

# Chapter Market update

Webinar consultation 24/05/2019



**ETIP-DG**

European Technology & Innovation  
Platform on **Deep Geothermal**

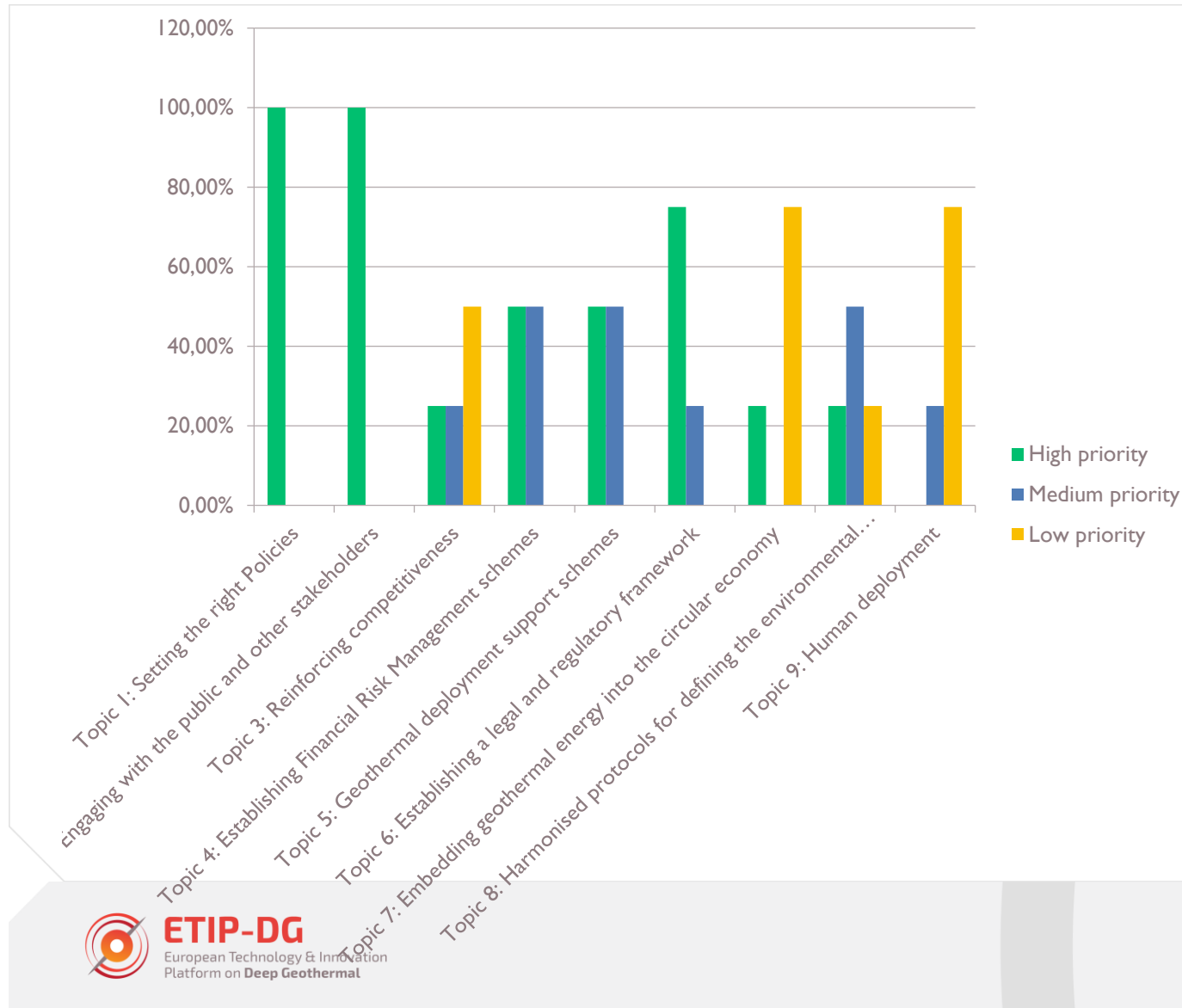
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# Steering Committee assessment

