DEPLOYMENT OF DEEP ENHANCED GEOTHERMAL SYSTEMS FOR SUSTAINABLE ENERGY BUSINESS
General Presentation

1. May 2016

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DEEPEGS Project Description

EU SUPPORTED DEMONSTRATION PROJECT

• The goal is to demonstrate the feasibility of Enhanced Geothermal Systems (EGS) for delivering renewable energy for the European citizens
• The project will be testing stimulation technologies for EGS in deep wells in different geological settings

DEMONSTRATION LOCATIONS

• The project will demonstrate advanced technologies in three types of geothermal reservoirs,
  – in high enthalpy at Reykjanes with T up to 550°C and
  – two deep hydrothermal reservoirs in southern France with T up to 220°C.

PROJECT DETAILS

Coordinated by HS Orka, Iceland
4 year project started December 1, 2015

Consortium partner from
  Iceland, France, Germany, Italy, and Norway

€44.057.254
Total budget

€19.999.740
EC Grant
DEEPEGS Project aim

**AMBITION**
- Develop a *future approach to geothermal energy* by implementing deep EGS methodologies,
- Laying the *foundation of a novel geothermal engineering* allow widespread exploitation of deep heat resources for improved energy security.

**BUSINESS MODEL TO BE CREATED**
- Robust business models for EGS wide spread deployments will be developed
- Showcasing Business Case demonstrators of EGS for deep geothermal energy
- Feasibility frameworks for exploitation in different geological areas/conditions
- Market analysis and cost-benefit assessments for wider deployments of EGS in Europe and world wide

**EXPECTED IMPACT**
- *Bring down cost* of renewable energy and *increase the attractiveness* of renewable heating and cooling technologies
- Reduce life-cycle environmental impact
- Improve EU *energy security*
- Make renewable electricity generation *more predictable*
- Strengthen the European industrial technology base
DEEPEGS – Project Consortium

**Partners**

- **Iceland:**
  - HS Orka
  - ISOR
  - GEORG
  - Landsvirkjun

- **France:**
  - BRGM
  - Fonroche Geothermie

- **Germany:**
  - Herrenknecht Vertical
  - Karlsruher Institut fuer Technologie

- **Italy:**
  - Enel Green Power

- **Norway:**
  - Statoil

**Demonstration sites**

- **Iceland:** RN-15 Reykjaness
- **France:** Valence
- **France:** Vistrenque or Riom-Limagne
DEEPEGS – Industry driven consortium
Plans for widespread business exploitations in Europe in 3-5 years following end of the DEEPEGS project.
DEEPEGS background experience
Technology Readiness Level

**Inputs**
- IDDPI: KRAFLA
- SOULTZ project

**Outputs**
- New Technologies
- New Models

**Business Models**
- TRL8-9

**Inputs**
- Technology & expertise

**Outputs**
- 3 Demonstrator's

**Technology Readiness Levels**
- **TRL 5:** Large scale prototype tested in intended environment.
- **TRL 6:** Prototype system tested in intended environment close to expected performance.
- **TRL 7:** Demonstration system operating in operational environment at pre-commercial scale.
Concluding Remarks

• DEEPEGS project will demonstrate the feasibility of enhanced geothermal systems (EGS) for delivering renewable energy for the European citizens.

• The DEEPEGS consortium is industry driven, with five energy companies that will through cross-fertilization and sharing of knowledge and experiences are capable of implementing the project goal.

• The DEEPEGS project will mobilise the considerable personnel efforts needed to implement successful EGS demonstrators, and the project team is highly experienced in all the areas required to deliver this impact.

• DEEPEGS will contribute to increased energy security and share of renewable energy in the total energy mix.

• The project will focus on three different geological environments as key demonstrators and business cases that can lead to rapid widespread deployment to other areas in Europe.
Thank you!

For more information please contact us via

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