Establishing a geothermal risk mitigation scheme

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GEORISK Workshop, Praxiforum Geothermie Bayern

7th October 2019
1. Brief Introduction
2. Approach
3. Key features of a risk mitigation scheme
T3.2 - Framework conditions for establishing geothermal risk mitigation scheme

Focus on “resource risks”

- Resource risks are linked with the uncertainties of the subsurface and geological objects.
- Some existing risk mitigation schemes (RMS) covering those risks in Europe.

=> GEORISK will work to establish such risk insurance in Europe and in some key target third countries (WP 4 & 5)

Identification of key aspects of a risk mitigation scheme

- A number of key parameters characterize national systems that offset the developer’s resource risk:
  - they need to be addressed when establishing a new insurance scheme.
  - they should be taken into account by any entity willing to accept some or all of the resource risks on behalf of the project developer.

  - T3.2
    - provides a review of those parameters not already captured in task 3.1
    - addresses the source of funding of existing schemes: public, private or public/private partnership PPP.
Approach: The RMS Questionnaire

14 existing or in-preparation European RMS

- 11 Public
- 2 PPP
- 1 Private
Five key aspects of a risk mitigation scheme

public / private-public / private

1. Legal and regulatory boundary conditions: What is the basis for a specific risk transfer mechanism?

   • Depend on source of funding:
     - an act, an ordinance, a decree: Energy Act (CH) or Environment Act (PL), including CO₂-Act (CH) and climate change legislation (NL)
     - comprise both company laws, banking regulations and public laws (FR)
     - articles of association and charters of a commercial entity (TK)

   • Purpose:
     - Justify engaging in the development of a risk transfer mechanism.
     - Define the funding source and mechanisms of the RMS, its nature and form, its scope and duration, the structure of the aid granting authority and the operating entity, as well as the nature of the risks covered.
Five key aspects of a risk mitigation scheme

5. Identification of the risk(s) to be addressed: Which precise risk(s) need(s) to be transferred?

- **Resource risks** (D risk category, GEORISK Risk Register v4): Short-term resource risks (i.e. risks of not finding an adequate resource) and/or long-term resource risks (i.e. risks that the resource naturally declines over time) may be covered by public or PPP RMS.

- Risks due to uncertainties in the external context, mainly the lack of financing for the next phases (B2 risk) may be covered by public (DE and HU) and private RMS (TK).

- **Environmental risks** (F risk category) may be covered by public (PL) as well as private RMS along with social risks (B3 risk) (TK).

- **Technical risks/issues** (E risk category) in more mature market conditions may also be covered by public RMS (DE).
Five key aspects of a risk mitigation scheme

public / private-public / private

3. Funding of the risk transfer scheme: How is the risk transfer mechanism financed?

- Source of public funds: revenues generated by public institutions (fees, fines...), levies, tax, surcharges, application fees, repayment of aid.
- Source of PPP funding: seed capital, shareholder equity and fees from applicants.
- Source of private funding: percentages of the revenues of the private company.

4. Procedural aspects: What is the process for granting aid?

- All the procedural aspects must be clear, simple, streamlined and adapted to the purpose of the RMS.
- A clear list of required information and documents must be specified to the applicants.
- Parties involved in the assessment must be identified, their role defined and the workflow they follow to arrive at a decision must be described.
Five key aspects of a risk mitigation scheme

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5. Performance indicators: How is the RMS performing?

• Common performance indicators to all RMS: number of applications submitted and the percentage of successful applications, the volume of aid awarded, the evolution of the installed capacity, the creation of long-term employment, the increase of public subsurface data, the availability of new local competent work force, the creation of new industry standards…

• Dedicated performance indicators linked to the risk categories covered by the RMS and the specifics about the objectives of the implementation of this particular RMS, its legal and regulatory framework or funding mechanism.
  
  o Public: reduction of CO₂ emissions (CH)
  o PPP: Sustainability of the fund (FR)
  o Private: internal guidelines and targets of the private company, internally defined economic indicators or combinations indicators (TK)

• Need to be designed and implemented with the RMS.
Five key aspects of a risk mitigation scheme

1. **Legal and regulatory boundary conditions:** What is the basis for a specific risk transfer mechanism?
2. **Identification of the risk(s) to be addressed:** Which precise risk(s) need(s) to be transferred?
3. **Funding of the risk transfer scheme:** How is the risk transfer mechanism financed?
4. **Procedural aspects:** What is the process for granting aid?
5. **Performance indicators:** How is the RMS performing?
This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No [818232 — GEORISK]