

# EGEC NEWS



## THE VOICE OF GEOTHERMAL ENERGY IN EUROPE

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### Issue n°6. JANUARY 2008

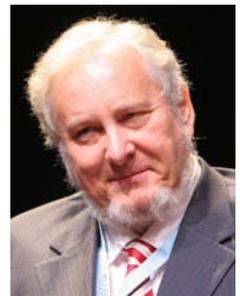
WELCOME... to the first issue of the EGEC Newsletter...for 2008

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#### **A word from the EGEC president :**

Dear members of EGEC, dear readers of this newsletter,

the year 2007 had brought us many events, a lot of work, some failure and, luckily, more success. 2007 started with a lot of momentum already in January, with the Renewable Energy Policy Conference in Brussels. We are also looking back at highlights like the European Geothermal Congress EGC 2007 in Unterhaching, a series of seminars and workshops in EU-projects like K4RES-H, Groundreach, RESTMAC and others. More humble are the numerous phonecalls, emails, talks, meetings in Brussels and elsewhere around Europe. I like to express my sincere thanks to those EGEC board members and other EGEC members who helped the Brussels staff and me to fulfil our tasks.



In 2007, there was also the election of a new EGEC board at the Annual General Meeting in November. Please see the relevant item in “News from EGEC”, the website, and, for the EGEC members, the “Member’s corner” on the website. I like to thank all who elected me into my second term as EGEC president for their trust and encouragement. I like to thank those who have been willing to candidate and now to serve on the board, as auditors, or as thematic coordinators. And in particular I like to thank the outgoing EGEC board members for their service over the past years, in one case right since the foundation of EGEC!

EGEC is now represented on the IGA board with two directors. In October 2007, yours humbly had to quit the IGA board, as their rules ask for a break after two 3-year-terms. Miklos Antics and Christian Boissavy did take office at the IGA BoD meeting in Reykjavik, Iceland. And the new Vice President of IGA, Ruggero Bertani, acts as thematic coordinator for electric power in EGEC.

2008 already puts new work in front of us. The European Commission is going to present the proposal for a Directive on Renewable Energy Sources this January – a paper that, once finally adopted, will control the path towards the RES future for several years.

In the year 2008 EGEC is going into its 10<sup>th</sup> year of existence. Founded in autumn 1998 in the small Bavarian city of Straubing (sporting a geothermal DH system, of course!). We will celebrate that anniversary towards the end of the year, and you will be informed on how you can participate!

I wish a successful and happy year 2008 to all of you.

Burkhard Sanner

#### **This Issue:**

- **Policy**
- **News**
- **News from EGEC**
- **News EGEC members**
- **Events**

# **POLICY**

## **EGEC's Position on the Framework Directive for Renewable Energy Sources**

Before the Commission presents a draft of this directive the geothermal sector wants to outline the basic needs and recommendations for the content of such a directive.

We believe that the future Directive (planned to be published the 23.01.2008) on the promotion of renewable energy sources is key to reaching the 20% renewable energy target set out by the Heads of State in spring 2007.

The definition of geothermal energy is lacking in the *acquis communautaire* and the national practice is diverse - some authorities consider it as a type of energy carried by thermal waters exclusively -, which leads to confusion regarding some most up-to-date technologies using shallow depth geothermal reserves via heat-pumps, or deeper closed-circuit heat exchangers. Therefore, a broad sense legal definition of geothermal energy is needed in a relevant piece of Community legislation.

EGEC proposes to adopt the following definition, which is widely used by the geothermal industry and is already part of some national standards :

*Geothermal Energy is the energy in form of heat beneath the surface of the solid earth.*

The sector of heating and cooling represents approximately half of the EU's final energy consumption and it is crucial that the future EU Renewables Directive includes effective measures to promote RES-H/C. Beside reminding of the opportunities to use RES for heating and cooling individual buildings, we would like to emphasize about the huge chances of the new member states to switch in from fossil to renewable sources within their district heating systems.

*See also our position paper on : [www.egec.org](http://www.egec.org)*

## **Strategic Energy Technology plan**

EGEC welcomes the European Commission's proposal on a Strategic Energy Technology plan.

EGEC shares the recommendations of the SET-Plan to develop geothermal energy:

- Establish a coherent financial support mechanisms
- Initiate additional incentives
- Adopt appropriate regulations, standards, permit procedures
- Develop RD&D support
- Promote international collaboration and centralisation of existing knowledge
- Launch vocational and training programmes

We regret not enough references are made to the heating & cooling sector.

## **And, EGEC proposes to add "Geothermal Power Production everywhere through EGS" in the Key EU Technology Challenges for the next 10 years to meet the 2020 targets:**

After more than 30 years of R&D efforts, electric power generation using EGS technology now for the first time can be demonstrated in a pilot plant (Soulz-sous-Forêts, France). However, to unleash the full potential of EGS, a concerted action is required to transfer the technology from the one site to other sites in similar geological situation and later to sites in all possible geological framework.

A major effort to introduce EGS, on the other hand, could create a substantial base-load electric power production, as geothermal energy is available independent from the time of day or year, of climate, weather, etc.

The sole objective of the initiative would be to proliferate the technology of Enhanced Geothermal Systems (EGS), from the one European R&D- and pilot-site in Soulz-sous-Forêts (Alsace, France) to other Member States and to different geological situations.

A target of the initiative will be to create about 20 (a minimum of 15) operating EGS power plants. The goal should be to have at the end of the program about 200 MW<sub>el</sub> of installed power operational, producing base-load energy with a load factor of >90%, and thus generating about 1580 GWh of electricity each year.

