EGEC NEWS



THE VOICE OF GEOTHERMAL ENERGY IN EUROPE

Issue n°3. December 2006

WELCOME... to the last issue of the EGEC Newsletter...for 2006

A word from the EGEC President:

Dear members of EGEC, dear readers of this newsletter,

the highlight of the last weeks of 2006 on the European scene for Energy and R&D clearly was the final approval of the 7th Framework Program on Research and Technological Development (FP7). After more than two years of



preparation, discussion, lobbying, and bureaucratic procedures, the way for the next 7 years is marked. Read more about the renewable energy coverage, the geothermal content, and EGEC's position on the FP7 documents in this issue.

Development in other policy areas also is taking shape fast, with the energy roadmap of the European Commission under preparation. The official publication event for the Commission's ideas on the future of energy security, renewable energies, energy efficiency, etc. is scheduled for early January 2007. EGEC hopes that this event will not just bring some more nice words and colorful, but vague dedications, but that in consequence of the Commissions plans we will see practical changes for an increased support of renewable energies!

Under the German presidency, key actions on the climate change scene can be expected in the first half of 2007. One event particularly important for renewable energies is the first European Renewable Energy Policy Conference, organized by EREC with the support of the German Ministry of Environment (BMU). On January 29-31, 2007, top-level speakers will discuss renewable energy policy at this event in Brussels. EGEC, as a member of EREC, will be present at that conference, and you as EGEC members, members of national geothermal associations, or just readers of this newsletter, are invited to join. See more details and an online registration tool on the EREC website: http://www.erec-renewables.org

At the Annual General Meeting of EGEC on November 24, 2006, a new structure for the membership fees has been adopted (see our website http://www.egec.org). For most of you, the fees will be lower, and we hope to attract more members from the geothermal industry throughout Europe to join EGEC. Please, become an ambassador for EGEC, by spreading the word and inviting your partner companies and colleagues!

With the very best wishes for a happy and prosperous year 2007 I remain

Sincerely yours,

Dr. Burkhard Sanner

This Issue:

- Research and Development	2
- Policy	5
 News from EGEC 	9
 News from EGEC members 	10
- Events	13

Research and Development



1) The FP7 is adopted! and the call for proposals is on the air!

After 19 month of negotiations and 2000 amendments - 700 of which were put to a vote - the European Parliament gave, in its plenary session on 30 November 2006, its final approval to the EU's Seventh Framework Programme for Research and Technological Development (FP7) for 2007-2013. The Council also adopted it the 18-12/2006.

The objectives of FP7 have been grouped into research themes; Cooperation, Ideas, People and Capacities. The Seventh Framework Programme will be fully operational as of 1 January and will expire in 2013. For more information, please visit:

http://cordis.europa.eu/fp7/

http://ec.europa.eu/research/fp7/home_en.html

The European Commission has opened the first call for proposals under the Seventh Framework Programme (FP7) the 22nd of December 2006. The relevant text for geothermal energy reads:

GEOTHERMAL ELECTRICITY: AREA ENERGY.2.4: GEOTHERMAL

Research and development should aim to develop enabling technologies for the exploitation of high-temperature resources, and to prove the feasibility and sustainability of EGS technology in representative EU sites. The estimated current cost of electricity generation from the first-generation prototype plants is of the order of $\le 0.08-0.15$ /kWh.

Demonstration projects should aim at improving geothermal reservoir detection technology, increasing the performance of fluid production systems (corrosion and scaling), and increasing the efficiency of electricity generating systems.

Expected impact: a continued reduction in cost through innovative developments, learning curve effects and co-generation of heat and power should lead to an electricity cost from enhanced geothermal systems of around $0.05 \notin kWh$ in 2020.

Topic ENERGY.2007.2.4.1: Understanding and Mitigation of Induced Seismicity Associated with Geothermal Field Development

Content/scope: The objective is to study the mechanisms of induced seismicity related to geothermal field development and operation, in particular enhanced geothermal systems (EGS). The research should (a) analyse the distribution in time and space of the magnitude of seismic events, (b) set requirements for seismic monitoring, (c) recommend management strategies for prolonged field operation, and (d) provide a methodology for the estimation of site-specific seismic hazard prior to development of potential sites for EGS.

