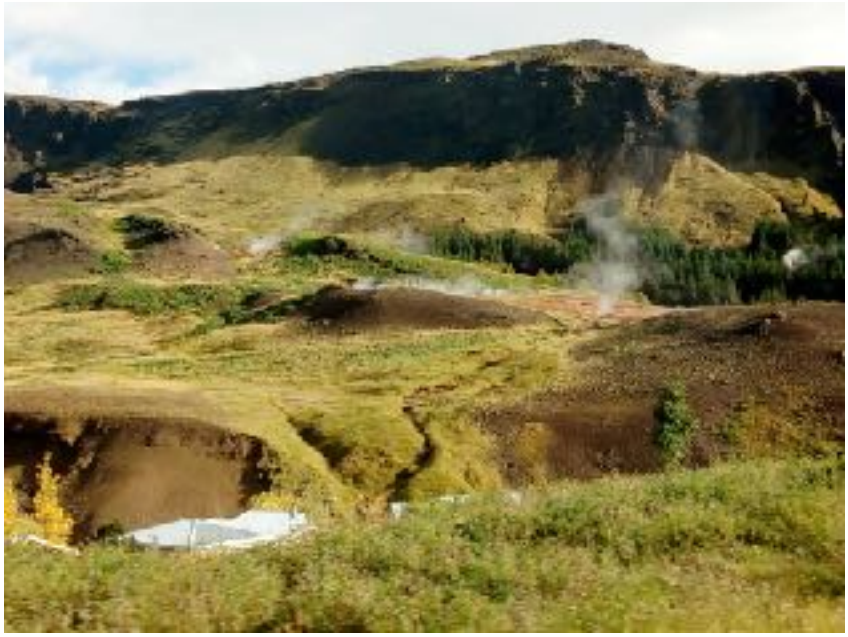
Report on the activity

“Geothermal workshop on Iceland for local governments"



Made by: Gábor Cseri

9 October 2017

Short description of the call

The three days professional programme titled “Geothermal workshop in Iceland for local governments” was held between 18 and 22 September 2017, within the European Economic Financial Mechanism (EEA Grants) 2009-2014 Renewable Energy Programme. 27 officials from 10 municipalities, responsible for tasks such as decision making, engineering and management, participated in the practice-oriented short training that aimed for the acquisition of a basic knowledge necessary to the utilisation of geothermal energy, and promoted the building of relations and long-term cooperation.

The Ministry of National Development, as Programme Operator, and the National Energy Authority of Iceland, as Donor Programme Partner, took part in the implementation of the training, which had been supported with 134.900 euros by the Fund for Bilateral Relations at Programme Level of the EEA Grants Renewable Energy (HU03) Programme, with an aid intensity of 100%.

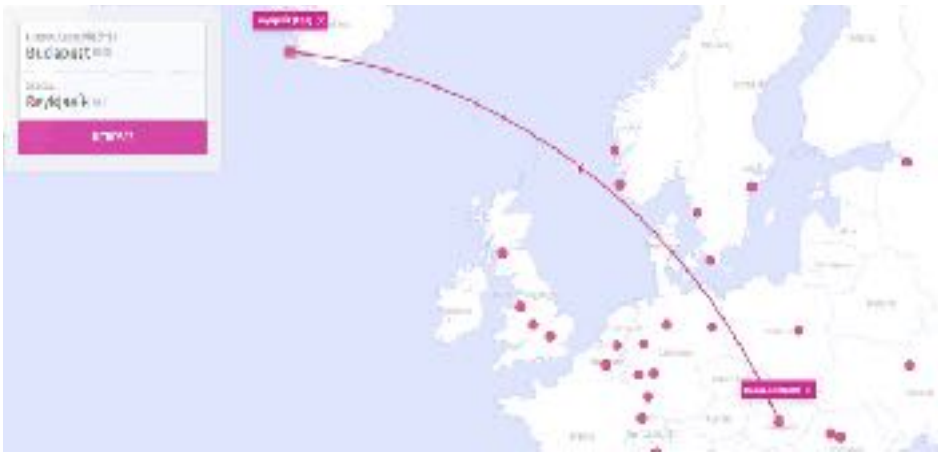
Eligible applicants for the open call number HU03-Bilat-A-2017 of the Ministry of National Development, published with the goal of strengthening bilateral relations, were local governments of settlements with a geothermal potential and a district heating network, committed to using geothermal resources as a renewable energy source.

