



THE VOICE OF GEOTHERMAL ENERGY IN EUROPE

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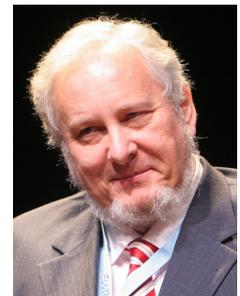
WELCOME... to the new issue of the EGEC Newsletter...for 2009

A word from the EGEC president:

Dear members of EGEC, dear readers of this newsletter,

In spring 1999, EGEC had conducted its first Business Seminar for the geothermal industry in Europe, in the historic and also modern city of Ferrara, Italy. On the occasion of that event, we had drafted and discussed a paper summarizing our expectations for the growth of geothermal energy use in Europe. This paper eventually was adopted by the participants, and published as the EGEC Ferrara Declaration.

Many experts had been uneasy with the numbers stated in the declaration for geothermal energy use in Europe in 2010, accusing us to be unrealistically ambitious. Today, in the year 2009, we can state that these values have almost been reached already!



Geothermal energy meanwhile is a factor in the European energy scene, for electric power production, and for heating and cooling. In an increasing number of regions in Europe, geothermal energy contributes to the welfare of the people.

Currently the European Union is setting up a number of initiatives to increase both security and competitiveness of our energy supply. Renewable Energies play a substantial role here. However, looking at initiatives like the strategic energy technology plan (SETP) or, even more, the European Economic Recovery Plan, reveals that there is nothing said concerning geothermal energy. Is the geothermal sector still too small? To well hidden?

So if governments do not fully appreciate the geothermal contribution to solving the energy problems, maybe it is good to look at the private sector. And so we read with great pleasure and satisfaction, that participants of the recent World Economic Forum in Davos concluded that geothermal energy will offer the best possible cost-effectiveness of renewable sources. To quote from the relevant report:

“Geothermal Power is particularly attractive as a renewable energy source because it can be used as predictable base-load power...”, and: “...a raft of new approaches has helped make it economically viable across a wider area”. So when looking at the targets for the next periods we set to ourselves in this Brussels declaration, I try to imagine how the view back from 2020 will be. And, considering the potential of geothermal energy and the technological development under way, I am quite confident that the thought in 2020 will be:

“Why have we not be even more ambitious?”

Now I would like to wish you an interesting reading!

Dr. Burkhard Sanner

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POLICY

RES Directive

The famous RES Directive has been officially published, the 5th of June 2009, in the Official Journal (OJ) of the European Union, under the title:

Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC

This directive, along with three other directives, one regulation and one decision, form the Climate-Energy Legislative Package, endorsed by the Justice and Home Affairs Ministers, on 6th April 2009, which aims at achieving the environmentally friendly targets 20-20-20% by 2020. In detail, the package is consisted of the following acts:

- Regulation (EC) No 443/2009 - reduction of CO₂ emissions from LDVs (Light-Duty Vehicles)
- Directive 2009/28/EC – Renewable Energy Sources
- Directive 2009/29/EC – ETS (Emissions trading scheme)
- Directive 2009/30/EC – Fuel Quality Directive (FQD)
- Directive 2009/31/EC – CCS (Carbon Capture and Storage)
- Decision No 406/2009/EC – «effort sharing» to reduce GHG emissions

Please visit: <http://eur-lex.europa.eu/JOHtml.do?uri=OJ:L:2009:140:SOM:EN:HTML>

The RES Directive entered into force on 25/06/2009. Which means new RES-E plants or increased capacity started counting towards the target.

After 18 months of publication in OJ, the Directive has to be transposed; which means 25th December 2010 (except for article 4.1, 4.2 and 4.3 on the NREAPs which should be transposed immediately).

The DG TREN prepared the *TEMPLATE FOR NATIONAL RENEWABLE ENERGY ACTION PLANS (NREAPs)* and presented it on 30 June 2009.

Revised ETS Directive creates a New Entrants Reserve

The general principle of 100% auctioning of CO₂ allowances in the power sector has been adopted as part of the revised Emissions Trading System (ETS). The decision was held up as extremely significant by the renewable energy industry: combined with the Renewable Energy Directive with its national 2020 targets, it should give a huge boost to investments in geothermal and other renewables.

Nonetheless, it was disappointing that the final agreement on CO₂ reductions was a great deal weaker than initially suggested. The goal is to cap total EU industrial emissions at 21% below 2005 levels by 2020 and make an average GHG reduction of 10% by 2020, divided between the Member States, for non-ETS sectors such as agriculture.

The Intergovernmental Panel on Climate Change (IPCC) has stated that to enable the global average temperature increase to be limited to not more than 2°C above pre-industrial levels, emissions in industrialised countries must be reduced by 25% to 40% by 2020.

The EU's decision allows for at least half of the reduction effort to be met by external credits in non-EU countries, meaning that the domestic reductions Europe is committed to are closer to 8% (and would increase to approximately 12% if an international agreement is reached next year in Copenhagen). This is too far from science to be credible.

The new ETS phase will begin in 2013 and run until 2020.

European Economic Recovery Plan

On 28 January 2009, as part of the overall European Economic Recovery Plan, the Commission proposed a €5 billion investment package designed to stimulate the EU's economy in the current recession. A substantial element of this proposal is dedicated to energy related projects, which is in line with the creation of a true functioning European energy market. It is essential that the European Economic Recovery Plan (EERP) achieves short-term economic stimulus and widespread job creation as well as sets the foundation for longer term recovery. Regarding the energy projects, a proposal for a Regulation to grant Community support to strategic energy projects has been made. A total of € 3.5 billion is proposed

for investment in carbon capture and storage, offshore wind projects, and gas and electricity interconnection projects.

EGEC was lobbying for the inclusion of geothermal projects into the recovery plan as our technology can deliver sustainable development that will lead to both short term stimulation and longer term restructuring of the EU's economy. In an informal *trialogue* meeting on the 16th of April, the Council, the European Parliament as well as the Commission have found an agreement on the recovery plan which stipulates that in case it would not be possible to commit all funds by the end of 2010, the unspent money should be used to fund renewable energy and energy efficiency projects.

The Parliament voted on it during its May Plenary. So, following a budget review by the European Commission in March 2010, unspent monies could be made available to certain renewable energy and energy efficiency projects. This would be an excellent way to ensure any unspent money is put to work to stimulate Europe's economy and reduce greenhouse gas emissions. Renewable energy not only decreases Europe's dependence on fuel imports, it creates technological leadership, provides jobs, and helps counter the dangerous and expensive effects of climate change caused by fossil fuels.

European Parliament vote on the Energy Performance of Buildings Directive

EGEC welcomes the plenary vote on the Energy Performance of Buildings Directive (EPBD) in the European Parliament. With a majority of 549 votes in favor of the report, the European Parliament clearly showed that addressing the building sector is key in the fight against climate change and will provide for the creation of new jobs in the energy efficiency and renewable energy sectors.

Net Zero Energy Buildings

The European Parliament report requires all new buildings to become net-zero energy buildings by December 2018. Both existing and new public buildings must implement requirements three years earlier, considering the exemplary role they have to play. Net-zero energy buildings implies a high level of energy efficiency measures, in combination with on-site renewable energy production. However, EGEC regrets that the obligation to consider and take into account the feasibility of renewable energy sources in new buildings from the entry into force of the Directive – which was agreed in the ITRE vote - has been watered down in the plenary vote.