Funding scheme: Collaborative Project (small or medium scale focused project) with a predominant R&D component. Only one is expected to be funded.

Expected impact: The results should lead to a better understanding of the mechanisms of seismic events in geothermal reservoirs. This will enable to define strategies for fluid injection, for the extraction of heat over a prolonged period, and/or for the creation of EGS.

Open in call: FP7-ENERGY-2007-1-RTD

Deadline: 03 May 2007 at 17:00 (Brussels local time)

GEOTHERMAL HEATING & COOLING: AREA ENERGY.4.3: GEOTHERMAL ENERGY

Expected impact: the focus of the geothermal energy area will be on the following topics: i) to improve the performance of specific ground source heat pumps (increased efficiency and competitiveness); ii) to improve the reliability and ease of maintenance of the underground heat exchanger.

Deadline: 03 May 2007 at 17:00 (Brussels local time)



Topic ENERGY.2007.4.3.1: Improved ground source heat pumps

Content/scope: Optimise the component level design including heat transfer fluids of commercial ground source heat pumps. The aim is to increase the coefficient of performance of the heat pump and of the overall system in order to reduce the electricity consumption and extend its usage in Europe and particularly to the Mediterranean regions where this technology has not gained ground in a significant manner. The increase of efficiency will reduce operating costs and reduce pay-back time.

Funding scheme: Collaborative project with a predominant demonstration component.

Expected impact: Reduce total cost (investment, operation and maintenance costs) of geothermal heat supply.

Open in call: FP7-ENERGY-2007-2-TREN

Topic ENERGY.2007.4.3.2: Improved underground systems

Content/scope: Development of components which are easy to connect and disconnect from the surface. It is important to further progress with this technology as the geothermal heat pump has important components below the surface. The installation and repair costs which are a sizable part of the installation will be greatly reduced allowing sector to increase market share as well as progress in reliability.

Funding scheme: Collaborative project with a predominant demonstration component.

Expected impact: Robust, reliable and low-maintenance geothermal heat pump systems.

Open in call: FP7-ENERGY-2007-2-TREN

The importance of the topic on induced seismicity described above was confirmed by nature, as on December 8, 2006, a minor earthquake has occurred in Basel, Switzerland, which is considered to have been triggered by the frac process in the Swiss Deep Heat Mining project.

2) EGEC welcomes FP7 agreement - however, renewable energies and energy efficiency still far behind nuclear in funding

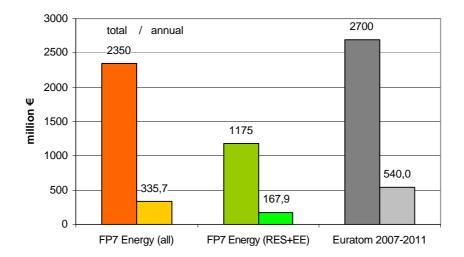
On 15 December 2006, the European Council reached agreement on a text negotiated by the Parliament and Commission granting at least € 1.175 billion of the budget for non-nuclear energy research for renewable energies and energy end-use efficiency over the next seven years, within the 7th Research Framework Programme (FP7). The Parliament already had approved the final text on 30 November 2006 after backing down from its original position, which sought more than €2.4 billion for renewables.

FP7 is the EU's main instrument for funding European research and has an overall budget of €54 billion. Following the Council's decision to support the compromise, the programme will begin as planned in January 2007 and will run until 2013.

Geothermal energy is part of the possible topics for R&D on renewable energy sources, both for electric power and in the heating and cooling sector. With geothermal energy, also the otherwise difficult base-load part of the renewable energy supply can successfully be met.

EGEC welcomes the increased funding for renewable energies in FP7, and highlights the fact that renewables and energy efficiency account for about half of the funds available for non-nuclear energy research. However, in the light of the increasing importance of renewable energies for fighting against climate change, the support is far from what is required, and far from what might be possible. A comparison with the funds available for nuclear energy R&D, which is outside FP7, and dealt with in the EURATOM treaty, shows that clearly: On an annual basis, RES+EE will receive just 31 % of the sum available for nuclear energy research (see table on next page).





