

# Webinar on Horizon 2020

19/6/2014

## *Project ideas*

## LCE 2 – Deep Geothermal Energy: *Development of new technologies and concepts for geothermal energy*

Deadline **3/9/2014** (stage 1)      Expected project size : **3-6 M€**

RTL: *from 3-4 (lab validated technology) to 5-6 (in situ technology validation/demonstration)*

- Project Idea: *Inverse problem, reservoir geostatistical simulation and production simulation modelling for investment risk assessment*

## LCE 2 – Deep Geothermal Energy:

*Development of new technologies and concepts for geothermal energy*

*Project Idea: Inverse problem, reservoir geostatistical simulation and production simulation modelling for investment risk assessment*

- Objectives: Improving and qualifying the risk assessment of a deep geothermal investment for energy sustainable production
- Relation to the work programme: the technology-specific challenge of the call topic aims to increase the understanding and mitigate the risks in geothermal area

LCE 2 – Deep Geothermal Energy:

*Development of new technologies and concepts for geothermal energy*

*Project Idea: Inverse problem, reservoir geostatistical simulation and production simulation modelling for investment risk assessment*

- *Concept and approach*: The correct evaluation of spatial distribution inside a reservoir of petrophysical parameters (permabilities, thermal conductivities/capacities, temperatures, fluid composition, ...) is the main challenge for the investment evaluation, because they are not known and must be estimated

LCE 2 – Deep Geothermal Energy:

*Development of new technologies and concepts for geothermal energy*

*Project Idea: Inverse problem, reservoir geostatistical simulation and production simulation modelling for investment risk assessment*

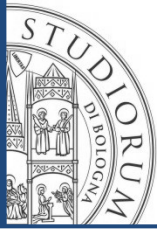
- Concept and approach (*follows*): The oil industry exploits advanced geostatistical modelling for risk evaluation in several decision phases: a) exploration borehole; b) reservoir modelling by the solution of the «inverse problem»; c) risk analysis of full investment project IRR by simulating possible reservoir images.

LCE 2 – Deep Geothermal Energy:

*Development of new technologies and concepts for geothermal energy*

*Project Idea: Inverse problem, reservoir geostatistical simulation and production simulation modelling for investment risk assessment*

- *Positioning of the project*: geostatistical analysis and modelling of a geothermal reservoir has been developed at lab level (TRL 3-4). It must be applied to a real case to validate and demonstrate the benefit of the technology (TRL 5-6).



ALMA MATER STUDIORUM  
UNIVERSITÀ DI BOLOGNA

## Roberto BRUNO – Francesco TINTI

*Research & Study Centre on Mining Engineering*

**DICAM - Department of Civil, Chemical, Environmental and Materials Engineering**, University of Bologna,

Via Terracini, 28 - 40131 Bologna

tel +39 0512090238 ; fax +39 0512090308; cell. +39 3355468613

skype: roberto.bruno-unibo.it; e-mail: roberto.bruno@unibo.it

*www.dicam.unibo.it*