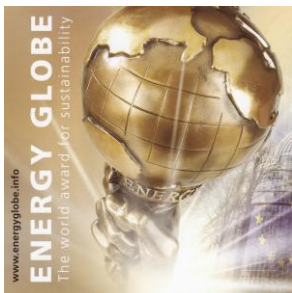


GeoDH Romanian National Training Workshop Report November 20th 2014

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SOCIETATEA ROMANA GEOEXCHANGE

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Summary

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I. Background

The Romanian national GeoDH training workshop was organized by the Romanian Geoexchange Society based on the deliverables produced in the frame of the GeoDH IEE project and on the Romanian national projects dealing with the topic of geothermal district heating & cooling. The financial and organizational aspects of the Romanian national training workshop respect the provisions of the addendum to the GeoDH contract concluded between EGEC and the Romanian Geoexchange Society.

Workshop agenda

The agenda of the GeoDH workshop was finalized 1 month before the workshop (Annex 1).

In the final version of the agenda, ALL of the GeoDH presentations were made by Prof. Robert Gavriiliuc (Romanian Geoexchange Society). Unfortunately, the training workshop was not attended by any GeoDH partners' members involved in the elaboration of the training materials and in the training program.

Although the date of the Romanian training workshop was announced early enough, we could not benefit from the CDs and the handbooks delivered within the project – these training materials could not be handed to the participants at the workshop.

The presentations of the Romanian national projects dealing with the topic of geothermal district heating & cooling were made by their authors, according to the agenda of the workshop.

During the workshop, a Wi-Fi connection to the EGEC website was achieved, allowing a real-time demonstration of the interactive web-map constructed in the frame of the GeoDH project. The demonstration was focused on the Romanian geographical territory, presenting the geothermal district heating systems from Romania and the potential for further development. From the EGEC website, the participants could also learn about other projects run by EGEC, such as: Geotrained, Regeocities, Geoelec, Thermomap, a.o.

There were also two short movies presented: the first one was the movie on geothermal district heating prepared by Alexandra Latham in the frame of the GeoDH project, and the second one was about the production process at the Hellisheidi power plant from Iceland.

All the participants received the Romanian version of the printed brochure presenting the GeoDH project and the program of the event. Consequently, all the participants

received by email – sent to the email addresses filled in on the participants’ list – an archive of all the presentations made during the workshop. After the event, all the presentations were installed on RGS site www.geoexchange-romania.ro

Venue

The venue was the “Columns’ Hall” of the Faculty of Building Services Engineering from the Technical University of Civil Engineering Bucharest. The faculty building also hosts the headquarters of the Romanian Geoexchange Society, together with other professional associations. The maximum capacity of the hall is 70 persons around 2 conference tables and flexible arrangement of chairs along the walls.

The number of participants in the workshop was 46 persons - the list is attached as a separate file. The RGS members directly involved in the workshop organization were:

- Prof. Robert Gavriiliuc – RGS President
- Doina Cucueteanu – Director
- Radu Polizu – Vicepresident
- Cristian Tudor – PhD student – responsible with the logistigcs
- Matei Vlad Gavriiliuc – Master student – responsible with registration



II. Participants

The workshop was attended by participants representing various actors on the geothermal energy market. For the first time after a very long period of time – as

acknowledged by all the participants! – very different actors sat at the same table and exchanged ideas and opinions.



The participants can be divided into several categories, as follows:

- central authorities, such as:

- the Ministry of Economy through the Intermediate Organism for Energy;
- the National Administration for Mineral Resources (responsible for the exploitation of the underground resources);
- the National Agency for Public Services (responsible for the operation and management of the district heating systems all around Romania);
- the National Agency for the Environment Fund (responsible for the management of funding of environmental related projects – geothermal and hydro-thermal heat pumps included)

- local authorities, such as the Sector 2 City Hall Bucharest;

- NGOs dealing with energy efficiency issues and their funding, such as: the Buildings Performance Institute Europe; CDT Profex; Business Development Group BDG;

- research and design institutes in the field of energy, district heating, and underground waters, such as: ISPE Bucharest; URBAN-INCERC Bucharest; INHGA Bucharest;

- the Romanian Academy through its Center for the Promotion of Renewables and Energy Efficiency;

- private companies, active in the field of: refrigeration and heat pumps - Daikin Romania; piping - Rehau Romania, district heating systems – Dalkia; geothermal heat pumps - Geoterm, Technocon, Pecef; drilling – Foradex, Adriels Group;

- ESCO's – such as Energy Serv;

- technical universities, such as: the Technical University of Civil Engineering Bucharest (through its Research Center for Underground Waters and Research Center for Energy Efficiency in the Built Environment); the POLITEHNICA University Bucharest.