During the 7 year validity period of FP7, the Commission will issue several calls for proposals in the renewable energy sector. Within the first call of Dec. 22, 2006, geothermal energy is mentioned both in the area of electricity (Energy 2007.2) and of heating and cooling (Energy 2007.4). Alas, in the electricity sector, only a small budget for the rather narrow topic of induced seismicity is foreseen (just for one projects probably). Other very important tasks, including the further evolution of low-temperature power generation, are not yet covered. In heating and cooling, the focus is on shallow geothermal only. It will be possible to submit widely related proposals also, but the chance for selection is low.

For EGEC and the national associations the task is to ensure that future calls will have sufficient budget for geothermal research, and priorities that match better the current industry needs. The primary tool for influencing R&D-decisions of the Commission can be a European Geothermal Energy Technology Platform. At a workshop in Brussels on Nov. 24, 2006, EGEC explored the possibility to create such a technology platform for the geothermal sector. All presentations of the workshop are available on our website: www.egec.org events. The next steps will be a continued discussion at the ENGINE mid-term conference in Potsdam, Jan.10, 2007, and at EGC 2007 in Unterhaching on May 31, 2007.



POLICY

3) Groundwater: stricter standards agreed in conciliation

The Parliament and the EU Council of Ministers struck an agreement on the proposed Groundwater Directive on 18 October. The directive aims to prevent the pollution of groundwater, Europe's main drinking resource, from agricultural residues such as pesticides and other harmful chemicals.

On 12 December 2006 the European Parliament gave its formal green light. In a key amendment, MEPs succeeded in broadening the scope of the directive to protection of groundwater "against pollution and deterioration" and not just "against pollution" as the Council had originally requested.

The agreement provides a legally binding obligation for member states to prevent the input of hazardous chemicals into groundwater. After the 2009 deadline to transpose the directive into national law, member states will be required to take "all measures necessary to prevent inputs into groundwater of any hazardous substances". The Council had previously backed less specific wording, requiring that all measures necessary be taken to "aim to prevent" groundwater pollution.

4) EU trade unions demand strong climate-change policy

The executive committee of the European Trade Union Federation (ETUC) adopted an ambitious resolution on European climate change policy in a meeting held on 18-19 October. ETUC sees opportunities in the form of new jobs but also dangers for some manufacturing sectors, which are the largest emitters of greenhouse gases. The ETUC therefore puts forward the following recommendations:

- Better estimation of the impact that climate change policies will have on employment and skills; social transition measures and more worker participation;
- a review of the guidelines for the EU's employment strategy to "include the objective of exploiting the full potential to create jobs linked to the development of renewable energy sources, energy efficiency and public transportation systems;
- to clarify the scope of the EU's new European Globalisation Fund "so that it can be used for workers in sectors exposed to international competition that are the most affected by greenhouse gas emission restrictions";
- to revise the existing directive on European work councils to give workers the right to information and participation on energy and climate-change issues, and;
- more ambitions for European transport policy.

The ETUC resolution also puts forward very ambitious targets for greenhouse gas reductions: 25% by 2020 and 75% by 2050, in comparison with 1990 levels. The EU should make these commitments "independently of international negotiations on the post-Kyoto period".

Finally, ETUC also calls upon the Commission to set up a "European platform for tripartite dialogue on climate change, bringing together the European social partners and the relevant directorates-general of the Commission".



5) Commission proposes €100 million global risk capital fund for developing countries to boost energy efficiency and renewables

The Commission proposed on 6 October to create a Global Energy Efficiency and Renewable Energy Fund (GEEREF) to mobilize private and public risk capital investment in sound energy technologies in developing and transition economies.

6) Commission accused of attacking aid for green electricity

A pending case between the Commission and Luxembourg relating to state aid for green electricity was denounced by the European Environmental Bureau (EEB) as running contrary to the EU's objective of promoting renewable energies.

In a 2001 directive, the EU set itself a target to increase the share of electricity produced from renewable energy to 21% by 2010. However, member states remain free to choose their preferred system to support green electricity. These are mainly:

- Feed-in tariffs which oblige grid operators to purchase green electricity at a fixed (higher) price in order to compensate for the difference with the market price, and;
- quota systems (or 'green certificates') where governments determine a minimum share of power to be produced from renewable sources.

