EGEC - European Geothermal Energy Council

Priorities for Geothermal Energy in FP7

EGEC has prepared a list of priorities for R&D required on the geothermal sector, as an input to the FP 7 discussion process. Representing the European geothermal industry, EGEC has focused more on application-oriented R&D for short- and medium-term topics. Thus this list can be seen as complementary to the relevant geothermal research priorities listed in the common EUREC/EREC paper "FP 7 Research Priorities for the Renewable Energy Sector", presented on March 1st, 2005, which cover more the medium- to long-term timeframe.

Sector 1: EGS (Enhanced Geothermal Systems for Power and CHP)

- Proliferation of the technology to other sites and regions
- Measures and technological development in order to multiply the number of EGS systems
- R&D on improvement of components (pumps, drilling, etc.)
- Potential 2020: 2 GW installed power without spec. support of investment
  6 GW installed power with specific support (RES directive);
  this are about the expectations of the EGEC Ferrara declaration from 1999.

A more detailed description of EGS research priorities can be found in the EUREC/EREC paper mentioned above.

Sector 2: "Classical" geothermal power and low/medium temperature power

- CHP, adapted power and DH-systems
- Improved energy conversion for conventional, ORC, Kalina, etc.
- Re-injection in high enthalpy areas (to foster sustainability and environmental friendliness)
- R&D on improvement of components (pumps, drilling, etc.)
- Demo for enhanced binary system
- Potential 2020: 1,5 GW installed power

Sector 3: Geothermal district heating

- Improved site assessment
- Modernisation and new plants in E/SE Europe and Turkey
- Innovative components (pumps, heat exchangers, etc.)
- Optimisation of networks

Sector 4: Shallow geothermal / Geothermal heat pumps

- Non-technical issues, quality, guidelines, regulation, infrastructure, promotion

Sector 5: Miscellaneous

- R&D on innovative concepts for geothermal energy in agriculture, aquaculture, drying
- Agricultural uses in combination with geothermal waters and chemicals
- De-icing, snow melting on roads, bridges, airport runways, etc.
- Sea-water desalination
- Geothermal absorption cooling
- Storage of heat or cold
- Use of automatic equipment for tunnelling, etc. for construction in hot environment
- Application of advanced control systems (automatisation, remote control)

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