



# ENGINE

*ENhanced Geothermal  
Innovative Network  
for Europe*

*Launching Conference*

12-15 February 2006  
BRGM - ORLÉANS - FRANCE



**Programme**

<http://engine.brgm.fr>



Geosciences for a sustainable Earth

**brgm**



## **Detailed Program - Launching conference**

**Sunday 12 February 2006 - Wednesday 15 February 2006**

**BRGM, Orléans, France**

### **Sunday 12 February 2006**

**14h00 – 19h00** - Reception of participants - Hôtel Domaine Portes de Sologne (ARDON)

**19h00 – 21h00** - Reception of participants: Ice breaker - Hôtel Domaine Portes de Sologne



## Monday 13 February 2006

**8h30 – 10h00** - Formal meeting of the Executive Group - J2 - 8th floor

**8h30 – 12h00** - Reception of registrants - Auditorium

**9h00 – 9h15** - Bus transfer - Hôtel Domaine Portes de Sologne to BRGM

**9h30 – 9h45** - Bus transfer - Hôtel Domaine Portes de Sologne to BRGM

### 10h00 – 12h00

#### Work Package Meetings

**10h00 – 12h00** - Work package special meetings: Work package WP2 - D2 - 1<sup>st</sup> floor - 119

Convener: CALCAGNO Philippe

**10h00 – 12h00** - Work package special meetings: Work packages WP3 & WP6 - C4 - Ground floor - R 31

Conveners: MANZELLA Adele, KOHL Thomas

**10h00 – 12h00** - Work package special meetings: Work packages WP4 & WP7 – D2 - 1<sup>st</sup> floor - 117

Conveners: THORHALLSSON Sven, HUENGES Ernst

**10h00 – 12h00** - Work package special meetings: Work packages WP5, WP8 & WP9 - C1 - Ground floor - R 05

Conveners: KALTSCHMITT Martin, KARYTSAS Costas, LOKHORST Ad

**12h00 – 13h15** - Lunch break - Restaurant

**13h15 – 13h30** - Coffee break - Auditorium

### 13h30 – 15h40

#### OPENING SESSION – Auditorium

**13h30 – 13h45** Welcome from the President Philippe VESSERON - BRGM

**13h45 – 14h00** Welcome from the President Michèle PAPPALARDO - ADEME

**14h00 – 14h20** - FOUILLAG Christian - Geothermal energy and strategies to reduce greenhouse gas emissions

**14h20 – 14h40** - SCHUPPERS Jeroen - EC support to geothermal energy research and demonstration



**14h40 – 15h00** - KALTSCHEMITT Martin - Policies and strategies for the development of geothermal energy

**15h00 – 15h20** - RYBACH Ladislaus - Enhanced Geothermal Systems: challenges and problems ahead

**15h20 – 15h40** - LEDRU Patrick - Why a co-ordination action about Enhanced Geothermal System?

**15h40 – 16h00** - Coffee break - Auditorium

## **16h00 – 18h00**

### **SESSION 1: Current and planned geothermal activity in Europe** **Auditodium**

**16h00 – 16h15** - FRITSCH Daniel - Current status of the EGS Soultz project: main achievements, results and targets

**16h15 – 16h30** - BAUMGÄRTNER Jörg - Geothermal exploration in the Upper Rhine valley in Germany

**16h30 – 16h45** - HOPKIRK Robert - The Swiss Deep Heat Mining programme: activities & perspectives

**16h45 – 17h00** - Questions and discussions

**17h00 – 17h15** - HUENGES Ernst - Current status of the EGS Gross Schönebeck project within the North German basin: main achievements and perspectives

**17h15 – 17h30** - ORZOL Jens - The GeneSys- and Prometheus-Projects: concepts for the extraction of heat from deep and tight sedimentary rock

**17h30 – 17h45** - MANZELLA Adele - Current status of the high enthalpy conventional geothermal fields in Europe and the potential perspectives for their exploitation in terms of EGS

**17h45 – 18h00** - Questions and discussions

**18h15 – 19h00** - Bus transfer - BRGM (visitor reception) to Orléans downtown

**19h00 – 20h00** - Orléans City Hall reception - Hôtel Groslot

**20h00 – 23h00** - Free time - Orléans

**23h00 – 23h30** - Bus transfer - Orléans downtown (City Hall) to Hôtel Domaine Portes de Sologne



## Tuesday 14 February 2006

**8h00 – 8h15 -** Bus transfer - Hôtel Domaine Portes de Sologne to BRGM

**8h30 – 8h45 -** Bus transfer - Hôtel Domaine Portes de Sologne to BRGM

**9h00 – 11h00**

### **SESSION 2: What needs for successful investigation of enhanced geothermal systems?**

**Auditorium**

**9h00 – 9h15 -** MENDRINOS Dimitrios - A review of the results presented in WGC 2005 concerning the investigations of enhanced geothermal systems

**9h15 – 9h30 -** FABRIOL Hubert - Evaluation of the different geophysical exploration methods through analysis of experiences in Europe and overseas

