EGEC Newsletter July/August 2014

The voice of the Geothermal Sector in Europe

Dear members of EGEC,

dear readers of this newsletter,

Within the last weeks, the summer definitely has arrived in Europe, with warm days - and heavy thunderstorms, at least in my area in Germany. Damages from storms and rain in summer seem to increase each year, and the statistics of the insurance companies should meanwhile be able to prove that some change in climate is happening.

Concerning comfort, we simply adjust to warm weather. In the 1980/90s, when working at the university and taking the bus each day to reach the city from my home 9 km away, all ventilation above windows and in the roof was open to keep temperature in the bus at an acceptable level (at least while moving). During a hot day last week, I again was on the bus in the city, and the interior of the bus was nicely cold, thanks to air conditioning. I was reminded of my first experience with American way of life during a short stay in the Southern USA in 1981, entering a bus after waiting in the hot air. At least the German bus driver of today avoids the freezer-like temperature setting that I remember from the USA!

While air conditioning is definitely a plus in these days (and I admit, my car has this feature also), the energy consumption for cooling is increasing steadily. For the transport sector, geothermal technologies obviously are no option. However, they offer excellent reliability and economy for cooling in buildings and for commerce and industry, and of course in the "stationary" part of transport, i.e. in airports, railway stations, etc. A recent example, supported by the EU through the Interreg programme, is the new DB station building in Horrem (near Cologne). Heat and cold for the building is provided by a geothermal heat pump since June this year (see more here).

In July and August, activities in the political sector are at a lower pace in most of Europe. So we provide you, as usual, with a combined newsletter for both months. Activity will increase again in September, and I like to specially mention two events on security of energy supply planned in that month in Brussels. The ongoing conflict in Ukraine, which has no summer break at all, emphasises the fledgling foothold we have for that part of our energy supply we need to import.

- On 22-23 September, EGEC is organising an event titled: "Rescuing Europe from energy dependency: the role of renewables". This event will look at the renewable energy benefits and policies in general, and on the contribution of geothermal district heating in particular, as part of project GeoDH. Click here for more info.
- At the end of the same week, on 26 September, the European Energy Security Forum (EuroSEF 2014) will be held. The Energy Watch Group co-organises and supports this high-level event; more info here.

And a bit earlier, EUFORES organises a dinner debate in the European Parliament under the heading "Energy Security - Renewables and Energy Efficiency are the Answer". So we see that eventually the message is becoming clearer: invest in own, clean, sustainable energy supply, to free ourselves from dependency on political circumstances we cannot actually control. And investing more in weapons to protect the energy supply from abroad would not be a wise alternative…

In conjunction with the GeoDH event on 23 September, we plan to have the EGEC Annual General Meeting for 2014. Members have already been informed to save that date, and I hope to see many of you in Brussels, after a well-deserved summer break!

I wish you an interesting read,

Burkhard Sanner

EU Court of Justice confirms full validity of RES Directive

In its judgment on the Ålands Vindkraft case (C-573/12), the Court of Justice of the European Union (ECJ) ruled on 1st July that the "public interest objectives of combating climate change and protecting the environment justify keeping national renewables subsidy schemes strictly national". Overall, the ECJ reaffirmed the conformity of the Renewable Energy Directive (2009/28/EC) with the EU Treaty.

EGEC welcomes the clarity provided today by the European Court of Justice's decision on the Åland case. This will provide added guidance for investors in the geothermal industry and reinforces stable regulatory frameworks. More on this landmark case on Energy Post.

Within the framework of the current debate on financing renewable energy, EGEC has published a Policy Paper 'Financing Geothermal Energy' (pdf) with key recommendations for policy-makers. The enormous long-term potential and full benefits of geothermal will be realised with innovative financial tools and smart and temporary support schemes.

European Commission puts forward hazy 2030 energy efficiency target

On 24th July 2014, together with an assessment of the implementation of the 2012 Energy Efficiency Directive, the European Commission proposed a 30% energy efficiency target for 2030. However, the Commission has left the decision on whether this target would be binding on the national level or at an EU-wide level only, to Member States. Additionally, it is not clear whether the indicator to be used to measure energy efficiency improvements will be in terms of primary energy or rather energy intensity (units of energy per unit of GDP). More information is available on the European Commission's website.

EU leaders set to agree on 2030 climate and energy strategy in October

At the next EU summit in October, Heads of State and Government are likely to take a decision on the main principles of the climate and energy framework between 2020 and 2030. In January 2014 the Commission proposed a binding target to reduce GHG emissions by 40% compared to 1990 levels, and a weak EU-wide target for renewable energy of only 27%, which would be non-binding on Member States. EGEC public reaction to this proposal is available here, while a joint letter of the RES sector to Heads of State and Government is available here.