The amount of power produced through this plants will be ca. 4% of the goal of 41 TWh/a for 2020 as set forth in the EGEC targets, and would amount to about 20 % of the geothermal power produced currently in the classical high-enthalpy geothermal power plants.

See also our position paper on : [www.egec.org](http://www.egec.org)

## NEWS

### Intelligent Energy Europe



The publication of next year's call for proposals has been postponed to **late February 2008**. Some **€50 million** will be available to co-finance projects promoting energy efficiency and renewables, and to help set up local/regional energy agencies.

You will also get the opportunity to find out more about the 2008 Intelligent Energy - Europe (IEE) call for proposals during the **IEE Info Day** on 31 January.

More details on budgets, funding priorities, requirements and deadlines will be added to the IEE webpage as they emerge.

[http://ec.europa.eu/energy/intelligent/call\\_for\\_proposals/index\\_en.htm](http://ec.europa.eu/energy/intelligent/call_for_proposals/index_en.htm)

### Several FP7 calls launched

The European Commission has published a number calls for proposals under all four specific programmes of the Seventh Framework Programme (FP7) namely Cooperation, Ideas, People and Capacities.

The calls address notably the following areas in Cooperation:

- Nanoscience, nanotechnologies, materials and new production technologies (seven calls);
- Energy (four calls);
- Environment (including climate change) (two calls);
- ERA-NET/ERA-NET Plus.

To see the full details of the calls, please consult the following web address:

<http://cordis.europa.eu/fp7/calls/>

### EC-EIB financial instrument: Risk Sharing Finance Facility (RSFF)

The European Commission and European Investment Bank announced the successful introduction of the **Risk Sharing Finance Facility (RSFF)** - the latest in a series of joint EIB-European Commission initiatives. This innovative financing solution aims at providing strong additional support to research, development and innovation projects in Europe. The first RSFF financing operations focus on renewable energy technologies, a priority lending objective for the Bank in 2007.

## **Iceland helps USA to exploit geothermal potential**

The Geothermal Resources Council published a survey in 2005 revealing that the US has ten times the geothermal potential of Iceland, although it is considerably less developed. The US has only harnessed a fraction of its energy potential but since 2005 geothermal capacity has increased by 20%.

In order to help Americans exploit their geothermal potential, several Icelandic businesses are setting up shop in the US. For example, Glitnir, an investment bank specialist in geothermal energy, opened an office in New York. And Iceland America Energy recently also opened a branch in Los Angeles. They see huge potential for both geothermal energy production in the US and for its uses. They suggest that geothermal energy could be used to power air conditioning systems in Las Vegas and snow removal systems in the Rocky Mountains.

Across the country swimming pools could also be heated by geothermal energy, whilst more specialist applications would be applied to particular regions: In Alaska, we could use geothermal energy for fish drying operations ; and fruit dryers in California.

Geysir Green Energy, another Icelandic investment firm, has invested in a Canadian energy firm working in California.

## **Petratherm secures geothermal exploration licence in the Madrid Basin**

Development rights to one of the most promising alternative energy projects close to Madrid have been awarded to an Australian company, Petratherm Limited. It has been awarded an extensive Geothermal Exploration License (GEL), covering an area of 330 square kilometres, located approximately 40 kilometres NNE of Madrid

Petratherm is convinced that enough information already exists about the project to minimise drill costs and commence early development work. The Madrid Basin location was identified as a high prospect target because it covered an area that included, deeply buried high-heat producing granites, evidence of large hot aquifers and close proximity to infrastructure and to major markets (for both electricity and hot water).

They declared the licence is in the highly regarded Madrid Basin and its geothermal potential is already proven from information available from five existing deep wells. At least three of these wells are around 3.5 kilometers in depth and demonstrate the presence of high temperature water in large aquifers. This makes them ideally suited to near-term geothermal energy exploitation for direct heating uses.

Two reservoirs are known to exist in the licence area – one a shallow reservoir at 1.5 kilometres depth and a deeper reservoir at 3.5 kilometres below surface.

The Madrid Project offers the opportunity for both an Engineered Geothermal System (EGS) to produce electricity from the heat from the deeply buried granites in the Madrid Basin and also the opportunity to supply hot water from known, large hot aquifers to meet the needs of commercial and industrial direct-use heat applications

The Madrid GEL has two main geothermal reservoirs defined by five deep geothermal exploration wells (ranging between 1,500 metres and 3,500 metres) previously drilled (during the period 1980 to 1990) by the Geological Survey of Spain.

Existing information from the wells, together with other available geological information, will provide a quick and low cost opportunity to assess the geothermal economics of this particular project area, thus avoiding significant costs of exploratory drilling.

The project is also located adjacent to several, large capacity 220 kV and 400 kV power transmission lines and electricity substations that serviced Madrid - a city with a population of 5.5 million.

Petratherm has now secured two conventional geothermal projects in the Canary Islands – Tenerife and Gran Canaria - and three EGS projects areas on mainland Spain - Madrid, Barcelona (GELs pending approval) and Almazan. The Company plans to secure around seven or eight geothermal energy projects across Spain covering both EGS and conventional geothermal technologies and is targeting both direct use hot water and electricity as the two key products for sale to local markets.

## **WTO free trade pact for climate-friendly goods**

As world leaders meet in Bali to outline a new global climate regime, the EU and the US have launched a joint push for an international deal on eliminating tariffs on green technologies in the hope of opening up new market opportunities for business.

On 30 November, the EU and the US announced what they termed "a ground-breaking proposal" for a WTO-wide deal on the full elimination of tariffs on 43 products identified by the World Bank as environmentally-friendly. The deal would come under the current "Doha" negotiations on trade liberalization.

