The context of contestation: how cultural, political and informational factors affect the reception of geothermal projects

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Introduction
Mining activities under societal debate

- Mining activities like oil and gas production, shale gas production, deep geothermal project development or CO$_2$ geological storage often meet strong societal debates.
- The costs and benefits are unequally divided among stakeholders.
- Minimal attention to societal factors that might influence project development.
- Project development too time consuming, too expensive or even: projects never reach phase of execution at all.
Common practice
Objectives of WP3.3. “Risk governance”

To assess acceptability of deep geothermal energy in various socio-economic conditions in Europe by:
• Comparing national approaches
• Comparing urban and rural areas
• Critically analyzing public communication in ongoing projects

Goal → recommendations for updating regulations for better public acceptance
## Comparative case studies approach

<table>
<thead>
<tr>
<th>Country</th>
<th>Area</th>
<th>Heat/power</th>
<th>Geology</th>
<th>Urban/rural</th>
<th>Short description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Northern Alsace</td>
<td>Both</td>
<td>Faulted</td>
<td>Rural</td>
<td>3 EGS projects carried by regional public operator; Acceptability is not an issue. The projects are fairly well accepted</td>
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<tr>
<td>F</td>
<td>Euro-metropolis Strasbourg (EMS)</td>
<td>Both</td>
<td>Faulted</td>
<td>Urban</td>
<td>5 EGS projects within the metropolitan area; Different operators (local public &amp; private operators); Strong variation in acceptance (2 projects have been abandoned due to strong contest)</td>
</tr>
<tr>
<td>CH</td>
<td>Haute-Sorne, Jura</td>
<td>Power</td>
<td>Faulted</td>
<td>Rural</td>
<td>EGS project carried by private company owned by utilities; On hold because of local opposition</td>
</tr>
<tr>
<td>CH</td>
<td>Geneva</td>
<td>Heat</td>
<td>Sediment</td>
<td>Urban</td>
<td>Program carried by the state and local public utility; Multiple project planning from shallow to mid-depth. Strong acceptance but no deep project completed yet</td>
</tr>
<tr>
<td>NL</td>
<td>Trias Westland</td>
<td>Heat</td>
<td>Sediment</td>
<td>Rural</td>
<td>Geothermal project in development (drilling phase will be completed before summer). Project is characterized by close cooperation with and support of local stakeholders.</td>
</tr>
</tbody>
</table>
WP 3.3. In-depth case studies location

Factors affecting the reception of geothermal projects
Factors affecting the reception of geothermal projects

• Cultural factors
  • Local characteristics that influence how social actors will interpret/perceive the project (i.e. rural/urban, innovative region, tradition of mining activities, social identity...)

• Political factors
  • Interrelations between (institutional) politics and geothermal projects

• Embeddedness of projects
  • Local roots of a project influence how it is perceived by the inhabitants

• Informational factors
  • How project carriers (operators & authorities) interact with the public
Cultural factors (France)

• History of oil exploration in Northern Alsace
  • Many drillings in the past
  • No notable opposition to geothermal energy
    => “Underground energy, it is our DNA” (Mayor of Soultz)

• La Robertsau case in the EMS abandoned
  • Industrial area where inhabitants were fighting for long time to reduce existing industrial risks
  • Strong democratic ideal in the neighborhood
    => against an imposed project
Cultural factors (Switzerland)

- Pioneering role and risk taking attitude of municipalities used to mobilize citizen to support geothermal energy
  - Successful strategy in St.Gallen
  - In Haute-Sorne it served as an argument of opponents to argue they were taken as guinea pigs

- In Geneva project framing oscillates between contribution to fight global warming and a strong focus on the localness of geothermal resources
Cultural factors (Netherlands)

• In Westland local greenhouse farmers see themselves as entrepreneurs and innovators

• The geothermal operator, the greenhouse farmers and the community see this geothermal project as a project of common interest (sustainable development of the region and the business)

• Large national banks have a close relationship with the agricultural business in the region and a positive attitude to sustainable development. They see geothermal energy as the way forward in that direction
Political factors: Role of local authorities (France)