The EEB said that the Commission had warned Luxembourg against its policy to compensate customers for higher-priced green electricity. When customers buy green power from a member state where a different support scheme applies, the measures are said by the Commission to be illegal, according to the EEB.

In July this year, the Commission delivered a ruling which said that feed-in tariffs in Austria had to be assimilated to state aid. However, it noted that the scheme was in compliance with the EU directive on the promotion of green electricity and authorised it. But it also ordered Austria to strip the scheme of a levy paid by final consumers on their electricity bill as it considered that this was leading to discrimination against imported electricity which did not receive the aid.

Claude Turmes, a Green MEP from Luxembourg, says that there are internal disputes at the Commission over what kind of support scheme Brussels should publicly endorse. He says the dispute pits the competition and enterprise directorates against environment and energy.

"This is a political manoeuvre," says Turmes, who points out that if the Luxembourg feed-in pricing system collapses, the German one will follow. "In Germany, power utilities do not like the feed-in tariff system because it allows many new companies to enter the market." This, Turmes says, resulted in a 6% loss of market share representing "millions of euros of business". "DG Competition is wasting its time attacking 5% of the market share," he added.

In November 2005, the preliminary findings of a Commission inquiry highlighted lack of competition in the energy sector as a cause of major concern and criticised member states for keeping their markets closed to foreign competitors.

A decision on the Luxembourg state aid case is expected in the coming months. But before in December 2006, the EC will publish final results of the Commission competition enquiry in the energy sector.

It is expected to have in December 2007 a review from the Commission of the need for harmonization of support mechanisms for renewable electricity.



7) Declaration "European Regions for Energy Efficiency and Renewable Energy Sources" signed on Dec. 7, 2006, in Brussels

Renewable energies have strong allies in the European regions. A declaration on energy efficiency and renewable energy was signed on December 7, 2006, at a round table organized in Brussels by the Committee of the Regions, the European Federation of Regional Energy and Environment Agencies and the Assembly of European Regions.

The position of the regions fit perfectly with the activities EGEC currently is doing in order to plant geothermal energy in regional plans 2007-2013.

The full text and pledges can be found at:

http://www.fedarene.org/publications/Projects/Contrat/Res-e-Regions/Declaration.htm

8) Climate-friendly energy neglected in EU spending plans for new member states: NGO research reveals EU is missing opportunity to back up climate commitments with financial support

The EU must take the opportunity today to adopt with EU regions, Operational Programmes 2007-2013 with ambitious targets for the renewables. The lack of this activity has recently been pointed out by some NGOs.

The plans for spending future EU funds in the new member states give alarmingly insufficient financial support to energy efficiency and renewable energy, new research by Friends of the Earth Europe and CEE Bankwatch Network revealed in November, 18 2006

Member states are currently submitting to the European Commission their Operational Programmes, which define how exactly they will use EU funds between 2007 and 2013, for appraisal.

Friends of the Earth Europe and CEE Bankwatch Network are urging the Commission and the member states to revise the plans before they are finalised in the next few months so that at least five percent of all EU funds in each member state is allocated for necessary energy efficiency and renewable investments. Examples include the renovation of public buildings and decaying prefabricated blocks of flats, the modernisation of municipal district heating systems, the combined generation of heat and power and investments in wind, solar, geothermal and small-scale biomass energy projects.

EGEC underlines that these financial supports will permit to really develop the geothermal heating and cooling market all over Europe. Big opportunities are represented by the geothermal heat pump sector and the renovation of district heating. Notably, for heat distribution, Eastern European countries may have an advantage due to existing networks: they could use these structural funds to adapt their heating system into an efficient renewable way.

9) A future common European Energy Policy

The EU Commission opened the debate on a future common European Energy Policy with the publication of a 'Green Paper' in March 2006.

At a March 2006 summit, EU member states already made clear that they would not tolerate interference with national sovereignty, especially when it comes to making sensitive political choices on the energy mix such as opting for nuclear power.



EU ministers shared views on energy efficiency and renewables on 22 November as part of a broader discussion on the EU's energy choices ahead of a Strategic EU Energy Review to be presented by the Commission in January.

