

**DESTRESS Final Public Conference** 24-25 November 2020



# Public perception of geothermal projects in Alsace: between energy transition and territorial rooting

Philippe Chavot<sup>1</sup>, Anne Masseran<sup>2</sup>, Cyrille Bodin<sup>1</sup>, Christine Heimlich<sup>3</sup>, Yeny Serrano<sup>1</sup>, Jean Zoungrana<sup>4</sup>.

<sup>1</sup> LISEC, University of Strasbourg, France <sup>2</sup> CREM, University of Strasbourg, France <sup>3</sup> IPGS-EOST, University of Strasbourg, France <sup>4</sup> SAGE, University of Strasbourg, France

Contact: Philippe.Chavot@unistra.fr

### Introduction

In the context of the DESTRESS project, we are interested in the formation and circulation of views on deep geothermal energy (DGE) in different social contexts. In particular, we conducted a survey using questionnaires to determine the opinions and perceptions on deep geothermal energy in urban

Fra

AI

and rural areas. This research looks at several territories: - the Eurometropolis of Strasbourg (EMS) where several projects are being challenged Northern Alsace where projects are well accepted.

#### Hypotheses:

1. Perceptions of risks and benefits vary depending on the way people experience and give meanings to their

territory. 2. The way in which local authorities invest in the field of renewable energies plays an important role in the favourable reception of deep geothermal projects

3. The local roots of a project influence how it is perceived by inhabitants (Chavot et al 2018)

#### Locally anchored projects versus unrooted projects:

"anchored" projects: Wissembourg & Illkirch-Graff. projects. Outcome of a long period of consultation between the different stakeholders. A project may have economic, cultural and/or political rooting.

"off-ground" or unrooted projects: Vendenheim & Eckbolsheim projects. Developed with economic advantages and/or national political programmes in mind, and often ignore the specificities of the local territory.

#### Methods

For each of our four areas, a sample size of N = 220 individuals Nt = 881 for our four areas

We sampled potential respondents using the quota method, taking into account three socio-demographic criteria: age, socio-professional category and gender.



### Results (I) Awareness of DGE and projects Questions: 'Have you heard of deep geothermal energy?' / 'Do you know that a DGE project is planned for the town of ...'? △ Age: 27% of persons aged under 30 know what the DGE refers to and 6.4% of them are aware of local projects awareness of DGE exceeds 80% among respondents aged over 60 Awan ness of geothermal **Opinion on local projects** according to study area. Question: 'Are you for or against th geothermal power plant project?' (n=195. people who are aware of local projects). 📕 For 📕 Against 📒 Don't know

#### References

Akrich, M., Méadel, C. : Histoire des usages modernes, in: Énergie, l'heure des choix, Beltran, A., Akrich, M., Méadel, C., Duclos, D. (Eds.), 25-91, Éditions du Cercle d'Art, Paris (1999)

ratis (1999).
Chavdt, P., Heimich, C., Masseran, A., Serrano, Y., Zoungrana, J., and Bodin, C.: Social shaping of deep geothermal projects in Alsace: politics, stakeholder attitudes and local democracy. Geothermal Energy, 6:26, (2018), 21p.
Chavdt, P., Masseran, A., Bodin, C., Serrano, Y., and Zoungrana, J.: Geothermal Energy in

#### Results (II)

German

## Risk perception among people who are aware of local

projects. Question: 'According to you, can exploitation of geothermal energy cause... ?' (n=268).



#### The variations of risk perception do not seem dependent on whether a project has local roots or not, nor related to the opinion on local project (at least for the perception of seismicity and surface deformation, cf infra). ⇒ They may be explained by information

circulated locally or by people's own experience of geothermal drilling (i.e. inhabitants of the Wissembourg area may have experienced micro-seismic events related to activities carried out in Soultz-sous-Forêts).



Operato

Scientists

Journalists

Wissembourg area

Municipal goverment

Other local authorities

Residents association

Environnemental association



Question: 'Who do you trust most to inform you about the technical aspects of geothermal energy? (Choose the top three)' (n=221)

- Locally rooted projects: Wissembourg and Illkirch - Unrooted projects: Vendenheim and Eckbolsheim

#### Scientists are seen as the most trustworthy by the population

In the case of the two locally rooted projects, industrial stakeholders and municipalities are widely trusted: the presence of the Soultz-sous-Forêts power plant in the Wissembourg area and communication efforts made by the municipality of **Illkirch** since 2010 may have contributed to this tendency.

#### Conclusion

Support for the project is most pronounced in the **Wissembourg** area. Likewise, the trust placed in operators and politicians is strongest there. The links between geothermal energy and oil drilling have often been put forward by political stakeholders in the area around Wissembourg, which can give 'historical' meaning to the deployment of this type of project. In these cases, awareness of the risks does not necessarily lead to an overall negative view or rejection of the projects.

Project acceptance is at its lowest in the Eckbolsheim area and mistrust of operators at its highest. That may be explained by the fact that the Eckbolsheim project which was not supported by local politicians and has no ties with the territory's economic and cultural history

France. A Resource Fairly Accepted for Heating but Controversial for High-Energy Power Plants. In Geothermal Energy and Society, A. Manzella, A. Allansdottir, and A. Pellizzone (Eds.), 105–122, Springer International Publishing, Cham, (2019). vot, P., Masseran, A., Serrano. V: Information and public Consultation exercises concerning geothermal projects. "The Strasbourg case". European Geothermal

Congress 2016, Sep 2016, Strasbourg, France (2016). isten, G., Hamman, P.: Transition énergétique et inégalités environnementales, énergies renouvelables et implications citoyennes en Alsace, Presses Universitaires de Strasbourg, Strasbourg, (2015).



20 40

Illkirch area

Eckbolsheim area

#### Acknowledgments

AUCHIOWICSGITTENTS This paper is based on research carried out in the context of the activities of the Social Sciences working group of the Labex G-EAU-THERMIE profonde (University of Strasbourg, CNRS, Electricité de Strasbourg) and was conducted within the framework of the WG 3.3 "Risk governance" of the H2020 project DESTRESS, "Demonstration of soft stimulation treatments of geothermal "comparison" reservoirs'