• Geothermal energy occupies a strategic position in local policy in the EMS and to some extent in Northern Alsace. Integrated in EMS Climate Plans defined in the mid 2000’s;

• Geothermal energy championed by Green/Socialist coalition that governs the metropolis;

• Some marginalized municipalities within the EMS oppose geothermal energy to defend local interest and communal sovereignty
Political factors: Role of local authorities (Switzerland)

• In Haute-Sorne, the project is presented as being in line with the Cantonal Energy plan
  • Authorities emphasize its benefit for local economic development
  • But no visionary discourse linking it to energy futures

• In Geneva geothermal energy is framed as necessary for the energy transition
  • GEothermie 2020 program, launched jointly by the Cantonal government and the local public utility
  • Reflection on the role of institutions
Political factors: Role of local authorities (Netherlands)

- Province and municipality are big supporters of the transition of the region into an area that only will use renewable heat (i.e. geothermal heat)
- Province and municipality lobbied national government to participate in this project
Embeddedness of projects

**Anchored projects**

The result of a long matured dialogue between the different actors

- Useful for local communities
- They can contribute to local economic value chains

**Off-ground projects**

Projects prompted by economic benefits and/or national political programming, often ignoring the specificities of the local territory

- No or rare up-stream concertation
- Not chosen by local communities
- Aiming at producing electricity first and eventually feeding heat network
Embeddedness of projects (France)

- Within the EMS, some geothermal energy projects first related to urban heat provision. Local utility, planned slowly in relationship with local authorities.

- Other projects were initiated due to the increase of feed-in tariffs by new operators not anchored regionally and without dialogue. These off-ground projects faced strong contestation.
Embeddedness of projects (Switzerland)

• In Haute-Sorne, the project is perceived as off-ground
  • The operator is active at a national level
  • Perceived as “outsider” from Zurich
  • Locals do not see the benefits of power production
  • No use of the residual heat
  • Setting up of a local branch to pay taxes locally, did not change the perception
Embeddedness of projects (Netherlands)

- The project was anchored right from the start as “local for local”:
  - Business case developed in cooperation with the end-users (greenhouse farmers)
  - The greenhouse farmers organized a representative board that was involved in all major decisions of the Trias Westland project
  - After 15 years the project will be owned by a cooperative of participants
Informational factors (France)

- In off-ground projects, operators usually communicate to the general public only a few months before the organization of the legal public consultations
  - Controversy is already there
  - Public consultation are used by citizen to express their opposition;
- Regional authorities and operators talk about geothermal energy in general
- Inhabitants, local NGOs and local mayors talk about particular geothermal projects in relationship to a territory
Informational factors (Switzerland)

• In Haute-Sorne:
  • Information/consultation early on during the authorization process;
  • Opposition raised after the authorization was given;
  • NGOs support the project, opposition raised by inhabitants;
  • No formal channel for the operator to engage the public after the authorization phase.

• In Geneva
  • Issues about the appropriate scale of communication;
  • Making geothermal energy visible, before the start of concrete projects;
  • Challenge of communicating on a regional program that will be implemented differently at local level.
Informational factors (Netherlands)

• Focus on worries and questions of the neighbors:
  • Anticipation
  • Hotline
  • Neighbor-meetings during the drilling phase

• Clear and understandable language
  • Messages and documents made by the stakeholder management
  • Process diagram of the whole project

• Good use of social media/internet:
  • Attractive and convenient website
  • WhatsApp group for the neighbors
  • Fast email procedures
  • Newsletter by mail
Conclusion
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• Acceptance is not just a matter of weighing benefits/risks, but is multifactorial
  • Anchoring is really positive – (connect to local living environment, social identity, meaningful, coherent with local politics)
  • Trust and relation building are essential – Initiators and operator must be trustful and in for a long standing relationship

• Recommendations for initiators/operators
  • Have a fair and dynamic vision of the public and stakeholders
  • Engage with your stakeholders & public – Go beyond established formal procedures if needed
  • Think in terms of project embeddedness instead of acceptance

• The context of contestation is responsive to the project
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