

# EGEC

## European Geothermal Energy Council



March 29, 2003

The EGEN view at the

### **Opinion Paper of the European Economic and Social Committee on Geothermal Energy: EESC/TEN-199, February 2005**

For clarification:

The EESC is not a part of the European Parliament or European Commission. It is an advisory body created in the Rome treaties of 1957, consisting of some 300+ European citizens determined by their national governments. The role of EESC is to be a public, non-governmental voice of the civil society in the EU governance. EESC can publish opinions and resolutions, which are taken into consideration by the real EU powers (Parliament, Commission and Council). The members seem to be mainly ex-politicians, representatives of large interest groups, industry leaders, etc.

The Opinion on Geothermal Energy of EESC was circulated in early March around the EGEN board and the IGA European Branch Forum. Comments were collected by the EGEN president and compiled into the following summary.

A common reaction from the European geothermal sector represented by EGEN and IGA-EBF was:

- The good news is to see a supportive declaration to geothermal energy. The document judges geothermal energy generally in a positive way; the three major measures identified (intensifying national and EU co-operative R&D programmes; supportive legislation like guaranteed feed-in tariffs; risk guarantee schemes) make sense and are badly needed.
- The bad news: The document will not earn much credit for being scientifically correct and technically realistic (there was also some much less polite wording used).

Some of the weak points and necessary corrections/additions are listed in detail in the appendix. Here a general statement:

The main R&D activities and future development in chapter 3 and 4 is seen only in binary systems for power (or CHP) and EGS. All other geothermal possibilities, from high enthalpy to shallow geothermal, are mentioned briefly in chapter 2, and from what is said then, they are not of importance furthermore. This limits the view of the Opinion to such an extent that it cannot claim to consider "Geothermal Energy" as a whole. The Summary in chapter 5 reiterates on that incomplete picture, and puts geothermal energy in the exotic corner where tidal energy, ocean energy, etc. reside. Compared to those, geothermal energy is a giant!

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We miss in all the text:

- Positive statements on that part of geothermal energy that has established itself already successfully on the market
- Plausible economic figures and expectations
- Statements on the development opportunities and R&D-needs outside EGS and low-temperature binary power plants

EGEC and IGA-EBF welcome the initiative of EESC to support geothermal energy. We offer to co-operate on a better understanding of geothermal energy in all its aspects, and would be glad if a way could be found to improve the published opinion of EESC on geothermal energy accordingly.

The knowledge and experience of the geothermal sector in Europe is available for EESC and for the EU parliament and administration through the association of the European geothermal industry, EGED, and through the European Branch Forum of the International Geothermal Association IGA, which is a NGO registered with the UN.

## EGEC

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**Appendix:**

**Selected shortcomings and necessary corrections to document EESC/TEN-199**

Preamble (paragraph in *italics*):

The text states that due to “the extent of resources” and by “not contributing to global warming”, geothermal energy “can therefore be considered as renewable”. This is far from being correct: Renewability is only given when production does not exceed natural inflow (of heat and/or fluid) over a certain area and time. Geothermal energy thus can be and has to be used in a sustainable, renewable way.

2.1.:

The definition of geothermal energy makes use of the terrestrial heat flow to delineate geothermal energy. This can built another step to separate shallow geothermal from the rest of the geothermal sector. The definition meanwhile used almost everywhere in Europe and promoted by EGEC and IGA-EBF reads: “Geothermal Energy is the energy stored in form of heat beneath the surface of the earth”.

EESC should make use of this definition common in the geothermal sector, and not invent a new, own one.

(Geothermal technologies are not applied to tap the thermal energy flows; these flows are much too weak and disperse for tapping. In reality, the immense amounts of stored heat are tapped, through heat carrier fluids like steam and/or water.)

2.1.2.:

The heat balance in surface layers is not affected by insolation: The heat budget itself is balanced: the heat irradiated at daytime is radiated back to space at night, and the balance sum is practically zero.

2.4.2.:

The list of areas with intensive tectonic activity as well as those with sedimentary aquifers is by no means exhaustive.

2.5.1.:

The use of geothermal reservoirs is by no means restricted to German speaking countries in Europe.

3.6.:

The physical unit of generated electricity is kWh, not kW. It is not correct that power from geothermal energy is twice more expensive than that from wind. This may be the case in the first plants in Germany, but not at all in e.g. Italy and Turkey. It also does not take into account the rapid development seen nowadays, and neglects the related potential for cost reduction.

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5.3.:

Geothermal energy today is not only used in areas with geothermal anomalies, a large share already comes from areas with perfectly average geothermal gradient.

5.5.:

There is not only a considerable (future?) potential for geothermal heat pumps (ground source heat pumps, GSHP); their market penetration is already a remarkable fact, mainly in Central and Northern Europe: In small Switzerland alone the total length of drillings for GSHP systems in 2004 amounts to > 600 km!

And finally a word on the language:

On several points, and mainly in chapter 2, the basic text seems to be written in German and translated into English by a person not used to geothermal terms (and in particular not to those in the shallow geothermal field). Words like "geothermal probe", "geothermal pump", "reversed cycle chiller", etc. have been abolished long ago or are not correct.