Financing mechanisms

EGEC strongly welcomes the agreement on financing mechanisms. The Parliament's report requires the European Commission to bring forward in 2010 legislative proposals considering reduced VAT-rates for services and products linked to renewable energy and energy efficiency. The proposals should also consider an increase of the maximum amount of the European Regional Development Fund allocation to support energy efficiency and renewable energy. Last but not least, a fund should be established, based on contributions from the Community budget, the European Investment Bank and Member States for investments in energy efficiency and renewable energy in buildings.

EGEC now calls on the Council to keep this integrated approach based both on demand and supply-side measures to fully reap the benefits of sustainable buildings in terms of security of energy supply, competitiveness of our industries and sustainability.

European Commission published its 2009 Progress Report on Renewable Energy

The 24th of April 2009, EC adopted a progress report on renewable energy (in the electricity and transport sectors), highlighting the patchy progress made and the EU's likely failure to reach the 2010 indicative targets.

The reasons for the uneven progress are not new. Despite the Commission launching infringement proceedings against various Member States, the current legal framework does not provide an adequate basis for supporting solid growth in renewable energy use. Known barriers remain - surrounding administrative procedures, grid access, and guaranteeing adequate support and measures from Member States to ensure that growth occurs.

The report explores these reasons and explains that the new RES Directive addresses all the concerns highlighted in the report and provides a solid basis for removing barriers and increasing the growth of renewable energy for the next ten years.

Renewable Electricity: Commission sends reasoned opinion to Italy for not accepting Guarantee of Origins

The 19th of March 2009, EC has sent a reasoned opinion to the Italian State for failure to recognize certain guarantees of origins from other EU Member States. Under to *Directive 2001/77/EC of the European Parliament and of the Council of 27 September 2001 on the promotion of electricity produced from renewable energy sources in the internal electricity market, (OJ L 283/33, 27.10.2001)*, Member State are asked to establish a system of guarantees of origins and to recognize those of other EU members. However, Italy has not respected this obligation and so Commission took measure against this State.

Evaluation and Revision of the Action Plan for Energy Efficiency COM (2006) 545

The European Commission is running a Public Consultation on the Action Plan for Energy Efficiency (EEAP): Consultation period: 08/06/2009 - 03/08/2009. The questionnaire is available online on EC-DG TREN website. The EC will plan, after the deadline expires, to publish the results of the public consultation which aim is to gather opinions of various stakeholders about the effectiveness of the 2006 Action Plan.

Power Markets will be further opened by EU Liberalization Package

The European Parliament adopted the final version of the third internal market package earlier today, 19 months after the Commission's initial proposal in September 2007.

The newly-adopted market liberalization package will help open European power markets and allow a higher penetration of renewables.

According to the final text, National Regulatory Authorities will have to facilitate the integration of renewables into the power grid, and TSOs will have to grant electricity from renewable sources priority dispatch, confirming the requirement contained in the 2009 Renewable Energy Directive. This will help adjust the balance of the power markets, currently heavily tilted towards conventional fuels.

The preferred approach of 'full unbundling', as proposed by the European Commission, has been retained in the final document. 'Full unbundling' means large vertically-integrated energy firms which control both electricity production and distribution assets would be entirely broken up. However, two 'opt-out' clauses appear in the final text. These both allow European energy companies to retain their network assets, with either an Independent Systems Operator (ISO) overseeing network activities, or the day-to-day grid management being put in the hands of an Independent Transmission Operator (ITO).

If a Member State chooses one of these alternatives to unbundling, it will be to the detriment of its 2020 binding renewables target and of the overall development of the internal energy market, as neither alternative will allow fully effective power market competition. Moreover, the opt-outs would both put a huge bureaucratic burden on the Member State and grid operator in question.

Disagreements force Energy Tax Proposal rethink

The European Commission's taxation department is being forced to revisit some elements of a draft proposal to revise the EU energy taxation directive, after its adoption was put on hold because of internal opposition to some of the department's proposals.

The Industry sector has been invited by the taxation department to take part in the proposal consultation process, in mid-July, so as to bring the 2003 directive "more closely into line with the EU's energy and climate objectives".

The proposal includes the introduction of a CO₂ emission-related element to the taxation of heating and motor fuels. From 1 January 2013 member states would have to levy a minimum rate of €0.03 per kilo of CO₂ on all such fuels, based on CO₂ emission factors for each fuel already developed under the EU emissions trading scheme (ETS). The CO₂-related element would not be applied to taxes on electricity or other energy uses regulated under the ETS. Biomass and biomass-derived products such as biofuels would also be exempt from CO₂-related taxes, according to the department's proposal.

Between 2010 and 2020 member states would be able to exempt businesses outside the EU ETS from CO₂-related energy taxes, subject to them making investments that reduce their overall emissions by at least 20%. Nine of the member states that joined the EU since 2004 would be allowed to delay the introduction of CO₂-related taxation until 2021, according to the proposal.

"Green economy" through the EU Cohesion Policy

The former European Commissioner for Regional Policy, Mr. Danuta Hübner, announced (just before to be replaced by Paweł SAMECKI) the investment of €105 billion on the "green economy" through the EU Cohesion Policy. The amount dedicated to the *green economy*, EUR 105bn, is three times greater than the sum allocated in 2000-06. This substantial increase illustrates that in the light of the severe financial crisis, fiscal policy and energy policy are now inseparable. Almost every fiscal stimulus announced around the world contains some reference to clean energy sector, which is widely seen as the first one to rebound from the recession. The funding, which represents more than 30% of the regional policy budget for 2007-2013, offers greater job opportunities and a favorable role to be played by regions and cities in the sector of green technologies. Four priority areas are defined to adopt a flexible policy and face the climate challenges: environmental initiatives, fight against climate change, promoting eco-innovation and launching "green proofed" programs.

Crucially, some EUR 48bn will be directed towards achieving EU climate change objectives. Some EUR 23bn of this sum will be dedicated for railways development and modernisation, EUR 6bn for clean urban transport and EUR 4.8bn for renewable energy projects. EUR 4.2bn will go to energy efficiency and EUR 3bn to promote environmentally friendly products and production (eco-innovation) processes in small and medium enterprises. The rest of the sum will be earmarked for water management, waste management and biodiversity and nature protection initiatives. Most of the money will be divided between 27 member states, but EUR 2.7bn will be dedicated for EU cross-border cooperation.

Moreover, First reading of the European Parliament adopted on 2 April 2009 on Regulation amending Regulation 1080/2006 on the European Regional Development Fund as regards the eligibility of energy efficiency and renewable energy investments in housing

- In each Member State, expenditure on energy efficiency improvements and on the use of renewable energy in existing housing shall be eligible up to an amount of 4% of the total ERDF allocation.
- Member States shall define categories of eligible housing in national rules, in conformity with Article 56(4) of Regulation (EC) No 1083/2006, in order to support social cohesion.

The First Ceremony of the Covenant of Mayors



During the EUSEW 2009, the first meeting of the Mayors from 370 cities from 30 countries, being part of the Covenant of Mayors, took successfully place at the European Parliament premises. The *Covenant of Mayors* is a commitment by signatory towns and cities to go beyond the objectives of EU energy policy in terms of reduction in CO₂ emissions through enhanced energy efficiency and cleaner energy production and use. Today, more than 500 European cities already join this initiative.

ELENA: New Source of Funding for Local Energy Action

ELENA (European Local Energy Assistance), is a technical assistance facility to be launched by the European Commission in cooperation with EIB. It is foreseen to be operational in the second half of 2009.

ELENA will assist cities and regions in developing their sustainable energy investments projects and mobilising investments. Through the facility, operated by EIB, the Commission will provide funding of €15 million to local authorities for financing their costs associated with development of municipal investment projects or programmes contributing to the overall EU energy targets.