Such a pact has been strongly advocated by EU Trade Commissioner Peter Mandelson, who claims it will foster the development of green products by making them more easily available to all nations and create opportunities for European industries, which lead the market in alternative energy technologies. Although the Doha Round already includes a mandate for freeing up trade in environmental goods and services (EGS), progress so far has been hindered due to a disagreement over which products should be covered.

## **Bali climate talks**

The UN climate talks in Bali wrapped up on 15 December 2007, producing a two-year negotiation 'roadmap' to reduce greenhouse gas emissions. New climate change adaptation funds, anti-deforestation mechanisms and technology transfers are seen as Bali's main achievements.

The mandate of the 13th Conference of the UNFCCC Parties (COP 13), held in Bali, Indonesia from 3 to 15 December, was to hammer out a negotiation framework and roadmap for a global climate change agreement to replace the Kyoto Protocol in 2012.

Following the agreement on a roadmap to negotiate a successor to the Kyoto Protocol, the parties will meet in Poznan in Nov./Dec. 2008 for the Poland climate conference (COP 14) - mid-way point of negotiations.

In Dec. 2009, the Copenhagen climate conference (COP 15) will present the projected completion of UN climate negotiations on post 2012 framework ; with end 2012 as a deadline for ratification of any new climate deal.

## **GreenNet-Europe: Renewable Grid Integration into European Electricity Markets**

*GreenNet-Europe* (Guiding Large Scale and Least Cost Grid and Market Integration of RES-Electricity in Europe) incorporates a series of different projects having been supported in different programmes of the European Commission in recent years (*GreenNet* (2003-2004); *GreenNet-EU27* (2005-2006); *GreenNet-Incentives* (2006-2009)).

The consortia tries to establish a common understanding on large scale and least cost grid and market integration of RES-Electricity in Europe under a variety of different constraints (e.g. technical, economical, legal, societal) and energy policy settings. In particular, *GreenNet-Europe* emphasises the necessity of a convergence of different coexisting policies of RES-Electricity grid and market integration (e.g. renewable technology support policy, grid regulation policy, unbundling implementation policy) as well as comprehensively addresses also the grid operator's and system operator's point-of-view in this context.

In *GreenNet-Europe* a variety of different products have been developed. The portfolio of outputs of *GreenNet-Europe* is continuously extended and several of these products and materials are available on this project website free of charge : [www.greennet-europe.org](http://www.greennet-europe.org)

## Reykjavik Energy Graduate School of Sustainable Systems (REYST).

Reykjavik Energy Graduate School of Sustainable Systems (REYST) was officially launched December 3., 2007 at Reykjavik Energy headquarters in Reykjavik, Iceland. REYST is an interdisciplinary school, founded by Reykjavik Energy in collaboration with Reykjavik University and the University of Iceland. The school offers higher education for engineers and scientists in order to create leading experts in management, design and research in the field of sustainable energy. The international graduate program is based on the three pillars of engineering, earth sciences and business. 18-months MSc program will start in August this year and deadline for application is March 15. Further information is available at <http://en.reyst.is>.

## NEWS from EGEC

### EGEC Annual General Meeting: New board elected, coordinators for thematic panels, new auditors

On 16 November 2007 the members of EGEC had been invited for the Annual General Meeting 2007 in the Renewable Energy House, Brussels. The detailed minutes are available for download in the member's section of the website.

The year 2007 marked the end of term for the 3<sup>rd</sup> board, and the election of the 4<sup>th</sup> **board of EGEC**, which consists of the following persons:

*Burkhard Sanner*, Germany, president  
*Tevfik Kaya*, Turkey, vice president  
*Peter Seibt*, Germany, vice president  
*Miklos Antics*, Romania/France, secretary  
*Christian Boissavy*, France, treasurer  
*Doina Cucueteanu*, Romania, member  
*Olafur Flovenz*, Iceland, member



Meeting in the REH on 19.11.2007

Also at the same meeting several persons have been appointed as **coordinators for thematic panels**, to assist the EGEC staff and the board in the relevant thematic areas:

Geothermal Electricity	–	<i>Ruggero Bertani</i> , Italy
Geothermal Heat incl. GSHP	–	<i>Erich Mands</i> , Germany
Research agenda 2020/2050	–	<i>Fabrice Boissier</i> , France, and <i>Rudolf Minder</i> , CH
Policy	–	<i>Pierre Ungemach</i> , France
Legislation and regulations	–	<i>Roisin Goodman</i> , Ireland

The panel on statistics for the public, EU-commission and interested groups will be coordinated by board members *Miklos Antics* and *Burkhard Sanner*.

Further themes and coordinators might be appointed as appropriate.

The new EGEC board (from left): Seibt, Orhan Mertoglu (guest, chairman of the European Regional Branch of IGA), Boissavy, Sanner, Antics, Kaya (missing: Cucueteanu, Flovenz)



Three **new auditors** have been elected by the AGM participants, to review and audit the accounting and procedures of EGEC and report to the next AGM, as set forth in the statutes:

*Jean-Louis Debeaumont*, Belgium

*Rudolf Minder*, Switzerland

*Ric Pasquali*, Ireland

The president thanked the members of the outgoing 3<sup>rd</sup> board for their service, and expressed his gratitude in particular for Jean-Louis Debeaumont, who had hosted the EGEC office in Brussels from the foundation in 1998 until the move into the Renewable Energy House in the beginning of 2006. Without his help and support, EGEC could not have started and grown as it did.

The term of office of the new, the 4<sup>th</sup> board will be until the AGM 2010.

