



Welcome to the Volterra Workshop of the
**ENhanced Geothermal Innovative
Network for Europe**
“Exploring high-temperature reservoirs:
new challenges for geothermal energy”

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The ENGINE project: a priority thematic area for "Sustainable energy systems"

- > a need for co-ordinating ongoing research and promoting the development and uptake of innovative methods and technologies to expand the exploitation of **Unconventional Geothermal Resources**, in particular **Enhanced Geothermal Systems**.
- > A major scope is the identification of gaps that hamper the development of geothermal energy and definition of research targets for the future

Objectives of the coordination action

- > to motivate the scientific community to face up to the above-mentioned challenges
- > to capitalise the know-how acquired in the framework of the EGS Soultz experiment but also from the exploration and exploitation of Italy, Bouillante and Iceland geothermal fields
- > to define new integrated projects that will federate the scientific community working in the "geothermal field", in partnership with industry, in order to achieve the strategic objectives of the European Community

Extension of the network to Third countries (Mexico, El Salvador, Philippines)



WP1, Project Management

WP2, Information and dissemination system

WP3. Investigation of UGR and EGS ★ Italy (4/2007)

★ Germany (11/2206)
★ Mid-term Conference

WP6. Expertise on investigation of UGR and EGS

★ Launching Conf. (France 2/2006)

WP4. Drilling, stimulation and reservoir assessment

★ Switzerland (06/2006)
★ Mid-term Conference

★ Iceland (6/2007)
★ WP7. Expertise on drilling, stimulation and reservoir assessment

WP9. Risk evaluation for the development of geothermal energy

★ Final Conference

WP5. Exploitation, economic, environmental and social impacts

★ France (9/2006)
★ Mid-term Conference (Germany 01/2007)

★ Greece (9/2007)
★ WP8. Expertise on exploitation, economic, environmental, social impacts

★ The Netherlands

★ Specialised workshops

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Beginning of contacts with the Stakeholder Committee



7 specialised workshops

2006

2007

- > WP3: Defining, exploring, imaging and assessing reservoirs for potential heat exchange (Germany)
 - > WP3: Exploring high-temperature reservoirs: new challenges for geothermal energy (Italy)
- > WP4: Stimulation of reservoir and induced microseismicity (Switzerland)
 - > WP4: Drilling cost effectiveness and feasibility of high-temperature drilling (Iceland)
- > WP5: Electricity generation, combined heat and power (France)
 - > WP5: Increasing policy makers awareness and the public acceptance (Greece)
 - > WP9: Risk analysis for development of geothermal energy (Netherlands)

Key words for a co-ordination action

> An efficient network

- The conferences and workshops are designed mainly for sharing experience, disseminating best practices and integrating information from different sources
- The workshops must provide opportunities for discussing new ideas and concepts in order to promote new projects for the next future

> The production of the deliverables

- Publications (proceedings of workshops and conferences, review articles, analysis, reports..)
- A Web-site providing access to collected information
<http://engine.brgm.fr>

Some milestones of the ENGINE co-ordination action

> Present: Half-time...

- An intermediate report approved by EU commission
- Good links with other FP6 projects (Soulz, I-GET, Low-Bin, Groundhit, HITI)
- New proposal in the FP7 on induced seismicity
- Renewed interest for deep geothermal sources
- A growing interest for ENGINE

> Soon

- Perspective of two calls within the next work program of DG TREN on Enhanced Geothermal Systems
- A need for new EGS projects

> Future

- Continuation of the Co-ordination Action
- Building of an industrial / public European consortium defining an ambitious strategy for 2030 and proposing shared-risk projects at the scale of the continent