ELENA is funded by the Intelligent Energy Europe (IEE) programme and will contribute to cover the technical assistance costs related to eligible investment projects or programmes.

Sustainable energy projects eligible under ELENA can focus on a variety of sectors, such as retrofitting of public and private buildings, sustainable building, energy-efficient district heating and cooling networks, or environmentally-friendly transport.

Further information can be found on the Covenant of Mayors website: www.eumayors.eu

Climate change: Commission sets out proposals for global pact on climate change at Copenhagen

The European Commission published its proposals for a comprehensive and ambitious new Kyoto Protocol (to be decided next December 2009 in Copenhagen). The Commission's proposals include the creation of an OECD-wide carbon market by 2015 as well as of innovative international funding sources based on countries' emissions and ability to pay, aiming at supporting developing countries to tackle climate change.

Priority for the Union is to limit global warming to less than 2°C above the pre-industrial temperature. The Communication offers concrete proposals to reach these goals, addressing both to developed and developing countries. As far as the financing of low-carbon development is concerned, global net additional investment may need to rise to around €175 billion per year in 2020 with more than half of this be needed in developing countries. In addition, EU should explore potential innovative sources of international funding based on the polluter pays principle and the ability to pay. EU Member States could also use part of their future revenues from auctioning allowances under the EU Emissions Trading System to support developing countries.

The purpose given by the Commission is the reform of the Kyoto Protocol's Clean Development Mechanism and the development, by 2015, of an OECD-wide carbon market by linking the EU ETS with other comparable cap-and-trade systems.

EP asks to reconsider Strategic Energy Goals

Due to energy supplies' ambiguity, the European Parliament has urged the UE to adopt more ambitious long-term energy and climate goals for 2050. The EP asked from Member states to agree on cutting greenhouse gas emissions by up to 80%, improve energy efficiency by 35% and bring the share of renewable energies to 60% of the EU's total energy consumption by 2050.

To finance climate policies in the future, MEPs called for the establishment of a European Climate Fund, or corresponding funds in the Member states, so as to support research and development in green transport technologies.

Concerning the developing countries, rich nations have to step up public funding to help developing countries cut their greenhouse gases and prepare for the negative impact of climate change. It has been also suggested a increase in global investment to 175 billion euro per year by 2020, more than half of which must be spent in developing countries. EU in its proposal, it proposes two options to increase public funding, based on the 'polluter pays' principle. The first would require developed nations to pay a set price for every tonne of carbon dioxide emitted – starting with €1 per tonne and rising later to €3 – to reach a total of €28 billion in 2020. The other option, less predictable because it is linked to market fluctuations, would set aside a percentage of emissions traded for the fund. To ensure action is matched by financial and technical backup, the Commission is proposing a new 'Facilitative Mechanism for Mitigation Support,' which would provide a platform for bilateral and multilateral support schemes and the establishment of another technical panel under the UNFCCC to support adaptation efforts for both developed and developing countries.

NEWS

World Economic Forum 2009 in Davos promotes Geothermal Energy

In the aftermaths of the World Economic Forum in Switzerland, (29 January 2009), a report on the «Green Investing: Towards a Clean Energy Infrastructure» had been released pointing out the need of investments, at least US\$ 515 billion per year until 2030, on developing a clean energy infrastructure in favor of a low-carbon economy. Eight emerging, large-scale clean energy sectors that will indeed contribute to a clean energy infrastructure of the future are mentioned in the report, including onshore wind, offshore wind, solar photovoltaic, solar thermal electricity generation, municipal solar waste-to-

energy, sugar-based ethanol, cellulosic and next generation biofuels, and last but not least (a contrario) geothermal power.

Special attention has been paid to the potential of clean energies to generate significant economic returns. The report shows that even after a tumultuous 2008, an index of the world's 90 leading clean energy companies had a five-year compounded annualized return of almost 10%, unmatched by the world's major stock indices. In details, an increase of clean energy investments from around US\$ 30 billion in 2004 reached over US\$ 140 billion by 2008, and, not to mention, it was geographically very diversified.

The link between economy and climate is unanimously a reality and actions are focused on avoiding any discouragement throughout the proceedings for the new Kyoto Protocol in Copenhagen in December 2009 due to the economic crisis. It is suggested, some of the money available from fiscal stimulus packages to be invested in activities that can provide jobs as well as create low emission options. Business, governments, experts and civil society groups need to cooperate and work to implement "win-win" projects.

Participants of the recent World Economic Forum in Davos concluded that geothermal energy will offer the best possible cost-effectiveness of renewable energy sources. To quote from the relevant report: "Geothermal Power is particularly attractive as a renewable energy source because it can be used as predictable base-load power...", and: "...a raft of new approaches has helped make it economically viable across a wider area".

Surprising Green Energy Investment Trends Found Worldwide

The 2008 investment is more than a four-fold increase since 2004 according to Global Trends in Sustainable Energy Investment 2009, prepared for the UN Environment Programme's (UNEP) Sustainable Energy Finance Initiative by global information provider New Energy Finance.

Investment in RES in Europe for 2008 reached the \$49.7 billion, a rise of 2%, and in North America \$30.1 billion, a fall of 8%. Between 2009 and 2011 UNEP estimates that a minimum of \$750 billion - or 37% of current economic stimulus packages and 1% of global GDP - is needed to finance a sustainable economic recovery by investing in the greening of five key sectors of the global economy: buildings, energy, transport, agriculture and water.

Geothermal was the highest growth sector for investment in 2008, with investment up 149% and 1.3 GW of new capacity installed. The competitive cost of electricity from geothermal sources and long output lifetimes have made this an attractive investment despite the high initial capital cost.

OneGeology Project



A truly multinational project, involving many different stakeholders, has been put into practice since March 2007. A total of 81 geoscientists from 43 countries across the world gathered to agree on the launching of the project that aims at creating a dynamic digital geological map data for the world; available to all from a portal via the Internet. Among other instruments to reach the target, the transfer of know-how to those who need it, adopting an

approach that recognizes that different nations have differing abilities to participate is going under way.

The project, closely interlinked with the IUGS Commission for the Management and Application of Geoscience Information (CGI), it brings together the network of geological surveys around the world, the international umbrella organizations of the Commission for the Geological Map of the World (CGMW), the International Union of Geological Sciences (IUGS), the International Year of Planet Earth (IYPE) and United Nations Educational Scientific & Cultural Organization (UNESCO) and the International Framework of the International Steering Committee for Global Mapping (ISCGM).

It is worth visiting the website: www.onegeology.org

'SuperSmart Grid' could connect up renewable energy across Europe

A recent study describes a new approach to electricity distribution in the form of a 'SuperSmart Grid'. This supports both long-distance transmission and decentralised energy generation and could enable a 100% renewable electricity system by 2050.

Two proposals for overcoming problems such as the intermittent supply, the fluctuations it causes and strain on the grid system may be: 1) a large-scale grid to transmit electricity from renewable sources over

long distances, a 'Super Grid', and 2) decentralising production of renewable electricity from distributed, small installations, such as micro turbines, fuel cells or biogas digesters: a 'Smart Grid'.

The researchers, working under the EU CIRCE project¹, suggest that these two proposals could be combined to create the SuperSmart Grid (SSG). This would transmit electricity over a wide area and connect up smaller, distributed generation installations. An efficient SSG would also even out any fluctuations over a wide area. The authors argue that a 100% renewable electricity system is necessary if Europe is to meet its target of reducing greenhouse gas emissions by 60-80%, compared with pre-industrial levels by 2050, (in line with the policy to limit the global average temperature increase to not more than 2°C) and that the SSG would enable this system.