## **Geothermal Statistics for Europe**

As part of our day-to-day activities in Brussels, and elsewhere in Europe, we constantly need up-to-date statistics of:

- geothermal energy use (in terms of installed capacity and of energy supplied),
- economic data of the geothermal industry sector,
- employment in geothermal energy and related industry,
- extrapolations and expectations on a short term to long term basis.

In the past our main sources were the country update reports from the different congresses (WGC and EGC), the data from Eurostat, and some national statistics made available. However, an event like WGC and EGC is held only every 2-3 years, and the Eurostat data are typically 2-3 years old when published (and the basis for collection sometimes is unclear, and differs between countries). In particular during the preparation of the reports for the project K4RES-H, when we collected and reviewed data on geothermal energy for heating, the deficiencies in the current statistics became obvious.

As a consequence, and in line with activities undertaken in other renewable energy sectors, EGEC is planning to start a regular collection of statistical data. We hope to do this in close co-operation with both the national geothermal associations (EGEC members as well as non-members), and the newly founded IGA European Branch.

We also hope for support from the geothermal industry and relevant research institutions.

Send us feedback and comments from you concerning your willingness to support and contribute, and suggestions on how and what to collect. EGEC will then come up with a more detailed proposal soon.

## **EGEC workshop on Geothermal Snow melting within the RESTMAC project Malmö, Sweden, 2<sup>nd</sup> October 2007**

The first workshop dedicated to innovative geothermal applications within project RESTMAC (supported by EU in FP6) has been concluded successfully in Malmö, Sweden. Ca. 30 participants discussed the state-of-the-art of geothermal snow melting and de-icing, and the technical and economic prospects.



Applications in operation can be found for road surfaces (bridges, crossings, sidewalks, driveways, etc.; in USA, Japan, and Europe) and for the railway sector (platforms, switch heating; in Europe only at that stage). Applications on airports (runways, gates) are in advanced preparation state.

While the technical feasibility could be demonstrated successfully, the economic side still leaves many questions open. The economic viability of geothermal snow melting is clearly given in cases where it is to replace other snow melting systems, e.g. on some inclined road intersections in Japan (replacing electric resistance heating!) or in airport applications, however, it is rather difficult to compare to situations where no snow melting would be done otherwise. The external cost of conventional snow removal (e.g. environmental impact of salt) or of non-removal (traffic jams, accidents, lives...) are not reflected in the usual cost comparison.



The presentations gave profound insight into the technical development and the application options, with some experience over already more than 10 years, and discussed also the economic side as far as yet possible. The presentations are available for free download at <http://www.egec.org> (see under "Publications").

### **Autumn Meetings of International Geothermal Association IGA Reykjavik, Iceland, 9.-11.10.2007**



This fall again the term of a Board of Directors of IGA came to an end. Since 2004 a number of 30 delegates from all over the world has governed the activities of IGA, and now, after elections have been held over the last months, a new board takes over the responsibility. The last meeting of the "old" and the first meeting of the "new" board took place in one of the most active regions of the geothermal world, in Iceland.

On Oct. 9-10, 2007, several events followed each other in Reykjavik (for more info see <http://www.samorka.is> – go to "IGA Meetings in Iceland 2007):

- A Symposium on International Geothermal Development in the near Future, organized by the Icelandic Geothermal Association (Jarðhitafélag Íslands), on 9.10.07
- The 43<sup>rd</sup> meeting of the Board of Directors of IGA ("old" board) on 10.10.07
- The Annual General Meeting 2007 of IGA, on 10.10.07
- The 44<sup>th</sup> meeting of the Board of Directors of IGA ("new" board) on 11.10.07

Receptions and a diner in restaurant Perlan (on top of the geothermal water storage tanks on a hill in Reykjavik) were hosted by Icelandic institutions and companies, and excursions will give a chance to see Icelandic geothermal facilities.

The symposium on Oct. 9 was held in the headquarters of Orkuveita Reykjavíkur (the municipal utility), where a very nice and modern auditorium exists. For the IGA BoD meetings, a room in the drinking water supply facilities some 10 km east of Reykjavik was used, in an isolated location perfect for concentrated working.



*43<sup>rd</sup> meeting of the Board of Directors of IGA on Oct.10, 2007, at the Gvendabrunnur Water Facility of Reykjavik*



At the Annual General Meeting 2007 of IGA, held again in the Orkuveita Reykjavíkur premises, finally the offices were handed over from the retiring IGA president John Lund (USA) to the new president, Ladislaus Rybach (Switzerland). The new president gave a short speech in which he compared the IGA board to an orchestra, where everybody had to play his tunes properly in order to produce the desired sound. Knowing that “Ladsi” Rybach is an expert with the baton, we can look forward to a well conducted continuation of the IGA board work. As concerns the past president, John Lund, we at EGEC are keen to express our gratitude and sincerest thanks for the efforts he has devoted over many years to promote geothermal energy world-wide, culminating in his three years at the helm of IGA.

In the “old” IGA board, EGEC was represented by its president Burkhard Sanner (which, among other collaboration, in particular with the IGA ERB, resulted in the 40<sup>th</sup> IGA BoD meeting being held in April 2006 in the Renewable Energy House in Brussels). As of today, two board members of EGEC will guarantee the close contacts to the international geothermal scene, in having been elected into the “new” IGA Board of Directors: Christian Boissavy, former president of EGEC and now treasurer, and Miklos Antics, secretary of EGEC. Both have assumed leading positions in the IGA BoD, Antics as chairman of the Committee for Program and Planning, and Boissavy as chairman of the Bylaws Committee.