## Level of priority



## Merge suggestions:

Topic A: Improving the Policy & Regulatory framework (topics 1+6)

Topic B: Ensure Public engagement & mitigation environmental and health impacts (topics 2+8)

Topic C: Develop Innovative financing & reinforce competitiveness (topics 3+4+5)

Topic 'MISSION' (topic 7+8+9):  
 \* Embedding geothermal into the circular economy (topics 7+8)  
 \* Human deployment (topic 9)

# Action 1: Improving the Policy & Regulatory framework

## Objective

- Sets up a level playing field at the European and national levels
- Establish dedicated policies & a long-term vision and strategy for the development of deep geothermal in Europe
- Appropriate European and national legislation and regulations

## Target

1. Developing a welfare analysis of the increase of deep geothermal energy in the energy mix
2. replicating best practices on policies relevant for R&D&I in deep geothermal energy
3. A long-term vision and strategy for deep geothermal
4. Providing recommendations for European harmonisation, including mutual recognition of adequate national regulations: codes, licensing, permitting...

# Action 2: Ensure Public engagement & acceptance

## Objective

- Better understanding of a range of social and cultural aspects and factors which shape individual and community acceptance of geothermal
- Foster mutual learning amongst stakeholders, enhancing contributions from all societal actors and unleashing the potential of geothermal
- Include perspectives from the public and other stakeholders as part of the innovation process for geothermal
- Respond to environmental concerns and highlight the benefits of the deep geothermal market uptake, focusing on the environmental and health impacts

## Target

- 1) Definition of guidelines for systematic information
- 2) Education and information campaigns about geothermal energy technologies and developments
- 3) Definition and testing of public engagement strategies and practices in the geothermal field
- 4) Promote a life cycle assessment (LCA) model for geothermal installations
- 5) Communicate effectively with the general public regarding environmental and health concerns

# Action 3: Develop Innovative financing & reinforce competitiveness

## Objective

- Develop innovative financial support schemes to deploy geothermal
- Establish financial schemes to mitigate resource risk
- Developing a fair competition between energy sources, beyond a unique LCoE approach
- Establishing fair competition globally with the geothermal stakeholders from across the world

## Target

- 1) Establish financing mechanisms adapted to the specificities of geothermal technologies and the maturity level of markets and technologies, notably to allow market deployment of innovation
- 2) Creation of a risk sharing facility at national level and across borders (Pan-European)
- 3) Develop a comparison model about full costs of competitive heat and power energies.
- 4) Establish carbon pricing in order to integrate the costs of external factors into the full costs of an energy source.
- 5) Develop new business models for geothermal developers and operators, allowing them to sell their heat and power on different markets

## « Mission » system approach

- Embedding geothermal into the circular economy:
  - 1) Adopting geothermal standardisation procedures and quality branding
  - 2) Improving the applicability and use of recycled/secondary materials/waste in geothermal plants
- Human deployment:
  - 1) Enhancement of the educational and training process & Create Networks for Geothermal Energy Education and Training
  - 2) Develop an Employment action plan in order to transfer knowledge and absorb the workforce of declining industries while promoting the mobility of workers in Europe
  - 3) Launch international cooperation, especially for EGS

## From R&I to deployment - targets

- Set ambitious policies at EU and national levels to allow the development of the geothermal market and the penetration of innovation in the sector
- Adapt policies and markets. Research and assess the economic incentives and support mechanisms for geothermal (as well as legal and regulatory frameworks) that will enable fast deployment at a low price
- Minimise the uncertainty associated with geothermal energy by addressing and quantifying exploration risk, and develop financial tools that help mitigate such risks
- Comply with the European concept of the "circular economy"
- Ensure public engagement and acceptance. Further research is needed to understand the drivers of public engagement and develop a more effective way to communicate key aspects for public acceptance such as environmental and economic elements
- Ensure access to first-class skills and human resources and consolidate the scientific base for geothermal energy in order to cement progress and educate the next generation of geothermal pioneers



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