Compared to alternative options, the authors believe the SSG benefits from large economies of scale and low running costs, but creates important challenges. At today's costs, initial investments for thermal solar plants in North Africa would be up to three times higher than for similar capacity increases with conventional fossil fuel plants in Europe. A supporting legal framework is needed to obtain permission for the rights of way of the electricity lines across national and local boundaries.

New Science for Environment Policy website and archive

A new website has been launched for Science of Environment Policy, the environmental news alert from the European Commission's DG Environment. The service is designed specifically to help policy makers and industry keep up to date with the latest scientific research relevant to key environmental policy issues. The new website makes it easier for users to access and search the online archive of articles.

Spain, Portugal to set up renewable energy research center

Spain and Portugal agreed on setting up a joint renewable energy research center, under the instruction of the Iberian Renewable Energy Center in the southern Spanish city of Badajoz located close to the Portuguese border. The center will be headed by Portugal's Antonio Sa da Costa, the current vice president of the European Renewable Energy Federation and it will focus on strategic energy planning far from oil dependence. Thanks to a high-speed rail link between Lisbon and Madrid, and between the Portuguese capital and Vigo in northern Spain, completed by 2013, the two countries have agreed that one of the stations along the high-speed rail link between Lisbon and Madrid will be between the border cities of Badajoz and Elvas in Portugal.

- Portugal, which is almost entirely dependent on imported energy, aims to collect 45% of its total power consumption from renewable sources by 2010.

- Spain aims to triple the amount of energy it derives from renewable sources by 2020.

Revival of Paris' geothermal potential

Due to the scarce development on renewable investments in France and mostly on geothermal energy, a major new project is going under way in Paris. The projects will provide an entire district with clean heating by extracting piping hot water from nearly two kilometers under the earth. Drilling has just begun in the north of the city on a desolate building site sandwiched between the traffic-clogged inner ring road and the Saint-Denis canal. At the construction site, a 36m yellow mast rises above a dense cluster of machinery that is usually used to drill for oil. At that depth lies a geological stratum called the Dogger from which water, heated naturally to 57 °C, will be sucked up to the surface, where it will be used to heat another stock of water. This will be pumped to apartment blocks to heat radiators and provide hot water. The scheme will heat around 12 000 apartments and other buildings due to be built by 2011 in a new residential area in the city's 19th district. The project will cost €31-million (about R-million), €5-million of which will come from the state environment agency and the regional council. The use of geothermal energy will prevent 14 000 tons a year of the main greenhouse gas carbon dioxide being pumped into the capital's already polluted air.

Historically, there were around three dozen sites using geothermal energy in the greater Paris region, nearly all dating from the 1970s and 80s. France's geology does not permit tapping into geothermal energy on the Icelandic scale, but there is much unused potential. Currently around 170 000 French homes are heated geothermally, but the government plans to multiply that number by six by 2020, which would mean that four% of the nation's households would be thus heated.

The Paris area, Alsace in the east, and Aquitaine in the southwest are the regions geologically best suited for such projects. And the capital's second airport, Orly, a year ago announced plans to extract geothermal energy to slash its heating bills.

CEZ Plans First Geothermal Plant in Renewable-Energy Expansion

CEZ AS, central Europe's biggest power company, plans to launch a pilot project to build its first geothermal plant to harness heat found deep underneath the earth's surface. The Czech company put a 250 million koruna (\$11.3 million) contract for preliminary drilling. In the second half of 2009 CEZ may begin boring to reach steam deposits hot enough to power generators for the plant to be located in the country's north.

CEZ's pilot project is part of more than 5.5 billion koruna it plans to invest in alternative-energy projects by the end of 2012. The geothermal plant will cost about 1 billion koruna in total and produce less than 10 megawatts of power, CEZ estimates. Liberec, the nation's sixth-biggest city, will bear part of cost and receive the electricity produced.

A geothermal plant is to heat and power at Poland's Lodz University

The City of Lodz Council and Lodz Technical University (Politechnika Lodzka) signed a deal to jointly develop the geothermal project, with work to start later in 2009. The ambitious project is to comprise an Olympic size swimming stadium for 800 viewers, a climbing wall and facilities, plus a teaching centre. The sports and educational complex will be developed on a site shared by the city and the university, and it will necessitate some demolitions of adjacent apartment buildings. The Lodz region has a great geothermal potential, with water reaching a temperature of up to 120 degrees Celsius at the depth of some 4km. A test-well - funded at PLN 20m (USD 6.1m) by the National Foundation for the Protection of the Environment and Water Resources - is to be drilled to that depth as the first step. The volume of boiling water available has been estimated by professor Krysinski of Lodz University at some 200 cubic metres per hour, thus enabling a dual use for both heating and electricity generation of the new complex, as well as some existing university buildings. The construction of the geothermal power plant is to take two years and its cost of some PLN 50m (USD 15.2m) will be partially funded by the city. The cost of the development of the new complex has been estimated at some PLN 130m (USD 39.5m) and is expected to be funded jointly by the sports and education ministries, the city and the county budgets and the Lodz University.

Tories pledge support for Deep Geothermal energy projects

Tory leader David Cameron has pledged support for deep geothermal energy projects that could bring jobs to mining areas in Cornwall, Yorkshire and the North East and offer 10% of the country's energy needs. The UK already boasts world-leading expertise in the field, contributing to international efforts to bring the technology to a commercial footing. Cornwall is set to host a 3MW demonstration project that could pave the way for a series of 50MW commercial-scale geothermal power stations in suitable areas across the country.

Still in its infancy, the technology is most proven where there are already underground hot water reservoirs in the form of natural aquifers - but these rock formations are not common in the UK. But, modern Engineered Geothermal Systems (EGS) mean natural aquifers are not needed - with the right drilling, high-pressure water can be used to force open cracks in the rock to create space for artificial reservoirs to heat water for energy generation. The plants can be as much as 70% efficient, using up to 30% of the energy generated to drive the system. Experts believe geothermal power stations could provide valuable "baseload" electricity, since they operate round the clock with little down-time. This would effectively follow along similar lines to the feed-in tariffs for renewable electricity projects below 5MW in scale, currently being devised by the Department of Energy and Climate Change for introduction in April 2010.

For East Europe, geothermal can replace some gas

Lajos Barath hospital has set up a geothermal installation for the use of both heating and hot water. It has costed 175 million florins (\$760,000) to change the hospital's system fully to geothermal using two existing geothermal wells of 2,150 meters (7,000 feet) deep, it is expected the investment to pay off in about eight years and to save between 18 million and 20 million florins annually in energy costs.

In Hungary, initiatives at a local level have already made a difference. Hodmezovasarhely, a sprawling agricultural town in the southeast, uses geothermal energy to heat apartments and community buildings. Local people wish the EU support this kind of initiatives.

Following Italy and Iceland, Hungary is among the countries in Europe with the best geothermal potential since the earth's crust is significantly thinner beneath Hungary than elsewhere.

CEGE Zrt, a unit of oil and gas group MOL and Australia's Green Rock Energy is testing some of Hungary's 8,000 or so mostly abandoned oil and gas wells for water that could later be used for heating, or possibly generating electricity.

Bulgaria and Poland are also among countries with good geothermal potential. Bulgaria's geothermal potential is mostly unused with at least 160 locations with geothermal springs, according to the Bulgarian Academy of Science. Some villages and towns such as Sapareva Banya in southwest Bulgaria have been using geothermal water to heat administrative buildings and schools since the communist era.