Some member states indeed have confirmed their intentions to agree on more ambitious targets, like the German Ministry for Economy did in a publication "10-Punkte-Energie-Agenda" published end of June. The German government sets forth the proposal to achieve:

- 40 % CO_2 reduction by 2030
- 30 % binding Renewable Energy target for 2030
- ambitious and binding Energy Efficiency target for 2030

Energy Security Strategy: An ambitious 2030 climate and energy framework would bring further solutions

On 27th June the European Council discussed how the EU and Member States could and should address the EU energy security challenge, based on the recent Commission's Communication "European Energy Security Strategy"

AEBIOM, EGEC and ESTIF welcome this discussion. Our organisations also take note that the key action identified by the Commission- the acceleration of the switch from fossil fuels to renewables in the heating sector, is not mentioned in these Conclusions. However, we trust that this discussion is only at a starting point and that further decisions, expected in the coming months, will contribute strongly to the EU energy dependency challenge by developing renewable heating and cooling.

More details are available in the position paper published by AEBIOM, ESTIF and EGEC on 21st May (pdf).

Open letter on the Renewal of NER300

NER300 is providing a much needed boost to the demonstration of innovative renewable energy technologies, including EGS (see post overleaf) in Europe, helping them progress towards commercialisation. EGEC has, together with other European RES associations, written to commissioners Hedegaard, Oettinger, Geoghegan-Quinn, and Damanaki on the Renewal of NER300 or creation of a new NER300-like instrument.

Read the letter in full here (pdf).

EGEC is a non-profit membership organisation whose sole aim is the promotion of the geothermal industry. It supports its members by lobbying on their behalf.

More than 130 members from 28 countries (including private companies, national associations, consultants, research centres, geological surveys, and public authorities) make EGEC a strong and powerful network, uniting and representing the entire sector.

Two more EGS projects receive funding under the 2nd NER 300 call

The second and final call for projects from the NER 300 Programme opened on the 2rd April 2013, with the results announced in July.

One EGS project in Ferencszállás, HU received funding in the first round, and two more will now receive funding from this second stage. The two projects are:

Geothermae (Croatia)

The project concerns the production of electricity and heat from a geothermal aquifer and its associated natural gas. The project, in Draskovec, close to the city of Prelog in Croatia, will generate 3.1 MW_e from geothermal hot brine using an Organic Rankine Cycle (ORC). [1]

GEOSTRAS (France)

The French-German cross border project aims to produce electricity and heat from a high temperature geothermal resource near Strasbourg. It involves creating a circulation loop several kilometres long at a depth of between 4 km and 5 km that will function as a semi-open underground heat exchanger. The proposed geothermal plant is expected to produce 6.7 MW_e electricity and 34.7 MW_{th} heat.

NER 300 is a funding mechanism managed by DG CLIMA, the European Investment bank, and Member states which is funded through the sale of 300Mio allowances under the EU ETS scheme.

More information is available here (pdf).

More on NER 300 and EGEC's support for its members on this issue can be found here.

1 According to the information available at present, we will have to closely monitor if this project will be built as a geothermal power plant, or as an essentially gas-fired power plant.

RHC-Platform Publishes Geothermal and Common Roadmaps For Development until 2020

Research and innovation is vital for the development of Renewable Heating and Cooling technologies and their urgently needed market deployment. This is a key message of the Common Implementation Roadmap of the European Technology Platform on Renewable Heating and Cooling (RHC-Platform), published in June. This Roadmap describes the top priority research themes and value chains until 2020, integrating topics from the Solar Thermal, Biomass, Geothermal and Cross Cutting sectors, including district heating, heat pumps and storage technologies.

At the same time, the roadmap of the Geothermal panel was published. This document addresses both shallow and deep geothermal resources, and the key performance indicators and cost reduction of both. The implementation of research measures for all relevant geothermal technologies is detailed from 2013-2020. The final chapter is dedicated to financing, which looks at both private and public funding needs and the interaction between the two, as well as European policy measures.

The implementation roadmap of the geothermal panel is available here (pdf).

The common roadmap, which describes a combined strategy for all heating and cooling technologies, is also available on the RHC-Platform website.

Romanian Geothermal District heating Developments

Geothermal heat production in Romania will receive a boost from EEA grants under the Rodine programme, as reported in this newsletter in March. On 20th June, a list of three approved projects was released.

Mannvit will start work on one of the projects, in Timisoara, in September this year with drilling due to be completed in mid-2015. The system, with an annual production capacity of 40.8GWh, should become operational in 2016. The project is operated by Mannvit and Sifee Terra Heat from Romania in collaboration with Timisoara municipality and Colterm, the city's utility company. Isor from Iceland is also a part of the project as subcontractor.

repowermap

This is one of the 39,867 lighthouse examples of renewable energy on the repowermap.