The review will assess the contribution of every source of energy - wind, nuclear, coal or other - to the objectives of sustainability, competitiveness and supply security endorsed by EU leaders in March. It will also include a renewable energy road map with possible new targets after 2010.

The ministers were only able to reach a minimalist consensus, saying that renewable energies "enhance competitiveness and security of supply". They insisted on R&D programmes at both national and EU levels to make the technologies more competitive.

Addressing the Energy Council, Energy Commissioner Andris Piebalgs said that mandatory targets were the best option to increase the share of renewable energy in Europe.

Separately, the European Parliament's Industry Committee firstly on 23 November backed calls for binding targets for renewable energies in order to achieve a 25% share of renewables in primary energy by 2020.

Secondly, the 14th of December 2006 the European Parliament provided a clear signal on how to promote renewable energy in the EU up to 2020.

The European Parliament responded to the European Commission's Green Paper on sustainable, competitive and secure energy by calling for binding sectoral targets for renewables in order to achieve 25% of renewables in primary energy by 2020.

At the same time the European Commission is preparing its proposal for a roadmap that will effectively change the existing, successful sectoral approach to renewables legislation, by proposing vague measures and ambiguous commitments. By omitting sectoral targets in its draft Roadmap, the Commission is providing cynical window dressing, according to the European Renewable Energy Council (EREC).

"The Commission should focus on creating the missing link in EU renewables legislation – heating and cooling – rather than undermining existing legislation for electricity and biofuels," said EREC policy director Oliver Schäfer

The European renewable energy industries call on the European Commission to support the European Parliament's approach in its upcoming Renewable Energy Roadmap. Anything else would threaten to dismantle the current, successful framework for renewables.

The EU should continue its successful approach of specific sectoral targets to avoid putting existing frameworks under threat and creating widespread investor uncertainty.

By 2020, the EU should reduce its greenhouse gas emissions by 30% and produce 25% of its primary energy through renewables, according to this report.

The European Parliament adopted the Eluned Morgan report on the Commission's Green Paper on a European Strategy for Sustainable, Competitive and Secure Energy. MEPs recommend setting binding targets for greenhouse-gas reduction and energy efficiency. They also expressed support for more use of renewables but left the decision whether to use nuclear power to member states.

The Parliament's resolution foresees the following concrete targets:

- 30% **CO2 reduction** by 2020 and 60-80% by 2050;
- 25% of primary energy production from **renewables** by 2020 and a road map to reach 50% by 2040;
- **energy efficiency** improvements of 20% by 2020.

The 10th January 2007, the Commission will present its Strategic Energy Review focusing on both external and internal aspects of EU energy policy and analysing advantages and drawbacks of each source of energy.



NEWS FROM EGEC

NEW MEMBERS:

We are pleased to announce you that in since our last newsletter in October 2006, 5 new partners join us as EGEC members; and we are glad to cover now two new countries with Portugal and Macedonia: Macedonian Geothermal Association, Deep Drill Equipment B.V. (The Netherlands), Escola Superior de Tecnologia de Setubal (Portugal), UBeG GbR (Germany) and Green Watt (Romania).

WORKSHOP 'Towards a Technology Platform for Geothermal Energy'

EGEC organized the 24/11/2006 a workshop in Brussels on the possibility to create a technology platform for the geothermal sector.

After a presentation of the political panorama from Christine Lins (EREC) and Burkhard Sanner (EGEC), Jeroen Schuppers (EC - DG Research) explained how to build a technological platform. An active debate, managed by Pierre Ungemach (Geoproduction), Christian Boissavy (Geo energie) and Katharina Krell (EUREC), permitted to all participants to express their point of view.

In Conclusion, it was decided to continue discussion on this topic during the ENGINE Mid-Term Conference, Postdam, Germany, 10-12/01/2007.

The final conclusion on the creation of a geothermal technology platform will be taken at the European Geothermal Congress in May 2007.

All presentations of the workshop are on our website : <u>www.egec.org</u> > events

Following the Geothermal Workshop, the Annual General Meeting of EGEC was held in the Renewable Energy House, Brussels on the 24/11/2006 (the minutes to be published on the member's section of the EGEC website).