In Poland, parts of the mountain resort Zakopane in southern Poland are heated using geothermal energy, but environmentalists say costs and red tape hinder broadening its use.

Turkey to focus on geothermal energy projects

During the GeoFund Geothermal Workshop in Istanbul (16-19 February 2009), the Turkish energy minister, Mr. Turkey Hilmi Guler announced the amount of \$120 billion-worth of investment for energy by 2020 with the major part of these will be constituted to the geothermal energy projects. In the framework of the workshop that focused on attracting investments on geothermal energy in Europe and Central Asia (ECA), Mr. Guler mentioned that the new regulations in electricity prices would also increase competitiveness in the market. To the common belief, Turkey is expected to make use of the tremendous resources in terms of geothermal energy and thus to be both the model geothermal country in its region and the largest GeoFund country.

The workshop was organized under the cooperation of the World Bank, IGA, with the support of EGEC. Moreover, the power group EnBW expressed its wish to invest 1 billion euros, in the following four years, in renewable energies with a partner in Turkey. EnBW has signed a letter of intent with the Turkish group, Borusan Holding with each side owning a 50% share of the joint project.

EnBW mentioned that the Turkish market for renewable energy is expected to grow by around 8% per year.

German renewable industry fears CCS law

German renewable industry has rejected a bill on CCS. The Bundestag, the German parliament, started to debate a governmental bill on underground storage of carbon dioxide that has been captured in power plants and industrial sites. Pressure group German Renewable Energy Federation (BEE) warned the draft law will slow the development of clean energy sources after 2020, in particular geothermal energy.

Priority was supposed to be given to carbon capture and storage (CCS) technology when it comes to picking geological reservoirs, instead of renewable energy sources, BEE warned.

Geothermal vs CCS

At the moment there is only one GWh built in capacity of geothermal energy in Germany, but BEE estimates it could climb up to 4 TWh by 2020. Interestingly enough, the wide-scale deployment of renewable energy may be at risk because of the law.

Government priority

German Environment Minister, Sigmar Gabriel, said in a press release the law is only a prerequisite for the industry to allow it to investigate whether the technology can be used safely. He insisted renewable energy is still a top priority to the government and clean energy sources will not have to compete with the technology of CCS. "Geothermal projects will take priority over the storage of CO₂," Gabriel said.

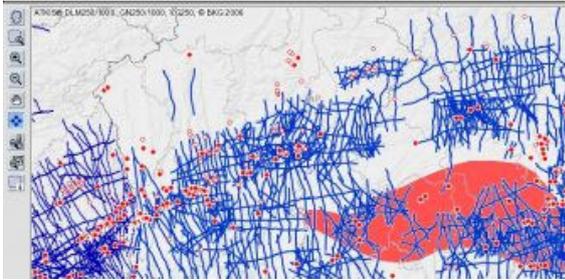
Eventually, the proposed law was not discussed in Parliament, and the issue will not be handled before the upcoming elections end of September.

Germany opens Geothermal Power Station in Bavaria

Germany has officially opened an eco-friendly power plant near Munich in what is seen as a significant step in the creation of its promised geothermal energy network. German Environment Minister Sigmar Gabriel inaugurated the new power station in the Munich municipality of Unterhaching. The plant will

allow the city of 22,000 to cut carbon dioxide emissions by two-thirds. He said the project showed how innovative technology could exploit geothermal energy to generate heat and electricity. The plant, which will supply energy from deep within the earth's crust, is the first in the country to use what is known as the Kalina system. The technique, which uses ammonia and water to maximize the levels of power generated, will give the plant an output capacity of 3.36 megawatts. Following the publication of a 2008 report which showed Germany to be making very little use of geothermal energy, the government has pledged to create a geothermal network capable of generating 280 megawatts of power, 40 times its present capacity, by the year 2020.

Online Geothermal Information System (GeotIS) launched in Germany

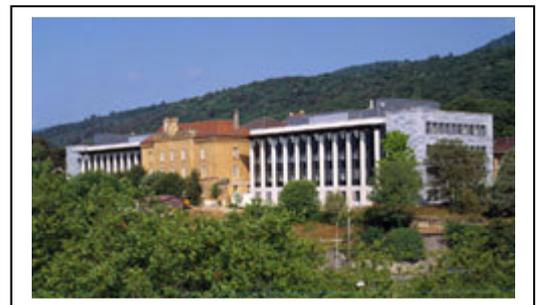


A new website, free of charge, entitled “Geothermal Information System for Germany (GeotIS)” has been launched by the Leibniz Institute for Geophysics in the country. It provides details about geological structures and physical parameter of the subsurface that are useful for the utilization of “deep” geothermal projects. Furthermore important data about existing geothermal installations can be called up. Based on horizontal and

vertical 3-D cuts, interested parties can easily evaluate the chances of utilization of geothermal energy. The system provide the basis for necessary feasibility studies, which are prerequisite for any investment decision.

Post-doc Opportunity - Groundwater Dependent Ecosystems at the University of Neufchatel - Centre d'Hydrogéologie et de Géothermie (CHYN)

It is increasingly recognized that groundwater can play an important role in sustaining terrestrial ecosystems. The goal of the project is to develop conceptual models of groundwater dependant ecosystems (GDEs) in mountainous areas, focusing on the Alps and Jura mountains, and to test them at selected sites. For mountainous karst areas, especially the role of the epikarst, which represents the most important water source for vegetation, will be evaluated. The project is part of a large European Project on groundwater dynamics and groundwater dependant ecosystems and will include international collaboration.



The ideal candidate should have PhD degree in hydrogeology or related fields, with experiences in both hydrogeology and ecology. Starting date is July 1, 2009 or upon agreement. The position is limited to 12 months with possible extension.

Applications should be sent by email (PDF) to:

Prof. Daniel Hunkeler (daniel.hunkeler@unine.ch)

Dr. Nico Goldscheider (nico.goldscheider@unine.ch)

Geothermal energy in the French Grenelle de l'environnement

In Alsace Region, the Regional Council plans to support 5 deep geothermal projects by 2015. The financial support is shared with Ademe, for an annual budget on all RES in Alsace : 19,2 Mio euro.

At national level, the Grenelle de l'environnement budget is ca. 19 Bio euro on 23 years

This French plan is also declined at regional level according to the local advantages. The Alsace region President, Mr Adrien Zeller notably said during the signature of the agreement with Ademe : “Here we don't have wind, but we have geothermal energy !”

Reduction of the half of CO₂ emissions by Chaudfontaine, through a geothermal power plant, Belgium

In the framework of sustainability policy, the Belgian major producer of mineral water, Chaudfontaine, announced the installation of a geothermal power plant that will recuperate the natural heat of the water produced, contributing this way to the reduction in half of the CO₂ emissions.

Since 2003, Chaudfontaine belongs to Coca-Cola Belgium & Luxembourg and more than 50 million euro have been invested at place in favor of environmentally friendly infrastructures. Coca-Cola has confirmed its commitment to design and follow an environmental strategy, through its “Coca-Cola Management System”.

4th International Renewable Energy Storage Conference IRES 2009 November 24-25, 2009, Berlin, Germany

EUROSOLAR (The European Association for Renewable Energy) and the World Council for Renewable Energy are organizing the 4th international conference themed “International Renewable Energy Storage Conference“ (IRES), in Berlin/Germany, November 24-25, 2009. The main purpose of the event is to contribute to the developments in energy storage and to publicize their application. More than 1000 experts from around the globe are expected to attend the IRES-conference.

The GREEN COLLECTOR Patent



The Energy Capsule is patented and approved by the Swedish Food Agency, Swedcert, Technical Research Institute of Sweden (SP) and made under European Standard EN 12201.