Just prior to the 43<sup>rd</sup> IGA board meeting, the newly elected forum of the European Regional Branch of IGA (IGA ERB) had its first meeting. The founding meeting was held alongside EGC 2007 this May in Unterhaching, Germany, and the registration of IGA ERB is currently undertaken in Romania. With the former IGA European Branch Forum meanwhile transformed into a more independent IGA ERB, for the first time the membership of the ERB could directly elect the forum, the governing committee of the Branch. Newly elected chairman is Orhan Mertoğlu from Turkey; his position meanwhile has been confirmed by the new IGA board. Other members of the IGA ERB forum are M. Antics, C. Boissavy, B. Kepinska, S. Popovska-Vasilevska, M. Rosca and B. Sanner. EGEC is looking forward to a fruitful cooperation with the new IGA ERB forum for the years to come. We wish to extend our thanks to the former chairman, Kiril Pivoski, who is an unflinching promoter of geothermal energy, and has for the past 6 years successfully navigated IGA EBF and later IGA ERB through the difficult transition and foundation phase.



*The old chairman of IGA ERB, Kiril Popovski (left), and the newly elected chairman. Orhan Mertoğlu*

EGEC likes to thank the following Icelandic hosts for the perfect organisation of the events, and the hospitality the IGA directors could feel:

Association of Icelandic Utilities



Geothermal Association of Iceland



Icelandic Geosurvey



Reykjavik Utility



## RESTMAC brochures

Four brochures were published by EGEC, in coordination with RESTMAC Project, in september 2007:

- Brochure on Geothermal Agriculture: 4 pages. 2500 copies
- Brochure on Geothermal Snow melting and De-icing: 4 pages. 2500 copies.
- Brochure on Geothermal Desalination : 4 pages. 2500 copies
- Brochure on Geothermal District Heating: 4 pages. 2500 copies

Finally, the brochure on Geothermal electricity and CHP: 16 pages. 5000 copies is about to be published within January 2008.

The following brochures can be easily found either directly in the Renewable Energy House – REH, in Brussels or by contacting EGEC staff in its offices in Brussels too:



**GEO THERMAL  
ENERGY USE IN  
AGRICULTURE**



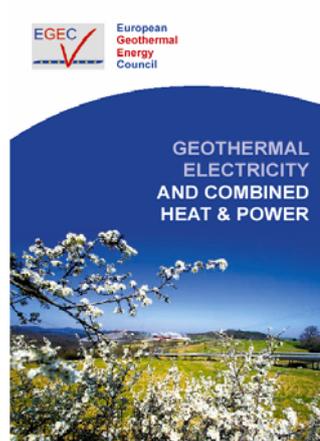
**GEO THERMAL  
SNOW MELTING  
AND DE-ICING**



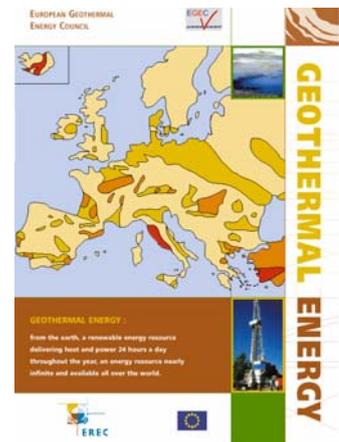
**GEO THERMAL  
DESALINATION**



**GEO THERMAL  
DISTRICT HEATING**



**GEO THERMAL  
ELECTRICITY  
AND COMBINED  
HEAT & POWER**



**GEO THERMAL  
ENERGY**

EUROPEAN GEO THERMAL  
ENERGY COUNCIL



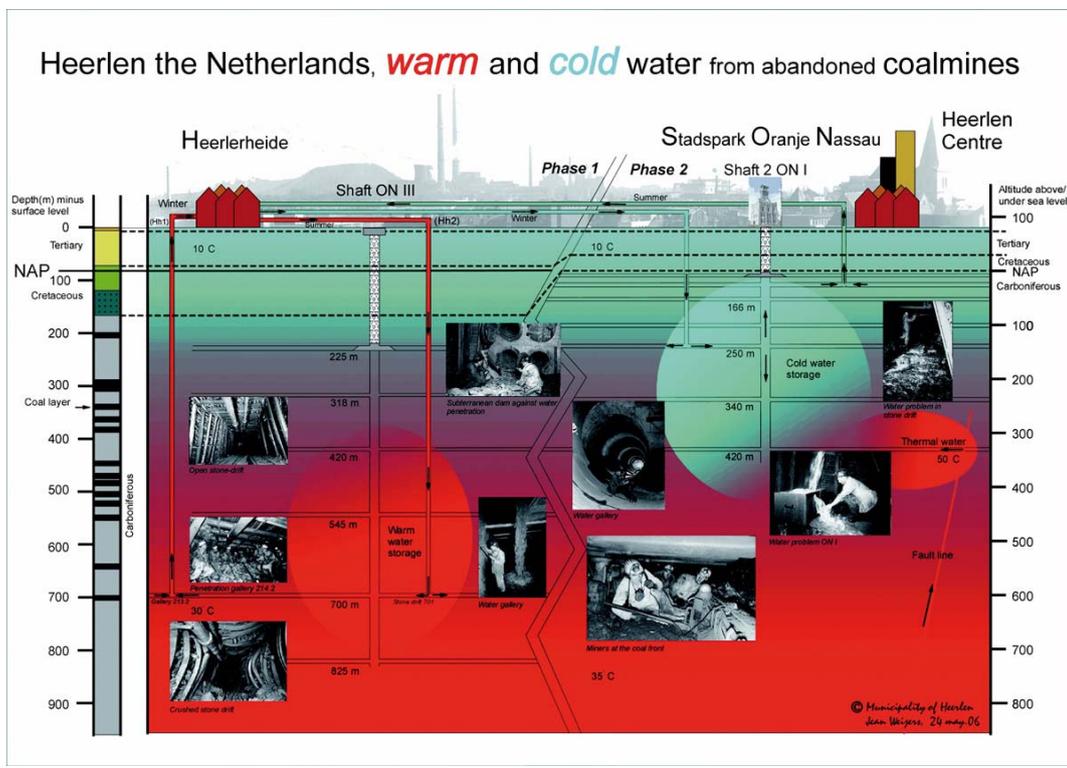
**GEO THERMAL ENERGY**  
From the earth, a renewable energy resource  
delivering heat and power 24 hours a day  
throughout the year, an energy resource nearly  
infinite and available all over the world.