The EEA FM 2009-2014 Renewable Energy (HU03) programme area set out the purpose of promoting the application of renewable energy sources, the exchange of knowledge and the shaping of views related to renewable energy. Beyond strengthening bilateral professional relations, four projects have been carried out within its frame, in a sum of near to 1,5 billion forints, with 610 million forints granted.

On the basis of the successful application of the Municipality of the City of Csongrád, Gábor Cseri, deputy mayor, and László Szabó, technical manager at Csongrád Közműszolgáltató Kft. (“Csongrád Public Utility Provider Llc.”) participated in the professional programme.

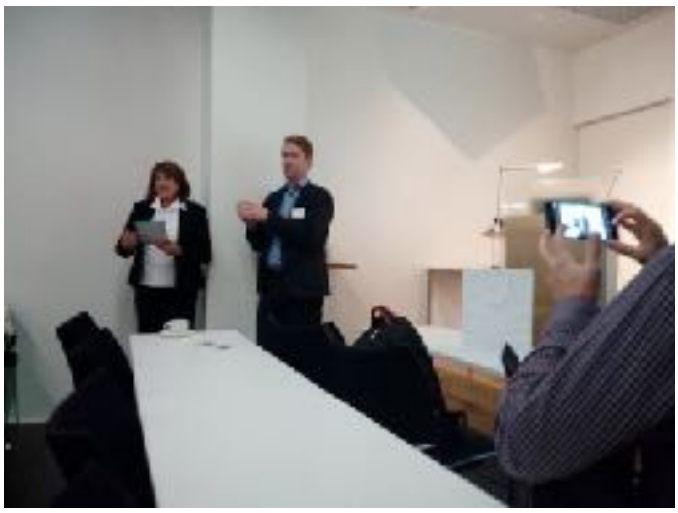
Journey

After a well-organised flight, we were transported to our comfortable, remarkably well-equipped accommodation.



Professional talks

The Icelanders organised professional talks as part of the programme. The talks were held by greatly prepared speakers. It was especially useful that, in relation to the talks, every city had to prepare an analysis of its situation. The analysis involved the possible ways of use of geothermal energy, the currently operating public utility network, etc.



Brief summary of the professional talks:

- Possibilities in Iceland's geographical characteristics.
- History and evolution of Iceland's utilisation of geothermal energy.
- Presentation of the current and other calls.
- Structure, tasks and rights of the energy office.
- Future distribution of Iceland's fuels and their use.
- Effect of Iceland's energy provision on the population.
- Reduction of the energy supply built on petroleum, natural gas and fossil fuels.
- Legislation regarding wells of heat sources.
- Possibilities and measure of the reinjection of the used water.
- Environmental effects.

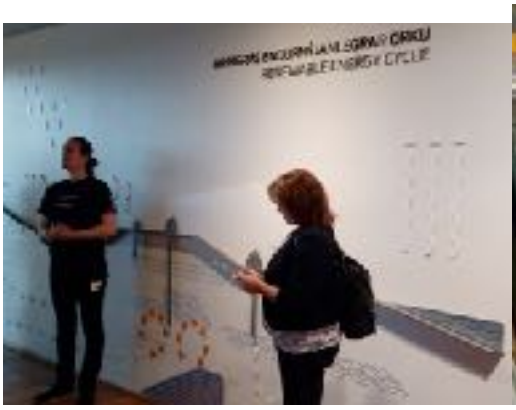
Professional visits

After the professional talks, we visited several businesses and companies whose activity entails design and carrying out of well drilling, geological analysis, creation of networks, and design and creation of geothermal energy plants. Our group was received by EFLA, WERKIS, and MANNVIT.