**9h30 – 9h45 -** MANZELLA Adele - Magnetotelluric in combination with seismic data for geothermal exploration

**9h45 – 10h00 -** Questions and discussions

**10h00 – 10h15 -** BRUHN David - Rising open questions on investigation of Enhanced Geothermal Systems, as addressed by the I-GET project

**10h15 – 10h30 -** CAPPETTI Guido - How EGS is investigated in the case of the Larderello geothermal field?

**10h30 – 10h45 -** HOLL Heinz-Gerd - Geothermal reservoir characterisation of clastic sedimentary targets - needs and gaps

**10h45 – 11h00 -** Questions and discussions

**11h00 – 11h30 -** Coffee break - Auditorium



**11h30 – 12h45**

**SESSION 3: Where shall we find new geothermal resources at depth  
at the scale of Europe?**

**Auditorium**

**11h30 – 11h45** - DÖVÉNY Péter - EGS prospects in Hungary

**11h45 – 12h00** - GENTER Albert - EGS resource in France and Europe

**12h00 – 12h15** - CLOETINGH Sierd - Lithosphere temperatures and geothermal energy

**12h15 – 12h30** - GUILLOU-FROTTIER Laurent - Temperature profiles in geothermal systems

**12h30 – 12h45** - Questions and discussions

**12h45 – 13h00**

**SESSION 3: Where shall we find new geothermal resources at depth  
at the scale of Europe?**

**Poster session - Auditorium**

**12h45 – 13h00** - TESAURO Magdalena - 3D strength and thermal model of intraplate Europe

**13h00 – 14h15** - Lunch break - Restaurant

**14h15 – 14h30** - Coffee break - Auditorium

**14h30 – 15h15**

**SESSION 3: Where shall we find new geothermal resources at depth  
at the scale of Europe?**

**Auditorium**

**14h30 – 14h45** - FOERSTER Andrea - The geothermal use of HHP granites: the recycling of an old concept

**14h45 – 15h00** - WRÓBLEWSKA Marta - Development of Polish Geothermics in relationship to heat flow data

**15h00 – 15h15** - Questions and discussions



**15h15 – 16h15**

**SESSION 4: What lessons from the oil and geothermal field exploitation  
for the stimulation of the reservoir?**

**Auditorium**

**15h15 – 15h30** - KOHL Thomas - Drilling, stimulation and reservoir assessment for EGS and UGR projects

**15h30 – 15h45** - ASMUNDSSON Ragnar - Needs and requirements for high temperature instrumentation in extreme geothermal environment

**15h45 – 16h00** - EVANS Keith - Microseismics and reservoir engineering: What can we learn and what is the price?

**16h00 – 16h15** - Questions and discussions

**16h15 – 16h45** - Coffee break - Auditorium

**16h45 – 18h30**

**SESSION 4: What lessons from the oil and geothermal field exploitation  
for the stimulation of the reservoir?**

**Auditorium**

**16h45 – 17h00** - DORBATH Louis - Microseismicity developments during hydraulic stimulations at Soultz-sous-Forêts

**17h00 – 17h15** - TISCHNER Torsten - Hydraulic stimulation of EGS: A comparison of the HDR-project Soultz and the GeneSys project

**17h15 – 17h30** - GENTIER Sylvie - Hydro-mechanical modeling of fractured crystalline reservoirs hydraulically stimulated

**17h30 – 17h45** - Questions and discussions

**17h45 – 18h00** - VUATAZ François-David - Overview of chemical stimulations of EGS and non EGS reservoirs

**18h00 – 18h15** - ROSE Peter - A comparison of hydraulic stimulation approaches within EGS and conventional geothermal reservoirs with examples from Soultz, France and Coso, California

**18h15 – 18h30** - Questions and discussions

**18h30 – 18h45** - Bus transfer - BRGM (visitor reception) to Hôtel Domaine Portes de Sologne

**19h30 – 23h00** - Conference dinner - Restaurant Domaine Portes de Sologne



## Wednesday 15 February 2006

**8h00 – 8h15 -** Bus transfer - Hôtel Domaine Portes de Sologne to BRGM

**8h30 – 8h45 -** Bus transfer - Hôtel Domaine Portes de Sologne to BRGM

### 9h00 – 10h30

#### **SESSION 5: How to improve exploitation and cost-effectiveness of geothermal energy and manage environmental and social impacts?**

##### **Auditorium**

**9h00 – 9h15 -** MÉGEL Thomas - Requirements for the development of EGS

**9h15 – 9h30 -** MENDRINOS Dimitrios - The environmental impact of the geothermal industry

**9h30 – 9h45 -** KÖHLER Silke - Trigeneration with geothermal energy - potentials and pitfalls of combined supply with power, heating and cooling

**9h45 – 10h00 -** STAMATAKIS Emmanuel - Scale detection in geothermal systems: the use of nuclear monitoring techniques

**10h00 – 10h15 -** UNGEMACH Pierre - Geothermal reservoir management a thirty year practice in the Paris Basin

**10h15 – 10h30 -** Questions and discussions

**10h30 – 10h45 -** Coffee break - Auditorium

### 10h45 – 12h00

#### **SESSION 5: How to improve exploitation and cost-effectiveness of geothermal energy and manage environmental and social impacts?**