# NEWS FROM EGEC MEMBERS

## **In the long term, Heerlen's investment pays for itself - Energy from mine water costs the same as gas**

Heating and cooling buildings with mine water costs the end consumer, on a yearly basis, no more than energy from traditional sources would. For the same price, consumers can purchase energy that produces 55% less CO<sub>2</sub> and the buildings that are connected to mine water will have a more comfortable indoor environment. In addition to this, it looks like Heerlen's municipal government will be able to earn their investment in the Minewater Project back. As a result, the board has asked the municipal council to present their view on the establishment of Corio Energy Inc, a company that will be able to produce mine water energy.



Energy bills include both a fixed charge and an amount for the energy used. For traditional energy, 30% of the end consumer's bill is the fixed charge while 70% is for the energy used. With mine water, this is the opposite: 70% is the fixed charge and 30% is the energy used. As mine water consumers will have better insulated buildings, they are expected to use only 30% of the energy they use with traditional energy, and because the fixed charge is set at 70%, the yearly costs should be the same. As energy prices are rising faster than the fixed charges, the expectation is that mine water energy will eventually be cheaper than traditional energy.

### *Corio Energy Inc*

In order to earn back their investments in the Minewater Project and in order to start negotiations with potential consumers, the municipal government must establish a corporation. Corio Energy will supply a semi-manufactured product to large consumers that can further process the materials in their own power plant. Corio Energy will become the owner of the five wells that have been drilled in the city in the past two years, the pipes that have been placed between the wells and the heat exchangers and meters that will eventually be installed for the consumers.

### *Climate Change Conferernce in Bali*

Just as world leaders were coming together at the UN Climate Change Conference in Bali to discuss what can be done to reduce global warming, Heerlen has shown CO<sub>2</sub> can significantly be reduced at a local level. The Minewater Project is of great value for the future. At the same time, it builds a bridge to the past, when coal was used to heat houses. Because of the need for coal, the mine galleries exist, and after the mines closed, the galleries filled with water. That very water can be used as a clean and sustainable means of heating and cooling buildings in the near future. Heerlen is the first city in the world that will use mine water as energy. As a result, the project can expect worldwide interest.

### *New Energy*

New Energy ties the city of Heerlen to the past and connects it to the future. It also promotes a cleaner world and strengthens our economy. For businesses and research institutes who want to establish themselves in an environment where innovative and feasible solutions for energy maintenance are given priority, Heerlen has much to offer. The cross-border business park Avantis is the dynamic and economic heart of the city. We too want to be role models and therefore invest in sustainable projects and energy projects on the street, in schools and in neighbourhoods. Just think of the Minewater Project. Heerlen is proud of its past in energy and proud of its future in energy.



The mine water project is conducted by the Heerlen, Midlothian, Weller, BRE, WFG Kreis Aachen, BRGM, and Bönen. It is also in part (48%) financed by the EU Interreg IIB-programme.

For more information: [www.Mijnwaterproject.info](http://www.Mijnwaterproject.info)

### **ENGINE, the European project looking into the future of Enhanced Geothermal Systems : Meeting of Steering Committee and Stakeholder Meeting in the Renewable Energy House, Brussels, Sept. 20, 2007**

On Thursday, Sept. 20, in the morning the Steering Committee of project ENGINE had its meeting in the Renewable Energy House, followed by a joint meeting with the stakeholder group for this project in the afternoon. EGEC provided the meeting room in Brussels for its member BRGM, the coordinator of ENGINE.



The topics of the stakeholder meeting were:

- Synthesis of the first evaluation of the R&D priorities as defined in the framework of ENGINE by the coordinator
- Strategy for enhancing links between R&D teams and stakeholders (technology, financial, public acceptance...)
- Suggestions and recommendations from the Stakeholder Committee

The final conference of the ENGINE project will be held on 12-15 February in Vilnius, Lithuania. The geothermal community is invited to learn about the ENGINE project results there!

More info on the project and on the final conference under: <http://engine.brgm.fr/>



## **The University of Neuchâtel, Switzerland, is seeking to hire: Full professor in Geothermics**

The Institute of Geology and Hydrogeology at the University of Neuchâtel recruits a specialist in geothermics. The candidate is expected to have a background in geology or engineering geology, with a specialization in tectonics or quantitative geology and a specific experience in deep geothermal reservoirs or in Enhanced Geothermal Systems (EGS).

**Research activities:** deep geothermal reservoirs; role of discontinuities in heat transfer; evaluation of the geothermal potential; application of modern techniques for exploration, development and exploitation of geothermal resources.

**Training:** at levels MAS, MSc, BSc; specialized teaching and field activities in shallow and deep geothermal systems; key role in the new MAS in geothermics at Neuchâtel.

**Duties:** Full chair (6 to 8 hours weekly teaching in English and French, research activities and administrative tasks).

**Requirements:** PhD and record of internationally recognized research in geothermics.

**Starting date:** August 1st 2008.

The University of Neuchâtel is an equal opportunity employer and encourages women to apply.