The Certification Board of Swedcert has granted Pemtec’s product, the Environment Collector, with the Green Certificate for the period 2008-2013. Based on the Swedish Buildings Regulations (BBD), the company fulfils all criteria to be provided with the certificate, accompanied to the installation site, by a certificate of assurance from the manufacturer. Of course, one per year, Pemtec has to present in front of Swedcert a quality control of the product.

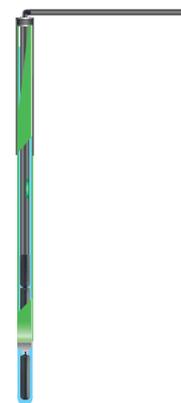
Environment Collector is applied (with ethanol/water mixed as circulating brine fluid) to transport energy from the drill hole to the heat pump.

The patented Green Collector system is used to:

- Make a hydraulic seal between energy probe and ground water with unaffected thermal heat exchange
- Hinder hydraulic contact between different water segments inside the well
- Simplify future maintenance if required
- Strengthen borehole to avoid collapse
- Possibility to pre-heat the water inside the Energy Capsule with solar energy or any “waste energy”
- No need to seal the geothermal well with bentonite nor cement.

The Green Collector consists of:

1. Casing protection is mounted on casing pipe to protect the Energy Capsule
2. The Energy Capsule with adapted weight They are lowered directly after drilling and filled with water.
3. The Energy probe with adapted and flexible weight The probe is filled with a mix of water and freeze protection and lowered into the Capsule.
4. Casing pipe cap is mounted and sealing the Energy Capsule towards the casing protection

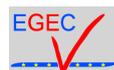


Resboat: RES Promotion and Dissemination Campaign of Project Results and Best Available Technologies on the River Danube



Following the conference on board organized in Vienna, Bratislava, Budapest, Vukovar and Belgrade on different aspects of RES technologies with the aim of bringing together the stakeholders of the RES market and owners of European RES projects and other interested participants, the “Virtual Boat” is still on going. It is a common database of RES projects descriptions and other useful features where it is possible to upload project samples, to exchange information and experiences and eventually to meet future colleagues. The Exchange board serves as a business corner and assists the users in the on-line networking activities by providing the opportunity to share business activities and project ideas with potential partners. The users of the exchange board can add their own files to the system and browse among the documents and files recorded by other members. For example: business or project ideas, information on RES projects, or the description of RES related technologies, etc.

Visit: www.resboat.org



NEWS from EGEC

EGEC Brussels Declaration 2009

In the aftermaths of the GRT-H Conference in Brussels, (11/02/09), EGEC published the *Brussels Declaration - A Geothermal Europe*. Following the publication of the Geothermal Research Agenda (January 2009) which formed the research priorities for all geothermal technologies until 2030, EGEC released its Declaration 2009, where the geothermal targets (electricity, H&C) for all Europe by decade and the ways of achieving those targets are indicated.

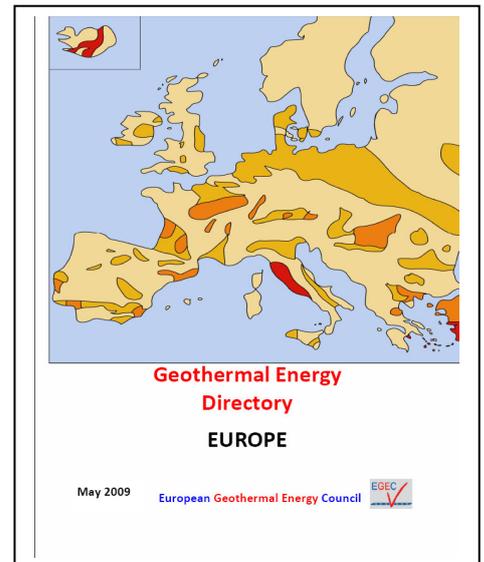
The Long Term goal (2030) of the geothermal sector can contribute to 5% of total electricity production in Europe, and 3.5 % of total heat generation.

Visit: www.egec.org > publications

Geothermal Energy Directory Released!!

EGEC is glad to announce you the online release of the Geothermal Directory: 250 pages presenting more than 1300 European geothermal actors. The Directory is a collection of associations, companies, agencies, financial institutions, NGOs, institutes and universities that deal with geothermal energy, geological research, HP installations, consultancy, financing and so on. This great initiative came into realization with the aim of helping geothermal stakeholders to have a common reference basis and of course, to network. Nevertheless, the version of the Directory – May 2009 – is the very first one and our objective is to republish the updated Directory every 6 months, all changes and new information included. Our apologize when some information is missing; to improve our work, your comments and advice are more than welcome.

The Directory is available only for EGEC Members.



European Technology Platform (ETP) Renewable Heating & Cooling - Geothermal Panel Kick-off meeting



EGEC has published a first edition of the Geothermal Research Agenda –Strategy 2008 to 2030, in January 2009.

“The ETP-geothermal panel has become an important tool for our sector to develop a roadmap for our technology.”, says EGEC President Burkhard Sanner.

The kick-off meeting of the ETP-RHC took place in Brussels, the 26th of June, in the premises of the Renewable Energy Council.

Aims of the geothermal panel:

- Strengthen the awareness of the huge potential of geothermal technologies in contributing to a sustainable energy infrastructure
- Increase R&D activities in the geothermal sector
- Accelerate the development of geothermal technology
- Create conditions for a broad dissemination of advanced geothermal technologies

Objectives of the geothermal panel:

- Develop a vision for geothermal technology in 2030
- Work out a strategic research agenda to achieve this vision

- Support of the implementation of the strategic research agenda
- Identify non-technological framework conditions to facilitate a broad market deployment for geothermal technologies

Next meeting of the geothermal panel on 03-04/09/2009 in Brussels. More info on www.egec.org

The Contribution of Renewable energy to the Mitigation of Climate Change: The vast mitigation potential of Geothermal Energy

The 3rd of April 2009, in Bonn, a side event during UNFCCC discussion was organized by EREC, EGEC and the Ministry of Industry, Energy and Tourism – Iceland. Divided into two thematic parts – general presentation of RES and focus of Geothermal energy – the topic of the meeting was the contribution of Renewable energy sources to the mitigation of climate change, both in developed and in developing countries. Arguments, such as Renewables offer a secure and sustainable energy future, economic development and the creation of millions of new jobs, the speakers spoke about the emergency of boosting RES sector the sooner the possible. EGEC’s President, Mr. B. Sanner, participated in the event by giving a speech on ‘Geothermal Mitigation Technologies - an Important Role in Technology Transfer’. Presentations are available on EGEC website > publications.

GTR-H project Progress

The project is supported by the Altener Programme – Intelligent Energy Europe.



During the Sustainable Energy Week 2009, EGEC hold the GTR-H conference on the “Promotion and Regulations for Geothermal energy for a real sustainable future: Experiences and perspectives in Europe”. Among the participants Ms. Anna Rita Brammerini (Regional Minister for protection of environment and energy) gave the introductory speech focused on the efforts made so far in the Toscana Region, Italy. In addition, Ms. Anni Podimata (MEP, PSE) and Mr. Towes (EC) made a political point on the necessity of the RES promotion within European Union and on the actions needed on behalf of both the Union and the Member States. Following, a session dedicated to various case-studies at place (Landerello, Pais Vasco) informed the attendants on concrete measures and practices. To conclude, EGEC President Mr. Sanner presented the results of a public Consultation on the Framework template for regulations on geothermal heating & cooling. The purpose has been to gather all current geothermal energy frameworks in Europe for creating concrete geothermal regulations, including GTR-H project data so far. To the success of the project and due to the lack of Geothermal Law in Europe, a Matrix on geothermal barriers (financial, legislative, data availability, national frameworks etc) has been created, an initiative that proved to be very helpful.