##### **Auditorium**

**10h45 – 11h00 -** TRAINEAU Hervé - Geothermal development in the volcanic Caribbean islands and EGS perspectives

**11h00 – 11h15 -** POVAROV Oleg - State of the art and prospects for geothermal energy development in Russia

**11h15 – 11h30 -** KAYA Tevfik - Development of the Geothermal Energy in Turkey, state of art and perspectives

**11h30 – 11h45 -** KARYTSAS Constantine - The LOW-BIN project of DG-TREN (efficient low temperature geothermal binary power) aiming in improving EGS exploitation costs

**11h45 – 12h00 -** Questions and discussions



## 12h00 – 13h00

### **SESSION 6: How to promote geothermal energy through dissemination of knowledge, education and training?**

#### **Auditorium**

**12h00 – 12h15** - CALCAGNO Philippe - The information system of the ENGINE co-ordination action

**12h15 – 12h30** - ROSCA Marcel - Promotion of the geothermal energy through education and training

**12h30 – 12h45** - MANZELLA Adele - Information and dissemination of knowledge in the field of geothermal energy

**12h45 – 13h00** - Questions and discussions

**13h00 – 14h30** - Lunch break - Restaurant

## 14h30 – 16h00

### **Work Package Meetings**

**14h30 – 16h00** - Work package special meetings: Work package WP2 - D2 - 1<sup>st</sup> floor - 119

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Conveners: KALTSCHMITT Martin, KARYTSAS Costas, LOKHORST Ad

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**16h00 – 18h00** - Formal meeting of the Steering Committee - C4 - Ground floor R 31

**16h30 – 17h00** - Bus transfer - BRGM (visitor reception) to Orléans downtown



## Event Program

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### 13h30 – 15h40

#### OPENING SESSION – Auditorium

**15h40 – 16h00** - Coffee break - Auditorium



**16h00 – 18h00**

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### **SESSION 2: What needs for successful investigation of enhanced geothermal systems?**

**Auditorium**

**11h00 – 11h30** - Coffee break - Auditorium

**11h30 – 13h00**

### **SESSION 3: Where shall we find new geothermal resources at depth at the scale of Europe?**

**Auditorium**

**13h00 – 14h15** - Lunch break - Restaurant

**14h15 – 14h30** - Coffee break - Auditorium

**14h30 – 15h15**

### **SESSION 3: Where shall we find new geothermal resources at depth at the scale of Europe?**

**Auditorium**

**15h15 – 16h15**

### **SESSION 4: What lessons from the oil and geothermal field exploitation for the stimulation of the reservoir?**

**Auditorium**

**16h15 – 16h45** - Coffee break - Auditorium



**16h45 – 18h30**

**SESSION 4: What lessons from the oil and geothermal field exploitation  
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**9h00 – 10h30**

**SESSION 5: How to improve exploitation and cost-effectiveness  
of geothermal energy and manage environmental and social impacts?**

**Auditorium**

**10h30 – 10h45 -** Coffee break - Auditorium

**10h45 – 12h00**

**SESSION 5: How to improve exploitation and cost-effectiveness  
of geothermal energy and manage environmental and social impacts?**

**Auditorium**

**12h00 – 13h00**

**SESSION 6: How to promote geothermal energy through dissemination  
of knowledge, education and training?**

**Auditorium**

**13h00 – 14h30 -** Lunch break - Restaurant

**14h30 – 16h00**

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**Sunday 12**

14h00 – 21h00 Reception hotel

**Monday 13**

8h30 – 12h00	Transfer hôtel to BRGM and reception of registrants
10h00 – 12h00	Work package meetings
12h00 – 13h30	Restaurant and coffee break
13h30 – 15h40	Opening session - Auditorium
15h40 – 16h00	Coffee break
16h00 – 18h00	Session 1
18h15 – 23h00	Transfer BRGM to Orléans hotel Groslot and free time Orléans
23h00 – 23h30	Transfer Orléans to hôtel

**Tuesday 14**

8h00 – 8h45	Transfer hôtel to BRGM
9h00 – 11h00	Session 2
11h00 – 11h30	Coffee break
11h30 – 13h00	Session 3
13h00 – 14h30	Restaurant and coffee break
14h30 – 15h15	Session 3
15h15 – 16h15	Session 4
16h15 – 16h45	Coffee break
16h45 – 18h30	Session 4
18h30 – 18h45	Transfer BRGM to hôtel
19h30 – 23h00	Conference dinner

**Wednesday 15**

8h00 – 8h45	Transfer hôtel to BRGM
9h00 – 10h30	Session 5
10h30 – 10h45	Coffee break
10h45 – 13h00	Session 5 - Session 6
13h00 – 14h30	Lunch break
14h30 – 16h00	Work package meetings
16h00 – 18h00	Formal meeting of the steering committee
16h30 – 17h00	Transfer BRGM to Orléans

## The **ENGINE** Launching Conference is co-sponsored by:



## The **ENGINE** partners:



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ENGINE Launching Conference  
Orléans - France  
12-15 February 2006

Jointly organised by

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