**Application file :** detailed curriculum vitae (description of research, teaching, grants and administration experience); complete list of publications; research proposal describing the scientific vision and the research which the candidate plans to develop (max. 5 pages). The candidates will ask to three experts to send a letter of recommendation to the head of the hiring committee.

Application files should be sent **before January 31<sup>st</sup>, 2008**, including electronic copy to:

Prof. François Zwahlen, head of the hiring committee  
CHYN - Centre of Hydrogeology  
Rue Emile Argand 11, CP 158  
CH-2009 Neuchâtel, Switzerland  
e-mail: [secretariat.chyn@unine.ch](mailto:secretariat.chyn@unine.ch)

**Information :** [www.unine.ch/chyn](http://www.unine.ch/chyn)

For complementary information, contact: Prof. François Zwahlen ([francois.zwahlen@unine.ch](mailto:francois.zwahlen@unine.ch)).

## **The 2<sup>nd</sup> edition of RENEXPO<sup>®</sup> Central & South-East Europe in 2008 in Budapest generates optimism for Renewable Energy Markets in Central and South-East Europe**

### **Optimistic Regeneration**

“The atmosphere was very positive,” stated a very pleased, Stefan Varga, Director of the event organiser REECO Hungary Kft., regarding the successful premiere of RENEXPO<sup>®</sup> Central & South-East Europe in Budapest in April of 2007. The second International Trade Fair and Conference for Renewable Energy and Energy Efficient Construction and Renovation in the south-eastern European market takes place from April 24 to 26, 2008. Over 83 exhibitors, 3,000 visitors and 400 Congress participants from 22 countries, all seeking to inform themselves on the latest products, services and developments in the area of regenerative energy.

83 exhibitors, including important members of politics, the media, and the field of sciences, will be in attendance to discuss energy sources of the future.

At the “Biogas: An energy source with a future” conference, a comparison between the German, Hungarian and Romanian market conditions and the framework for Biogas will be drawn. The “Biofuel” conference will inform about different aspects of heating with Biomass – specifically focusing on the economic factor. The conference “Bio-hydrocarbon fuels” in turn, will delve into the topic of fuels created from Biomass, as well as with the theory and practice of producing Ethanol and Biodiesel.

Further themes such as wind energy, hydropower, geothermal energy, cogeneration and energy efficient construction and renovation will be discussed during other specialized conferences happening throughout RENEXPO® Budapest.

The participation from countries such as Romania, Ukraine, Slovakia, Slovenia, Poland, Bosnia, Serbia, Austria and Germany – but also from China, Mongolia, USA, Australia, Italy and Great-Britain – at the launch of the event in 2007 has already made quite an impression; one that gives the south-eastern European renewable energy market high hopes for the future.

With the positive feedback from the organiser and exhibitors of last year’s fair, next year’s RENEXPO® Central & South-East-Europe – in April 2008 – is expecting an even greater number of participants from Hungary and the surrounding countries. “Building on the success from the previous year and with the support of our many national and international partners,” Stefan Varga is confident that “RENEXPO® Central & South-East Europe will be really big in 2008!”

Further information is available online at [www.renexpo-budapest.com](http://www.renexpo-budapest.com)

## **EVENTS**

- **RESTMAC Workshop: ‘2<sup>nd</sup> Conference : Geothermal Energy in Eastern Europe’,** Budapest, Hungary 25 April 2008

The topic of this years event, which is part of the RESTMAC project and jointly organised by EGEC and Energy Center Bratislava (ECB), in cooperation with REECO, will be:

**“Agricultural and commercial applications of geothermal energy”**

Please find more information and the programme on the EGEC website and also under:

<http://www.renexpo-budapest.com/>

Also in the RESTMAC pipeline, but with no fixed date and program yet:

- **RESTMAC Workshop: ‘GSHP in Italy’,** Milan, Italy, Spring 2008
- **RESTMAC Workshop: ‘Geothermal Electricity in Europe’,** Germany/France, Spring 2008

If you are interested by these events, please do not hesitate to contact us directly at: [com@egec.org](mailto:com@egec.org)

- **EU Sustainable Energy Week -EUSEW2008 : Geothermal Energy - Benefits and Potential.**  
**Friday 1 2008, Committee of the Regions, room 51**

An event organised by the Ministry of Industry in Iceland. At the session the focus will aim at the importance of geothermal research and how geothermal energy can play an important role in the energy utilisation, both in Europe and world wide. Geothermal energy is a clean and renewable energy source, which despite its great potential, has not been used to a great extent.

Geothermal energy is present in many countries in Europe as well as all over the world. Despite its potential the growth in utilisation has been slow. Iceland is hosting a high level event on Geothermal Energy within the Sustainable Energy Week to share its experience in geothermal utilisation, raise the awareness of the geothermal potential and the benefits that it can bring with it.

**To the events [programme](#) and [registration](#) : [www.eusew.eu](http://www.eusew.eu)**

*Please note that registration is required for all events at the EUSEW2008.*

For further information please contact Ms. Thora M. Hjaltsted, Counsellor at the Icelandic Mission to the EU, e-mail: [thora@mfa.is](mailto:thora@mfa.is), tel: +32 (0)2 238 5016

- **EUSEW 2008: European Union Sustainable Energy Week, Brussels, Belgium, 28/01 – 01/02 2008**

On the initiative of the Directorate-General for Energy and Transport, the European Institutions are combining efforts to organize the second EU Sustainable Energy Week, from 28 January to 1 February 2008, under the umbrella of the Sustainable Energy Europe Campaign. This initiative could prove to be an opportunity to raise awareness and change the landscape of energy.