GTR-H project is now providing recommendations on regulations on geothermal heating and cooling to EU Member States to help them writing their NREAPs before June 2010.

GTR-H Closing Conference on September 30th and October 1st, 2009

Venue: Royal College of Physicians, No. 6 Kildare street, Dublin

Key aspects of the conference:

- Geothermal Regulation in the EU discussed in the light of the current geothermal regulation process being undertaken by the DCENR geothermal working group.
- Minister of State Conor Lenihan - Department of Communications, Energy and Natural Resources will address the opening of the conference.
- International audience of Stakeholders - attendance will include active members of the geothermal sector from across Europe.
- Topical renewable energy option - Planning preference for increased renewables in the energy mix, coupled with potential for self sufficiency, puts geothermal centre stage.

GeoTrainet Project



The project entitled Geo-Education for a sustainable geothermal heating and cooling market (GeoTrainet) aims at training the instructors of GSHP

Intelligent Energy  Europe

designers and drillers. The main idea is to create a common European training framework. The project, supported by the Intelligent-Energy Europe, is available at <http://geotrainet.eu> and information on the partners, objectives, trainings and publications can be found at a click.

Moreover, the first GeoTrainet training course took place between 10 and 12 June 2009, in Uppsala, Sweden. This first course has been part of the ongoing process towards the creation of a European certification Framework for shallow geothermal installers, and raising and coordinating national and European standards in GSHP systems.

The first course for geothermal drillers will be in Dublin, Ireland on 28th -29th of September 2009. see you there !

EGEC's response to the EC Public consultation exercise on the Green Paper Towards a Secure, Sustainable and Competitive European Energy Network

Make Europe the most energy import independent region of the world- Renewables for Security of Energy Supply, Competitiveness and Environmental Protection EGEC welcomes the intention and initiative of the European Commission to show the path towards a secure, sustainable and competitive European energy network. EGEC is committing itself to actively support a transition into an energy economy which is fair to all EU citizens, provides a level playing field for all actors on the EU scene, and aims at the goals of efficiency, sustainability, security and conservation of the local and world-wide environment. EGEC hence will co-operate with all levels of EU politics, administration and industry to achieve these goals.

For EGEC members, please visit members' corner > position paper.

NEWS EGEC members

Geothermal Energy Development: Opportunities and challenges

A comprehensive overview of the current status and the perspectives for the development of geothermal energy for the production of electricity and its direct uses will be discussed in a two days International workshop organized by CEGE, as part of the Expo Pomarance on Renewable Energy technologies.



They will take place on 3-4 September 2009 in Pomarance (Tuscany), Italy.

For any information regarding the programme, registration or sponsorship please visit: www.cegl.it or contact gherardini@cegl.it

Geotherm expo 2009

GeothermExpo 2009 is the first Italian exhibition entirely dedicated to systems, technology, machinery, equipment and services for geothermic energy and ground-source heat pumps.



GeoTherm Expo 2009, is characterized by latest technologies, systems and machinery, together with high level conferences and seminar program. The principal target is the identification of the nowadays and future industries and markets.

It is co-organized by UGI/Unione Geotermica Italiana. It will take place 23rd - 24th -25th September 2009 in the Ferrara Exhibition and Conference Centre.

More info: <http://www.geothermexpo.com/>

Geothermal Energy in the Spotlight - GES 2009

We are very pleased to inform you about the International Forum titled "Geothermal Energy in the Spotlight" that will take place 2-3 October in Thessaloniki.

The Forum is jointly organized by the Greek Geothermal Association, the Institute for Solar Technology (IST), Greek Association of Municipalities and Communities of Curative Springs and Heliotopos Conferences.

Detailed information about the event is available on the web site <http://ges2009.conferences.gr>

Venue: Teloglion Foundation of Art, Thessaloniki

Deadline for Abstract Submission: 15 July 2009

APPA's new Geothermal department - APPA Geotérmica de Alta Entalpía

Under the Presidency of the geologist Mr. Raúl Hidalgo Fernández, for four years, a new section dedicated to Geothermal energy has been developed within APPA family.



The Geothermal Section has been an initiative taken by 8 Spanish companies (Acciona Energía, Energía y Recursos Ambientales-Eyra, Iberdrola Renovables, Molinos del Ebro, Norvento, Petratherm España, Tecnología y Recursos de la Tierra-TRT y Ugarriza) as they have recognized that geothermal energy needs to gain the position it worth in the energy market.

The main objective will be the promotion of collaboration between public organizations, such as IDAE and IGME, and the private sector aiming at encouraging the development of geothermal energy among different Administrations and thus putting this technology in the game and rendering it attractive to the social sectors. In particular, the geothermal section will focus its work on the implementation of political instrument and legislation rules that would enhance the development of this renewable energy. Additionally, the establishment of an adequate retributive frame has to be given in advance to the companies in order them to be ready to plan effectively the projects' execution and consequently boost the development of the geothermal sector.

APPA and Greenpeace present a draft Renewable Energy Law which provides for a 30% renewable energy target by 2020

On 20th of May 2009, the Spanish Renewable Energy Association (APPA) together with Greenpeace Spain, supported by the law firm Cuatrecasas, Gonçalves Pereira, presented in Madrid a joint draft Law to promote renewable energies. The draft law combines the visions of the RES industry and the environment organization in terms of the needed support measures for a complete ecological transformation of the energy sector. The proposed provisions in form of a law include objectives, which could make Spain to the world's leading nation in the field of renewable energies. The main topics included are: RES targets, NAPs, RES in the building sector, bioenergy, simplification of the administrative procedures, grid access and connection, clear information about the generation mix, etc.

The document is available in Spanish, English and German. Please contact APPA.

GEOPLAT- Spanish Geothermal Technology Platform



The Constitutive General Assembly of GEOPLAT took place the 11th of May 2009 in Madrid.

The purpose of the Platform will be to address the technological needs of the Spanish geothermal sector so as to ensure the involvement of the sector in R&D projects offered by both the National Administration and the EU. The Platform will prepare a Vision 2030 document of geothermal energy in Spain, describing the current status and raising scenarios for 2020 and 2030. The initiative to develop the Strategic Research Agenda with the priority research lines of the geothermal sector will be included.

GEOFAR: Geothermal Finance and Awareness in European Regions

GEOFAR project, funded by Intelligent Energy-Europe, is an ALTENER project. Its purpose is to foster the deep geothermal sector all around Europe by providing new financial and funding schemes. Aiming at raising awareness among local and regional decision makers and improving the technical know-how, in the framework



of the project, informative seminars in order to stimulate potential investors will be organized. The target countries are: Germany, France, Greece, Spain, Portugal, Bulgaria, Slovakia, Hungary. One part of the project is dedicated to information dissemination through Newsletters published in all 8 countries involved. Furthermore, BRGM, one EGEC member, presents in a report '*Financial instruments as support for the exploitation of geothermal energy*' the available financial instruments in European Countries, analyzing the financial schemes suitable for the exploitation of geothermal energy at both European and national level

www.geofar.eu

For 2009 the main subsidiary within the Deep Drill Group will be split into two separate entities: Deep Drill Tubulars and Deep Drill Equipment.

The rental assortment of Equipment and OCTG have been divided between the responsible entities as follows: Deep Drill Equipment and Rent A Tube. All three divisions (Drilling Equipment - Tubulars – Supply, rentals and services) have now become three different entities under one roof.