Project GROUNDREACH

EGEC is in charge to publish quarterly newsletters on the GSHP sector in Europe.

On 17 November 2006 the Ground Source Heat Pump (GSHP) Best Practice Database was implemented into the project website of the EIE project GROUND-REACH (http://www.groundreach.eu).

Main purpose of this database is

- to provide reliable information on the high energy efficiency and low CO₂ emissions achieved with GSHP in practice
- to show the broad range of possible application areas for this sustainable heating/cooling technology all over Europe
- to form the basis for setting up recommendations for a successful design, installation and operation of GSHP systems

In the course of the project at least 50 best practice cases from 28 EU countries shall be compiled. So far four cases are included (two office buildings, a one-family house and a sheltered workshop). An evaluation of the best practice case studies shall help to identify criteria ("benchmarks") for the application of GSHP in Europe.



All stakeholders interested in presenting their successful ground source heat pump installation(s) to the public are invited to submit information to <u>FIZ Karlsruhe</u>, <u>Germany</u> or to make direct online input on the website. Measurement of seasonal performance factor (SPF) over at least one heating period is required.

Project K4RES-H

The documents with the interim results can be downloaded from the website of the European Renewable Energy Council, at http://www.erec-renewables.org.

The Renewable Heating and Cooling Action Plan and the Geothermal Action Plan will be presented at the European Policy Conference in Brussels – 29-31 January 2007.

Project GTR-H starts...

On 14/12/2006 the kick-off meeting of the Geothermal Regulations for Heating / GTR-H project was held in Dublin.GTR-H stands for primarily to produce regulations for GEE for Ireland, Hungary, Poland and Northern Ireland, UK to be used as a template for geothermal regulation across Europe; and review best international practice and effectiveness of existing regulations in place in other countries.

GTR-H will follow up on barriers to GEE identified by K4RES-H and will develop a template for establishing solutions.

The other objectives: Design and elaborate geothermal regulations in focusing on promotion of exploration and exploitation of geothermal energy. Draw up a template to remove regulatory-legislative barriers and provide solutions through a draft regulation framework. Produce best EU wide applicability of the drafted regulatory template by the experience and scope of the GTR-H team. Implement this template in Ireland, Hungary, Poland and Northern Ireland, UK and facilitate the use of a common template for future EU standardization. This process will outline and encourage investment of GEE by private and public sector partnerships.

NEWS FROM EGEC MEMBERS

GEOTHERMAL PROJECT IN BLEISWIJK

Dutch Greenhouse Company drills 1700m for geothermal energy

Horticulturist A+G van den Bosch in Bleiswijk, the Netherlands, will be using deep geothermal energy for growing its tomatoes. Research on heating a 7.2 hectare greenhouse with geothermal energy was conducted at the end of 2005 by the Dutch research center TNO. TNO found that the greenhouse in Bleiswijk (Province of Zuid-Holland) offered a suitable geothermal location due to two productive geological formations 1500 – 1750 meters below the surface (Rijswijk and Berkel formation).

The temperature gradient is 3.18 °C per 100 meter at an average surface temperature of 11 °C. The expected water temperature at a depth of 1700m is therefore 65 °C and it is expected that geothermal water can be produced at a rate of approximately 150 m³ per hour. Savings on natural



gas will amount to 3 million m³ per year. The geothermal well is expected to come on-stream in the coming winter – fully replacing the natural gas.

Drilling has started

Recently the drilling of the two wells was commissioned. The first phase will be conducted using a relatively light drilling rig. In the second phase a heavier rig will be used to widen and deepen the well to it's projected depth of 1700 - 1750 meters. This stage of the project will last between 50 and 70 days. As the sandy layers are not directly underneath the greenhouse the total length of the well is nearly 2500 meters. The drilling on the second well will be started as soon as the first well has been tested successfully. The drilling contract is commissioned – on behalf of the horticulturist - by Visser & Smit Hanab, a large construction firm specialized in installation of underground utilities and pipeline construction. The drilling is conducted by Daldrup AG and is overseen by PGMI (well construction and drilling engineering & management), with among others IF Technology in its design team. Total costs of the project are roughly 5 million euro.