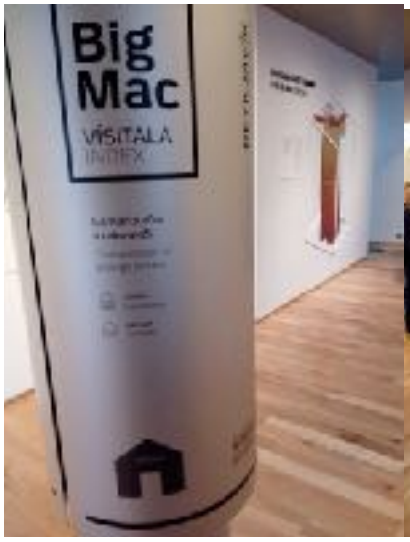
The company Mannvit has a company in Hungary too. They shared a lot of their experiences in Hungary with our group.

Our professional visits also involved a visit to a thermal well, located on the ocean shore. We were shown how the well worked, which provided plenty of information to the engineers.

We travelled out to the company ON Power as well. The company supplies electric energy to more than 75.000 homes and businesses on Iceland at a competitive price. Besides showing us their company, they also gave an interesting presentation. (If I remember well, 95% of the extracted thermal water gets reinjected here.)



The company had analysed the cost of the production of electricity, which was well-illustrated on the Big Mac column. The price of the electricity produced in different cities was demonstrated by the number of Big Macs.



We also visited the glasshouses of the agricultural university. With more or less success, cultivation of every kind of plant is tried out in the glasshouses, which are heated exclusively with geothermal energy. I tasted a tomato that had been cultivated there. The taste of a tomato matured under the sun is much richer. Sunrays cannot be replaced with the non-natural light of lamps, giving light of different wavelengths.

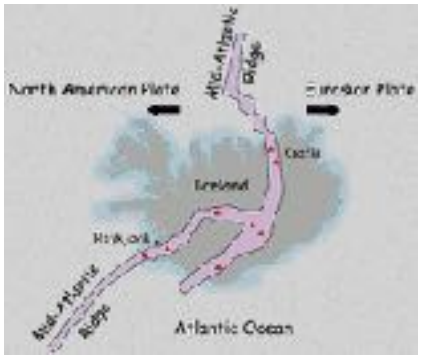
Some of us made a visit at a swimming pool. Besides relaxing, we observed the swimming pool and its services with a professional eye as well.

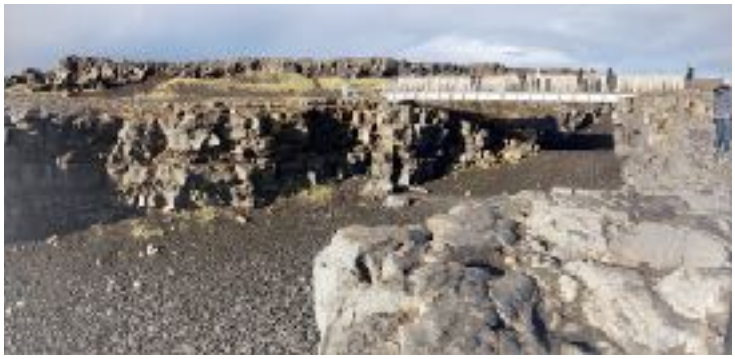
Trip to Reykjavík. The place received its name (the meaning of Reykjavík is "*bay of smoke"*) after the steams spouting up from the thermal springs of the area. Most of the houses of the city are still heated with hot water coming through tubes from nearby volcanic thermal springs. This way, the price of the heating and the electricity are affordable. Part of the heat is circulated into tubes that are laid down beneath pavements and roads. Due to this, people do not have to shovel snow in winter, because it melts.




It was interesting that some of the underground tubes of the heating system had been directed to the surface in the form of columns at common areas used by children. Snuggling to the columns, people can warm themselves in winter.