III. Debates

The presentations prepared in the frame of the GeoDH project were the trigger for very vivid debates among participants, the main issues discussed being:

- the quality aspects of the technical projects presented;
- the financing problems of the geothermal projects in general;
- the difficult administrative issues related to the implementation of a geothermal project, from permits up to the implementation phase;
- the legal characteristics of geothermal wells, such as: licencing, taxes, conservation, cooperation with local administrations for exploitation and operation;
- the problems of district heating systems: clients' lost; high costs for refurbishment (source level and network level);



IV. Conclusions and next steps

The participants expressed the satisfaction regarding their participation and the possibility to obtain information from very reliable European and national sources (EGEC, RGS). They were very pleased by the contacts they made during the workshop and by the vivid discussions among participants – facts proven by follow-up contacts made by the organizers.

The discussions enabled the initiation of further cooperation with regard to the following issues:

- participation at the elaboration of the new law regarding the mineral resources – invitation from the National Administration for Mineral Resources;
- participation at the elaboration of the strategy with regard to the use of renewable energy sources in general, and of the geothermal energy in particular – supervised by the Romanian Academy and the Romanian Council for Energy;
- cooperation – with ESCOs & local authorities & universities - for finding financing sources for geothermal projects

From the point of view of RGS, the conclusions are the following:

- bringing together participants from such different sectors proved to be a huge success;
- the Romanian Geoexchange Society and the academic institutions can and must become a turning plate for streamlining the efforts of such different partners involved in the elaboration and implementation of geothermal projects;
- the experience exchange among partners with different but complementary knowledge proved to be extremely beneficial for all.

V. List of participants

The list is in a separate pdf file attached at the e-mail message.

GeoDH Training workshop agenda
Bucharest – November 20th 2014
Technical University of Civil Engineering Bucharest
Faculty of Building Services Engineering

Time table	Action	Person(s) in charge
8.30 - 9.00	Participants registration & coffee	Drd.ing. Tudor Cristian
9.00 – 9.10	Welcome to participants	Sorin Burchiu - Dean
9.10 – 9.15	Workshop's opening	Robert Gavriiliuc (RGS)
9.15 – 10.15	Geothermal technology	
	Overview of geothermal energy	Robert Gavriiliuc (RGS)
	Prospective for geothermal DH in Europe & Geothermal DH potential in Europe, webmap viewer	
	Geothermal project phases and concepts	
	Drilling technologies, Production, Operation and Management	
10.15 – 11.00	District heating technology	
	Planning (Existing infrastructure or new, Heat demand, Other producers, Interaction between geothermal and other producers to meet heat demand)	Robert Gavriiliuc (RGS)
	DH network (Transmission and/or distribution network, Temperature level)	
	Geothermal plant (Principal sketch with elements, Heat exchangers, Heat pumps, Design of plant size, Water chemistry)	
11.00 – 11.15	Coffee break	
11.15 – 12.00	Non technical issues	
	Regulations, standards and codes	Robert Gavriiliuc (RGS)
	Environmental issues	
	Risk insurance	
	Financing costs and investment analysis	
12.00 – 13.00	Projects & Project proposals in Romania	
	MATES Project	Cristian Petcu, Ph.D. – INCD URBAN INCERC
	TRANSACUT Project	S.Strachinescu, M. Raileanu, S.C. Technocon Engineering
	STEI Project	S.C. ADRIELS Group & UTCB
	OTOPENI District Heating Project	S.C. Thermaflex
	The “SOLARIS” house - geothermal & solar house concept	Neculai Negut, M.Sc. – S.C. GEOTERM