Support

The project was widely and actively supported by the Dutch government. The Ministry of Economic Affairs (through it's SenterNovem agency) and The Provincial Authorities of Zuid-Holland allocated an investment (demonstration) grant and the Ministry of Agriculture, Nature and Food Quality and the Horticultural Product Board offered to guarantee the risk of finding a tight well. Though this risk is considered to be low, the availability of a guarantee is obviously an important consideration for the decision to go ahead with the project.

Landmark project

A+G van den Bosch is the first horticulturist in The Netherlands to use deep geothermal energy for it's greenhouses. The project is also an important milestone in the development of geothermal energy in The Netherlands in the sense that it is the first geothermal well at this depth. Earlier this year the Municipality of Heerlen drilled to a depth of 800 meters. It is expected that these examples will inspire a wider group of both horticulturists and town planning authorities to investigate the potential of geothermal energy.

More information

More information with respect to this project and/or the development of geothermal energy in The Netherlands can be obtained at the 'Foundation Platform Geothermie'.

Stichting Platform Geothermie E.V. van Heekeren Telephone +31-70-3244043 e-mail info@geothermie.nl www.geothermie.nl

BRGM CREATES A DEPARTMENT DEDICATED TO GEOTHERMAL ENERGY

BRGM has just created a new "geothermal energy department". In the context of rising energy prices and the necessity to combat climate change, the creation of a dedicated department shows BRGM's will to contribute to the development of all kinds of geothermal energy, from high energy to low energy and ground source coupled heat pumps.

BRGM's activity already addresses these different fields, through several research programs, support for public policies and commercial contracts. Moreover, BRGM owns two subsidiaries dealing with geothermal energy: CFG Services, a service and engineering company specialised in geothermal energy, and Géothermie Bouillante that runs Bouillante geothermal power plant in Guadeloupe.



This new department, with a staff of a dozen engineers, takes over the whole activity linked with geothermal energy previously realised by different units. Moreover, it shall promote geothermal energy and its differents uses together with the ADEME, the French Environment and Energy Management Agency.

It is headed by Fabrice Boissier, who was before in charge of the service responsible for the environmental inspection of industrial installations in region Languedoc Roussillon.

BRGM is France's leading public institution in the Earth Science field for the management of natural resources and surface and subsurface risks. Its activity is implemented in the framework of three missions: scientific research, support for government policy, international cooperation and development assistance.

ENGINE CREATES AN ENHANCED GEOTHERMAL INNOVATIVE NETWORK FOR EUROPE

The ENGINE European coordination action was launched last February in BRGM (Orléans, France). It aims to state the art in order to promote Enhanced Geothermal Systems. During 30 months, ENGINE coordinates 35 partners representing 16 European and 3 non-European countries including 8 private companies, on a grant of 2,3 M€from the European Commission.

3 conferences and 7 workshops are scheduled along the coordination action. After the Launching Conference, the 2006 workshops took place in Zurich (Switzerland), Strasbourg (France) and Potsdam (Germany) to set the state of the art about reservoir stimulation, electricity generation and reservoir assessment. The forthcoming meetings are:

- The Mid-Term Conference, Postdam, Germany, 10-12/01/2007.
- Supercritical fluid reservoir workshop, Pisa, Italy, 26-27/04/2007.
- High-temperature drilling workshop, Reykjavik, Iceland, 28-29/06/2007.
- Policy makers and public implications workshop, Milos island, Greece, 13-14/09/2007.
- Risk analysis workshop, Utrecht, The Netherland, 8-9/11/2007.
- The Final Conference, Vilnius, Lithuania, 13-14/02/2007.

More information is available on the ENGINE Web site: http://engine.brgm.fr



Participants to the ENGINE Workshop in Zurich (Switzerland).



EVENTS

ENGINE

The Mid-Term Conference, Postdam, Germany, 10-12/01/2007.