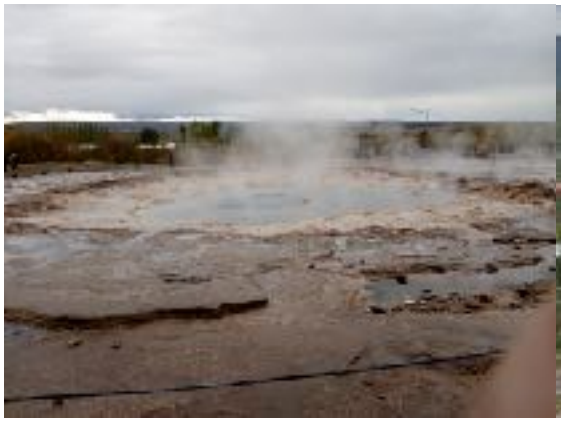
To our great pleasure, we got a chance to travel to the meeting place of two tectonic plates of global significance: the Eurasian and the North American plates.

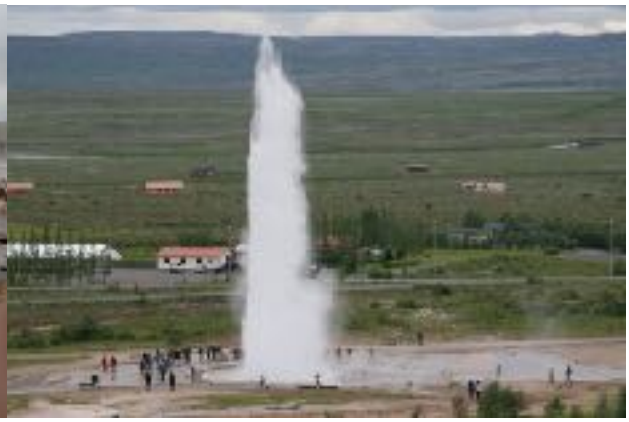


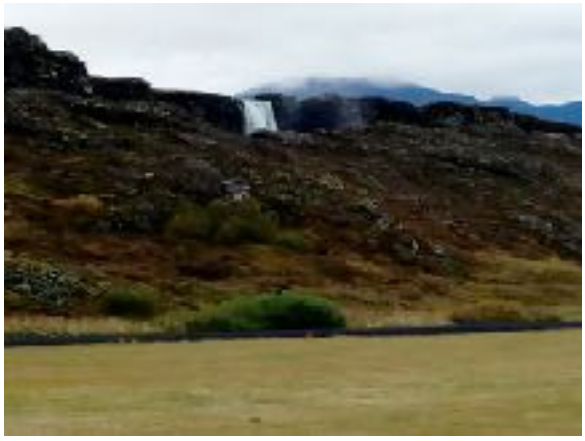


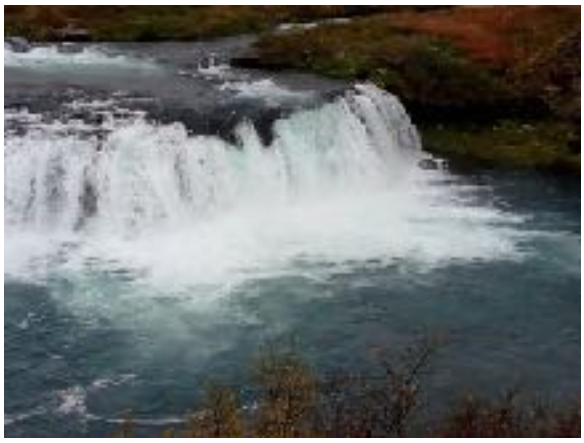
We relaxed in the warming water of the famous Blue Lagoon, popular among tourists. The pool is filled with the secondary water of the thermal power station and its temperature is over 40 °C. The pool is situated directly next to the fizzling aluminium tubes and chimneys of the power station, in a natural pit.

Waterfalls and smoking geysers appear in many places in the bare Icelandic landscape. We visited the "land" of the geysers as well, where we could also see a geyser in eruption. Pictures do not reflect the experience completely, so I made short videos too.









Concluding remarks

Our country is especially rich in thermal water, and the quality and quantity of these resources are outstanding in the world. Whether the extracted water can be and should be reinjected are important issues. Thinking of our grandchildren, whose this Land is, we should ask the question: can our thermal water resources go dry?