D.5.2. Report on National Training Workshops – Hungary

Date and venue:

November 5, 2014, Budapest, Geological and Geophysical Institute of Hungary, H-1143 Budapest, Stefánia 14. (National training workshop)

November 6, 2014 Kistokaj, Hungary, Site visit at the Miskolc Geothremal District Heating System, operated by Pannergy Ltd.

Event organizers:

Geological and Geophysical Institute of Hungary (MFGI), Hungarian Chamber of Engineers – Section Geothermal, Geotermia Express Ltd.

Program:

The detailed program of the November 5 Training workshop is in Attachment 1. First A. Nádor (MFGI) gave an overview on the GeoDH project goals and main results, as well as a short introduction on the geological background of geothermal district heating (sections 1.1., 1.2., 1.3., and 1.4 of the Training Manual), as well as some aspects of regulations (section 3.1 of the Training Manual) and environmental issues (section 3.2. of the Training Manual). This was followed by an online presentation by L. Orosz (MFGI) on the interactive web-map tool, showing the geologically potential areas for GeoDH matching existing heat demands, and the main functionalities of the web-portal. In the next presentation A. Kujbus (Geotermia Express Ltd) overviewed the planning of geothermal projects and operation of different technologies (section 1.5. of the Training Manual), as well as financial aspects (sections 3.3 and 3.4 of the Traning Manual). The next presentation by E. Bitay (Vikuv Ltd) was about drilling technologies (section 1.6 of the Training Manual). It was followed by a presentation of L. Ádám (Mannvit Ltd) overviewing everyday management of geothermal projects (section 1.7. of the Training Manual). The last presentation given by T. Orbán (Főtáv Ltd) encompassed all aspects of district heating and the potential roles of geothermal (section 2 of the Training Manual).

After the lunch a roundtable discussion was organized with the participation of G. Szita (Hungarian Geothermal Association), M. Kurunczi (Hungarian Thermal Energy Association), I. Döbrőssy (Szentes ESCO) and T. Orbán (Főtáv Zrt.), where the actual Hungarian situation of geoDh was overviewed.

On November 6 a one-day field trip was organized (with bus transport from Budapest) to Kistokaj to visit Hungary's largest geothermal district heating system operated by Pannergy. The participants first had an introduction at the Visitors Center with the possibility of the visit of the tehnical facilities of the heating center itself, than they went to see one of the production wells.

Materials given to participants:

Participants were provided by the printed version of the GeoDH Brochure (Hungarian version) and were informed that the Training Manual is available at the GeoDH project website (printed versions of the Manual arrived only at the end of November).

Number of participants:

At the workshop there were altogether 81 participants (Appendix 2), whereas at the site visit 41 people attended (Appendix 3). They represented municipalities, private companies, ESCO-s, regional authorities, ministries, academia, universities.

Workshop short description and summary

The workshop was very successful, the great number of participants (81 and 41 respectively) showed a big interest in the topic. All topics of the Training Manual were covered by the different speakers, therefore the workshop fulfilled its objectives.

The view of the DH sector, presented by T.Orbán (Főtáv Zrt) was one of the most interesting presentations of the workshop: the excellent overview highlighted the realistic place of geothermal in the DH sector, the possibilities and obstacles. It also confirmed that an alive discussion and cross-fertilization of the geothermal and the distrct heating sector is a must to enhance geoDH systems in the future.

The site visit was also unique, this was the first time that the Kistokaj system was publicly presented to the geothermal experts in Hungary. There were many technical questions about the operation of the system, which were answered by Pannergy experts.

Actions /outcomes of the workshop

At the end of the workshop it was concluded that the main obstacles of development of geoDH in Hungary are non-technical barriers, especially financing and the unfavorable position of renewables in the current energy policy of the country. It was agreed that geothermal in itself does not have enough lobbying strength, therefore should address policy makers together with other renewable energy stakeholders (especially biomass and solar). It was also highlighted that in the current funding schemes (Energy and Environment Operational Program) a significant part of the finances available is for the surface technologies, therefore does not support geothermal efficiently.


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Country **Venue, Date**	**Organiser/s**	**Attendees'** **number**	**Wksp's materials put on website** **Yes/No**	**Comments,** **Summary**	**<u>Actions that were /or are planned by the participants as results of the Wksp</u>**
Hungary, November 5-6, 2014, Budapest, Kistokaj	MFGI, Hungarian Chamber of Engineers – Section Geothermal, Geotermia Express Ltd.	81 (training workshop) 41 (site visit)	yes	A successful workshop with high number of participants, including site visit to Hungary's largest geoDH system	Cross-fertilization with the DH sector is essential. Lobbying towards policy makers with other RES is required.