2nd WORKSHOP - GROUND REACH: 24.01.2007: Vienna - Austria

Contact: Arsenal Wien, programme and registration for download at:

http://www.arsenal.ac.at/downloads/einladung.pdf

EU SUSTAINABLE ENERGY WEEK

In Brussels:

- EU Renewable Policy Conference
- Sixth Annual ManagEnergy conference for local energy actors
- Seminars and workshops proposed by European regional authorities, networks and trade associations
- Financing Local and Regional Sustainable Energy Solutions: 01/02/2007 at the Committee of the Regions, rue Belliard 101 Brussels. www.fedarene.org

Those who cannot come to Brussels to take part will have the opportunity to participate in a number of related national, regional or local events, including

- The Energy Days of the Brussels Region (Belgium) on the following weekend.
- Les Assises de l'Energie in Grenoble (France)
- The meeting of the European Buildings Directive Platform in Dublin (Ireland)
- The Spanish Sustainable Energy Week in Murcia (Spain).

You can obtain more details and register for the EU Sustainable Energy Week on : www.eusew.eu

EUROPEAN RENEWABLE ENERGY POLICY CONFERENCE: 29.-31.01.2007:

Brussels

Contact: EREC <u>www.erec-renewables.org</u> Email: <u>conference@erec-renewables.org</u>

3rd WORKSHOP - GROUND REACH: 08.02.2007: Orléans - France

Contact: BRGM f.jaudin@brgm.fr

67th annual meeting of Deutsche Geophysikalische Gesellschaft (DGG)

Held in Aachen next year from March 26-29.

For the first time in 2007, a DGG annual meeting will offer a continuous English program in five topical convened sessions, besides the regular German-language program. The topics of these symposia are:

- Hydrogeophysics,
- Geothermal Energy,
- High-Performance Computing in Geoscience,
- Sedimentary Basin Dynamics, and
- Scientific Drilling.

For more information on the meeting, visit http://www.dgg2007.rwth-aachen.de/.



RENEXPO® CENTRAL & SOUTH EAST EUROPE : 19-21.04.2007 : Budapest Fairgrounds, Budapest – Hungary

Contact: REECO GmbH

mailto:hegner@energie-server.de

www.energy-server.com

The RENEXPO[®] Central & South East Europe, taking place from April 19-21, 2007 on the Budapest Fairgrounds, brings together major players within the south-eastern European renewable energies sector. Approximately 100 exhibitors – manufacturers, planners, energy suppliers, experts from research and development, associations, members of the media, ministers and public authorities – will present the entire spectrum of renewable energies as well as energy efficient construction and renovation to visitors.

A three-day congress unites experts from the political and economic spheres with associations, members of the media and operators. The participants of this high quality specialized congress, as well as accompanying workshops, receive comprehensive information concerning legal and financial issues, current technologies and their application, as well as future market trends and implementation strategies.

Support for the RENEXPO[®] comes directly from government circles. The Hungarian state secretary Imre Németh attended RENEXPO[®] Augsburg in September of this year, making numerous contacts with representatives from politics and economy. State secretary Hans Spitzner from the Bavarian Ministry of Economic Affairs, as well as representatives from the state parliament confirmed their cooperation for the event in Budapest.

In Hungary, the trade associations for bioenergy, cogeneration, solar energy, wind energy, the bioenergy cluster and the economic network LEADER are on the extensive list of supporters. From Germany, the Bavarian Competence Centre for the Environment (KUMAS) has pledged its support in promoting RENEXPO® Budapest.

The resonance of the trade fair is also quite large outside of Europe. The Australian foreign trade organisation and members of the Chinese solar industry have confirmed their participation in Budapest.

It is to be expected that strong market impulses will carry over into the entire south-eastern European region. Countries such as the Czech Republic, Romania, Slovenia, Slovakia, Bosnia, Serbia, Croatia and the Ukraine are included in the concept of the trade fair. Germany, a leading country within the context of renewable energy, will serve as the official partner country of RENEXPO® Central & South East Europe.

Istvan Varga, managing director of the trade fair organizer, REECO Hungary, made following statement: "RENEXPO $^{\otimes}$ in Budapest will become a highlight of the south-eastern European market."

EUROPEAN GEOTHERMAL CONGRESS: 30.05.-01.06.2007: Unterhaching, Germany

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POWER-GEN EUROPE: IFEMA FERIA DE MADRID: 26-28.06.2007: Madrid – Spain

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