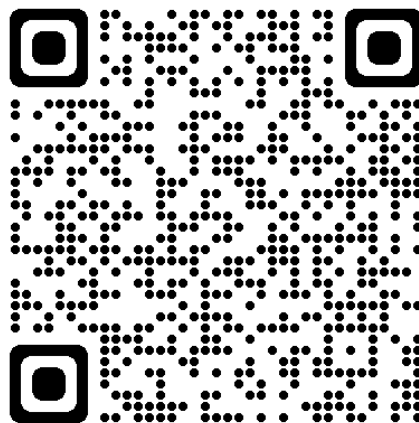
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This publication is based upon work from COST Action Geothermal-DHC, CA18219, supported by COST (European Cooperation in Science and Technology).

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