Is your organisation present?

Add examples of your work, and create a personalised map of projects to add to your website.

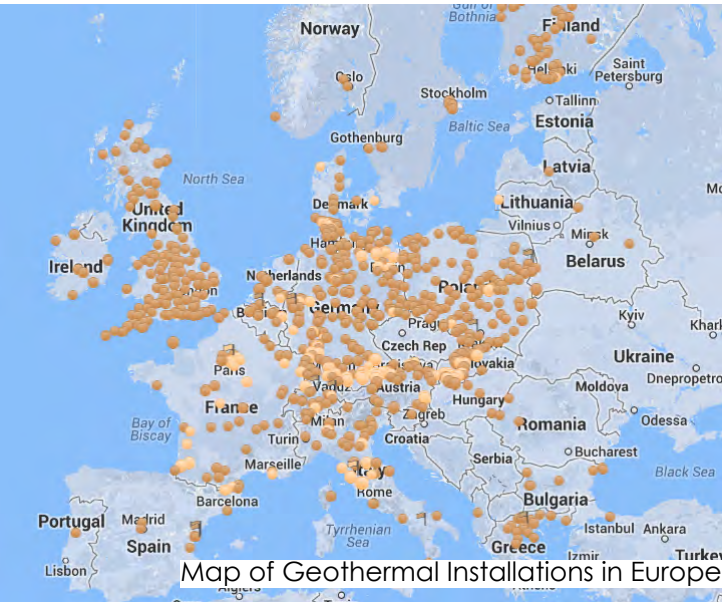
Repowermap is a free promotional tool available to any company or organisation working in geothermal, funded by the European Union.

Contact us if you would like to participate.

Wine cellar Orschwiller-Kintzheim

100% Geothermal Winemaking

The wine cellar of Orschwiller-Kintzheim was founded in 1957 and is today a cooperative with 80 adherents. The winery recently underwent renovation, and chose to use a geothermal system in order to reduce costs and maintain quality. The wine is still made in the traditional way, but uses state of the art equipment- in stainless steel tanks, refrigerated or reheated thanks to the geothermal system. A new technology known as 'B.R.O.T.S.' (patented by INIP) results from new hydraulic principles, coupled with vertical borehole heat exchangers.



Map of Geothermal Installations in Europe

Drilling

23 borehole heat exchangers of 100m each underneath the winery represents an energy reservoir of 170,000m^3

Exchanges

- The heat pumps, connected to the vertical borehole heat exchangers and hot water tanks, allow the storage, guiding and optimisation of the resource, and for remote, on-line management.
- Two reversible heat pumps are designed for use with temperatures from 15°C-25°C, and can deliver 110kW of heat and 90kW of cold, with a COP of between 7-10 at 45°C
- one 'B.R.O.T.S.' system allows simultaneous and direct heat and cold production.

Wine cellar on the repowermap

Economic and Environmental Aspects.

- 194 tonnes of CO2 are saved annually thanks to the Geothermal system.
- 30 TOE are saved each year.
- Payback period: 6 years
- Total cost of new winery: €6 million (before tax)
- Cost of works including heat pump, B.R.O.T.S., hot water tanks, heat exchanger, SGC, collectors, glycol €360,000 (before tax), 6% of the total project cost.
- Cost savings per year: €15,00 in fuel and €23,000 for electricity on average.

The Purpose of the repowermap is to make geothermal energy use more visiable

It helps companies promote themselves and reach new customers

European Geothermal Days 2014
and
Rescuing Europe from energy dependency: the role of renewables

Two days of free geothermal events 22-23rd September Brussels

- **European Conference on Rescuing Europe from energy dependency: the role of renewables**
- **Conference on geothermal District Heating in Europe**
- **Geothermal panel meeting (Technology platform)**
- **EGEC Annual General Meeting**

Rescuing Europe from energy dependency: the role of renewables
Monday 22nd September (AM)

This event concerns the EU's energy security strategy and the 2030 climate and energy package. It will look at the role for renewables in the energy system and will address in particular flexible electricity technologies, and heating and cooling, in both the short term, and in the context of the EC 2030 climate and energy proposal.

Click here to register

Conference on geothermal District Heating in Europe
Monday 22nd September (PM)

This event will cover all aspects of Geothermal District Heating in Europe, focusing on potential, fiancing, and legislation for Geothermal District Heating.