Find out more about the campaign at: [www.sustenergy.org](http://www.sustenergy.org)

For registration: [www.eusew.eu](http://www.eusew.eu)

- **C5's 2<sup>nd</sup> European Financing Renewable Energy Forum – The latest Trends and best Practices for Funding, Structuring and Executing Your Renewable Energy Projects, Le Meridien Munich, Germany, 31/01 – 01/02 2008**

Renewable energy is big business. Total global investment in renewable energy is likely to increase more than sevenfold in the next decade to reach £375bn and there is no sign of the investment cooling despite uncertainties in some global markets.

Building on the success of the Berlin event in March 2007, C5's 2<sup>nd</sup> European Financing Renewable Energy Forum brings together a distinguished faculty of leading investors, developers and other experts experienced in financing renewable energy projects.

For registration on line: [www.c5-online.com/renewableenergy](http://www.c5-online.com/renewableenergy)

- **World Sustainable Energy Days, Wels, Austria 05/03 – 07/03 2008**

The World Sustainable Energy Days, the largest annual conference in this field in Europe, offer a unique combination of events on sustainable energy production and use, covering energy efficiency and renewable energy sources for buildings, industry and transport.

For registration and more details: [www.wsed.at](http://www.wsed.at) or [office@esv.or.at](mailto:office@esv.or.at)

➤ **ENERBALT 2008, Siemens arena, Ozo g. 14, Vilnius, 2008 april 17 – 20**

**These are only few of many priorities set for development of energetic sector in Lithuania.** Since Lithuania has no mayor local energy producers significant part of energy is being imported. On the other hand Lithuania does have enough big resources of renewable energy – solar, wind, biomass, geothermal power – as well as a good scientific and industrial potential in developing renewable energy power plants. As requirements and regulations from European Union towards renewable energy are growing, Lithuania, together with other Baltic states as well as eastern Europe, becomes one of the most prosperous markets for renewable energy developers.

JSC “Lithuanian Fairs” is organising a fair, which is a great opportunity not only to present your production to prosperous customers, but also to make business contacts and discuss future cooperation.

**Fair topics:** Geothermal energy; Water power; Clean energy; Renewable energy; Energy economy; Alternative energy in private households...

More information on : [www.lietuviskosmuges.lt](http://www.lietuviskosmuges.lt) and at [dalia@lietuviskosmuges.lt](mailto:dalia@lietuviskosmuges.lt)

➤ **RENEXPO® Central & South East Europe - International Trade Fair and Congress For Renewable Energy And Energy Efficient Constuction And Renovation, Budapest, Hungary April 24-26, 2008**



The aim of this three-day event is to provide a platform to discuss and exchange industry know-how as well as to network in order to solve existing or upcoming problems that may arise in reaching these set targets. Over 150 exhibitors, 400 conference attendees and 3000 visitors are expected to be there. Parallel to the three-day trade fair, several conferences will be held in English and Hungarian, covering topics such as Biogas, Geothermal Energy, Wind energy, starting up a business in the renewable energy field and many more. For more information please consult the webpage: [www.renexpo-budapet.com](http://www.renexpo-budapet.com)

➤ **The Athens Summit - Global Climate and Energy Security**

Amidst increasing concerns over climate change, environmental safety and the security of energy supply/demand, the Mediterranean region is in a privileged position to act as a host to a wide variety of viewpoints regarding the resolution of our global sustainable development issue. Until very recently Climate Protection and Energy Security have been viewed as largely contradictory or separate objectives. [“The Athens Summit on Climate Change and Energy Security”](#), organized by the non-profit, non-government **International Association for Energy Security and Climate Change (I.E.S.C.)**, will strive to overthrow this zero-sum mentality.

The conference aspires to bring together senior government officials, international civil servants, corporate leaders, financiers, academic and market analysts from all segments of the energy and environmental communities, in order to define a common understanding of the challenges facing the area’s sustainable development, as well as to provide a unique networking opportunity for all interested parties.

This idea has been wholeheartedly supported by H.E. Karolos Papoulias, the President of the Hellenic Republic , the Prime Minister of Greece Constantine Karamanlis as well as the head of the Opposition and President of the *Socialist International*, George Papandreou. The summit will culminate in the signing of an inter-governmental declaration, which aspires to set bold but achievable sustainability targets for the Euro-Mediterranean region.

This could take the form of **an EU-Mediterranean Partnership** to jointly achieve at least 20% energy savings and to increase up to 20% the participation of renewable energy sources in the areas’ final energy consumption by the year 2020. **45 ministers of energy and development from the EU- Mediterranean**

**region** as well as **Russia** and **U.S.A.** have been invited by their Greek counterpart, Christos Folias, to participate in the process of drafting the Declaration. The **European Union**'s Commissioner for the Environment, Stavros Demas, is among the Summit 's keynote speakers.



5-7 May, 2008 - Athens Hilton, Greece

**The Challenge of Change**  
www.athens-summit.com

- **The 9<sup>th</sup> International Energy Agency: Heat Pump Conference – Advances and prospects in technology, Applications and Markets**, Zurich, Switzerland, 20/05 – 22/05 2008

The goal of the conference would be to promote heat pumping technologies through discussions, networking and information exchange. Technology, markets, policy and standards are issues to be dealt with in the light of environment benefits and energy conservation. The conference will pay attention to heat pumps, air conditioning and refrigeration equipment and systems for residential, commercial and industrial applications. Also, heat pumping technologies for heating and cooling of low energy houses and systems for district heating and cooling are included.

Further information: [www.hpc2008.org](http://www.hpc2008.org)