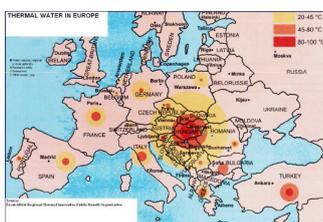
This way the company can extend its workforce even more with experienced people and evolving into separating their expertise into different entities. All team-members already work in their specialized divisions but the new name(s) should give the outside world a clear selection. The main activities remain the same: matching and creating complete drilling packages, either for sale or rent and in supplying complete well set-ups.

Geothermal power plant that could run 10 per cent of British homes to be built in Cornwall

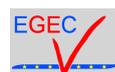
The Eden Project and EGS Energy Limited announce plans for the UK's first geothermal power plant, producing carbon neutral electricity and heat from Cornish granite. Within months, a team of engineers will begin to drill deep into the crust of the Earth in search of a new source of cheap, clean and unlimited energy. Their goal is to unleash the natural heat that lies buried three miles under the surface of Britain - and use it to drive electricity-producing turbines on the surface. If successful, the UK's first commercial 'geothermal' power station could usher in an energy revolution and provide a green, reliable alternative to the controversial wind farms earmarked for the UK. Experts believe there is enough untapped energy in the granite below Cornwall alone to provide a tenth of Britain's electricity. Plans for the £15million power plant were unveiled by the Eden Project near St Austell, Cornwall, and geothermal experts EGS Energy. They hope it will produce up to 3 megawatts (MW) of electricity - enough to power nearly 5,000 homes. A typical wind turbine can produce up to 2MW, but only when the wind is blowing. The pilot plant will be created near the Eden Project's vast greenhouses near St Austell. Engineers will first drill two boreholes around 2.5 miles into the granite that lies underneath much of Cornwall. Each hole will taper - and will be 24 inches wide at the top, and around nine inches wide at its bottom. Water will be pumped down one well and forced through the hot, porous granite to the bottom of the second well where it will return to the surface under pressure and at temperatures of around 150C. At the surface, a heat exchanger will remove most of the heat from the water and use it to drive a turbine. Waste heat will be piped directly to offices, homes and the Eden Project's domed greenhouses. By now the water from the wells will have cooled to 50C and will be pumped back into the first well to repeat the cycle. Some of the electricity produced by the power station will be used to pump the water to the bottom of the well. However, 60 to 70 per cent of the electricity created by the turbine can be sent to the national grid.



CLUSTHERM project



The CLUSTHERM project, managed by INNOVA Észak – Alföld Regional Development and Innovation Agency – Hungary, aims at creating a Central European Thermal Water Research Cluster. The 12 partners are Public national, regional or local authority, Research entity, Enterprises and expert organizations from Hungary, Romania, Austria and Croatia. The strategic objective of the project is to set up a new research driven cluster in Central



Europe on thermal water utilization that will strengthen the research potential of the participating regions.

The direct objectives are:

- analyze the RTD development and the needs of geothermal energy utilization
- promote synergies and catalyze links between regional, research and business actors involved in thermal water utilization (vertical clustering)
- foster the transnational and cross-border co-operations between the regional actors of the participating regions on the field of thermal water utilization (horizontal clustering)
- develop and enhance transnational mutual learning through information exchange possibilities of regional stakeholders in creating research driven clusters and to disseminate good policy practices and benchmarking activities
- develop joint action plan and research strategy among the participating regions to increase the regional economic competitiveness through concentrated use of natural resources.

PannErgy establishes 4th Geothermal Company

The Hungarian alternative-energy company PannErgy and the local council of Kiskunhalas have established a geothermal-energy company in a joint venture. PannErgy owns 90% of the new company, called Kiskunhalasi PannTerm, while the local council of Kiskunhalas owns the remaining 10%. PannTerm will begin drilling geothermal wells near Kiskunhalas after it obtains the necessary land rights and permits. PannErgy Board of Directors Chairman Balázs Bokorovics noted that the company has now established JVs with four local councils, including those in Szentlőrinc, Tamási and Csurgó (all S Hungary) in addition to Kiskunhalas. PannErgy intends to apply for European Union funding to partly finance the investments made as part of the JVs. PannErgy sustained after-tax losses of HUF 481 million (€1.7 million) in the first quarter of 2009, down 19.7% from after-tax losses of HUF 599 million in Q1 of 2008, the company announced in its consolidated IFRS report on May 15.

Moreover, Pannergy announced earlier this month its “first cross-border cooperation agreement with the local government of Koprivnica, Croatia.”

“Within the framework of this pre-contract, the first measurements will be performed to serve as the basis of the detailed geological analysis that will be considered in relation to the continuation of the project.

These measurements will ascertain whether the areas in the surroundings of Koprivnica are suitable for geothermal drillings. In connection with the project, Csurgó and Koprivnica as settlements lying on the two sides of the national borders will jointly apply for grants in the EU’s cross-border cooperation scheme in order to fund surface measurements and test drilling.

Ballymena: the first town in Ireland to be powered by geothermal energy ?

Ballymena Borough Council has joined forces with Irish geothermal energy company GT Energy to use deep geothermal energy for a green district heating.

They announced the formation of a strategic alliance to develop the geothermal district heating energy system for the Co Antrim town, in combination with a biomass system that will supplement the network heat demand during peak load periods and for back-up purposes.

It will be the first deep geothermal project in Ireland. It’s expected that larger commercial and industrial heat users will be the first to link up to RES system, followed by the roll-out of the network to smaller commercial premises and residents.

EVENTS

- **ETP-RHC Geothermal Panel, 3-4 September 2009, Brussels, Belgium**
- **International workshop ‘Geothermal Energy Development: opportunities and challenges’, 3-4 September 2009, Pomarance (Tuscany), Italy**
www.cegl.it
- **EGEC AGM 2009, 4 September 2009, Brussels, Belgium**
- **Symposium "Thermal Response Test", 16 September 2009, Gottingen, Germany**
Details on: <http://www.egec.org/events-Dateien/RTG09-1st.Anouncement.pdf>
E-mail: gtv-service@geothermie.de
- **GeothermExpo 2009 Ferrara, 23-25 September 2009, Ferrara Exhibition and Conference Centre, Italy**
www.geothermexpo.com/
- **Geotrained courses for GSHP drillers, 28-29 September 2009, Dublin, Ireland**
www.geotrained.eu
- **GTRH Final Conference, 30/09 and 01/10 2009, Dublin, Ireland**
www.gtrh.eu
- **Geothermal Energy in the Spotlight - GES 2009, 2-3 October 2009, Thessaloniki, Greece**
<http://ges2009.conferences.gr>
- **Renergy, 8-11 October 2009, Turkey**
Site web: www.renergy.com.tr
- **3rd European Renewable Energy Policy Conference, 16-17 November 2009, Brussels, Belgium,**
Invitation: http://www.egec.org/events-Dateien/1st_Announcement%20EREC.pdf
- **4th International Renewable Energy Storage Conference IRES 2009 November 24-25, 2009, Berlin, Germany**
Details on: IRES@eurosolar.de
E-mail: <http://www.eurosolar.org>
- **EGÉTICA-EXPOENERGETICA 2009, 25-27 November 2009, Valencia, Spain**
Information at: www.egetica-expoenergetica.com
- **Geothermia Expo 2009, 25-28 November 2009, Milan Fair center – Italy**
Site web: www.geothermia.it
- **Renexpo Austria 2009, 26-28 November 2009, Trade Fair Center Salzburg, Austria**
Information at: www.renexpo-austria.com