Speakers from industry, government, and research will cover topics including:

- Role of Renewables in security of supply
- Potential for GeoDH in Europe
- Business models
- Innovative financial models
- Best practice legislative models
- The impact of European policy on the GeoDH market
- Technology Developments

Click here to find out more and register

Geothermal Technology Platform Meeting- Focus on DH
Tuesday 23rd September (AM)

Following the last oversubscribed event in January, this meeting will cover the technological developments in Geothermal District heating and the 2015 work programme of Horizon 2020- including calls on EGS and borehole heat exchangers for shallow geothermal

EGEC AGM
Tuesday 23rd September (PM)

The annual general meeting of the European Geothermal Energy Council (Members only)

Join us in Istanbul on 2-4 December 2014 for the 6th annual GeoPower Global Congress.

Officially endorsed by EGEC, all EGEC members are entitled to a 20% registration discount.

With almost 700 projects currently under development in 76 countries and a sustained growth rate of 4% to 5% per annum (GEA 2014), the international geothermal power market is booming. Add to this 50,000MW of total installed direct heat use capacity in 2010 (and a growth rate of over 10% per annum), then it's clear to see the increasing importance of geothermal power and heat projects in the global energy mix.

The GeoPower Global Congress is a unique opportunity for developers, investors and other key stakeholders to share specific technical, financial and legislative expertise for optimising the development of current and future geothermal power and heat projects worldwide.

Confirmed speakers include:

Joshua Kibet Choge, *Chairman, Ken-Gen*
Alparslan Bayraktar, *Commissioner, EMRA*
Christine Lins, *Executive Secretary, REN21*
Christopher McCormick, *Director, Reykjavik Geothermal*
Fausto Batini, *Managing Director, Magma Energy Italia,*
Dr. Bjarni Pálsson, *Manager Power Projects Department, Landsvirkjun*
Hezy Ram, *CEO, Ram Energy*
David Perez Salinas, *Director, Mexxus RG JV*
Erdinç Çetin, *Manager Project Finance, Zorlu Energy*
Lemayian Kimojino *Principal & CEO, Sosian Energy*
Dr. Horst Kreuter, Managing Director, *Geothermal Power Tanzania*
Mehmet Kucukbeycan, *General Manager, Partner, Enerji Merkezi*
Herman Darnel Ibrahim, *Board Member, National Energy Council Indonesia and Board Member, IGA*
Allan Baker, MD – *Global Head of Power, Societe Generale*
Peter Ballinger, *Managing Director, OPIC*
Craig O'Conner, *Director, Office of Renewable Energy & Environmental Exports, US EXIM*
Onur Büyükbozkırlı, *Department Head Project Finance, Denizbank*
Bjarni Richter, *Marketing- and Project Manager, Iceland Geosurvey (ISOR)*
Alex Richter, *Founder & Principal at ThinkGeoEnergy and Director, IGA*
Dr. Mehran Gharibi, *Senior Geophysicist, Quantec Geoscience*
Burkhard Sanner, President, *European Geothermal Energy Council*
Philippe Dumas, *Secretary General, European Geothermal Energy Council*
Miklos Antics, Board Member, *European Geothermal Energy Council*
Anthony Hinde, *International Marketing and Sales Director, Exergy*
Senior Representative, *Munich Re*

For more information or to view the full agenda, visit www.geopowerglobal.com

Events

European events

2nd International Symposium on Energy Challenges and Mechanics	19-21 August	Aberdeen, Scotland	website
Status and Future of Geothermal Energy in the peri-Adriatic Region	24-28 August	Veli Losinj, Croatia	website
European Conference- Rescuing Europe from energy dependency: the role of renewables	22 September	Brussels, Belgium	Website
Conference on geothermal District Heating in Europe	22 September	Brussels, Belgium	Website
Geothermal Technology Platform Meeting Tuesday 23rd September (AM)	23 September	Brussels, Belgium	Website
EGEC AGM Tuesday 23rd September (PM)	23 September	Brussels, Belgium	Website
Der Geothermiekongress 2014	11-13 November	Essen, Germany	website
GeoPower Global Conference	2-5 December	Istanbul, Turkey	website
World Geothermal Congress 2015	19-25 April 2015	Australia & New Zealand	website

GeoDH Training courses

Training course/ Workshop	25-26 June	Pisa	Italy
Training course/Workshop	7 July	Westland	Netherlands
Training course/Workshop	26-27 August	Copenhagen	Denmark
Training course/Workshop	9 September	Prague	Czech Republic
Training course/Workshop	7 October	Heerlen	Netherlands
Training course	13 October	Uniejów	Poland
Information session/ Site visit	14 October	Uniejów	Poland
Training course/Workshop	15 October	Paris	France

Visit geodh.eu for more informaton