PRESS RELEASE

Brussels, February 11th, 2009

Contribution of the geothermal sector to the target 20% RES by 2020.

EGEC published today its Brussels declaration 2009, updating 10 years after the so-called Ferrara Declaration which put geothermal energy on the first path towards a sustainable energy provider.
The targets set for the geothermal sector for 2030 are to contribute to 5% of the total electricity production in Europe, and 3,5 % of the total heat generation. Geothermal energy is today the 4th RES provider to the total final energy consumption (behind Biomass, Hydropower, and Wind).
The attainment of the 2020 RES target will require the use of the all renewable energy sources, among which geothermal energy.

A Renewable energy mix can not be reached in the future without geothermal energy: don't ignore it now, the future is there !

Geothermal Electricity generation:

> A major advantage of geothermal energy is the availability of the resource all day and night, throughout the year: a load to the grid, operating up to 100% of time (the best ratio of all energy technology !).

As demonstrated in numerous sites since already 1904, heat from the underground can be converted into electricity. The relevant resources are far from being fully developed in Europe. The concept of Enhanced Geothermal Systems is going to add a tremendous increase to the potential. Innovative power plants permit the production of electricity using low thermal water temperatures of the order of 100 °C.
Installed capacity is almost 1000 MWe of electric, with ca. 8 TWh electricity production per year.
In 2020, geothermal electricity installed capacity would reach 6000 MWe for EU-27, and producing 50 TWh.

Geothermal Electricity - EU-27	**2007**	**2010**	**2020**
Low temperature (MWe)	815	920	1200
Electricity conventional (MWe)	15	70	300
Electricity Enhanced Systems (MWe)	-	10	4500
Total Installed Capacity (MWe)	**830**	**1000**	**6000**
Yearly Electricity Production (TWh)	**6,5**	**8**	**50**

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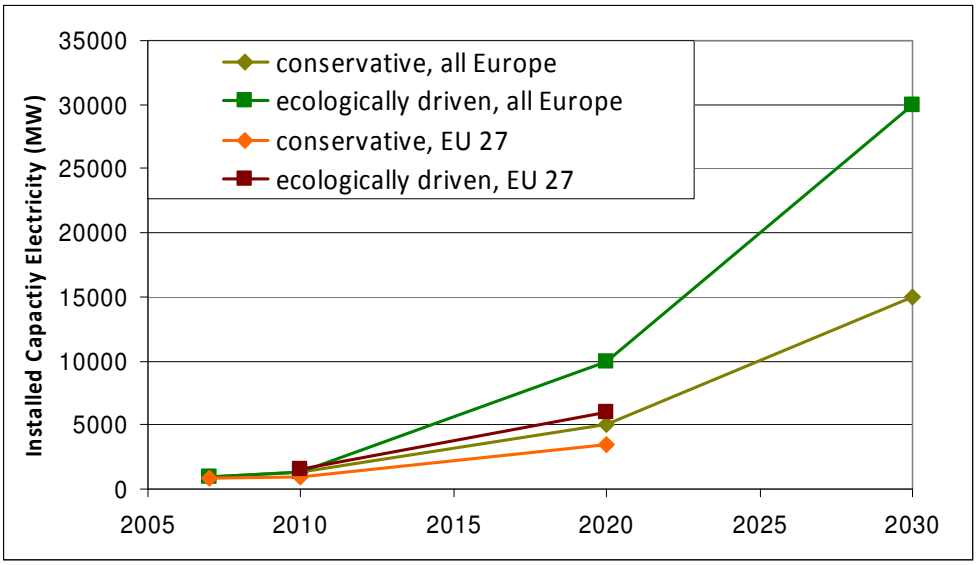


Summary of targeted costs

Geothermal Electricity	Costs 2007 Range(€/MWh)	Average (€/MWh)	Costs 2030 Average (€/MWh)
Electricity Conventional	50 to 90	70	20
Low temperature	80 to 150	115	50
Enhanced Geothermal Systems	200 to 300	250	70

Geothermal heating and cooling:

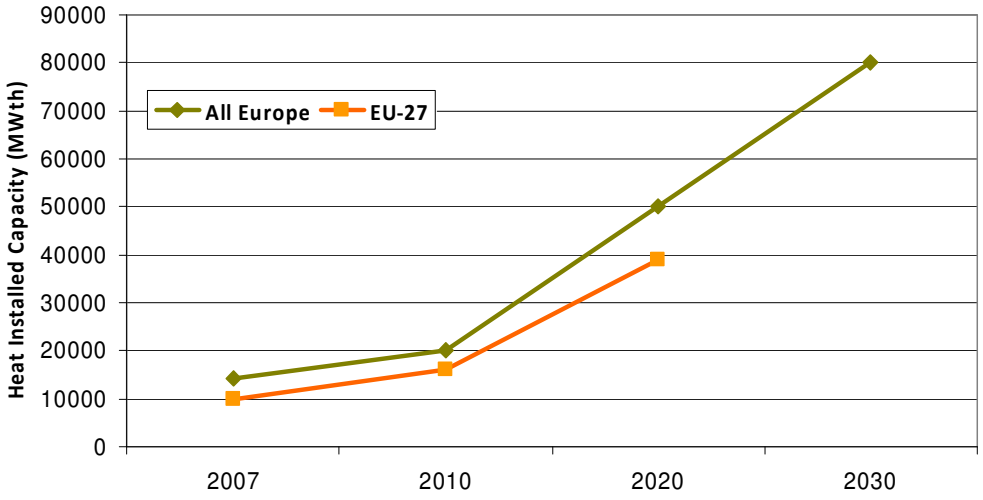
> Geothermal energy is a safe and controlled renewable energy technology: present anywhere and available everytime, independent of the season, climatic conditions and day time, use from antique time for heating & cooling !

Geothermal energy provides about 10 000 MWth for heating and cooling in Europe alone, producing ca. 4 Mtoe per year, whereby direct and indirect uses are comparable in size. In EU-27, the contribution in 2020 will represent around 40 GWth installed for ca. 10 Mtoe.

Direct Use: Heat is produced at sufficiently high temperature levels (above ca. 25 °C), suitable for direct heating or cooling;
> Until now we just used a marginal part of the underground heat reservoir potential. The most promising areas are the building of new district heating networks (Geothermal district heating & cooling, with 50 €/MWh, is one of the most competitive energy technologies), optimization of existing networks, and increased new and innovative applications of geothermal energy in transport, industry and agriculture.

Use via Geothermal Heat Pumps: Low temperature heat from the underground is used, and a heat pump increases the temperature to useful levels.
> Geothermal energy benefits from constant temperature that boosts the system and makes it the most efficient one !

Heating & Cooling - EU-27	**2007**	**2010**	**2020**
Geothermal Heat Pumps (MWth)	5 700	11 500	30 000
Geothermal Direct uses (MWth)	4 100	4 500	9 000
Total Installed Capacity (MWth)	**9800**	**16 000**	**39 000**
Heat and Cold Production (Mtoe)	**2,6**	**4,3**	**10,5**



Summary of targeted costs

Heating and Cooling	Costs 2007 Range(€/MWh)	Average (€/MWh)	Costs reduction by 2030 (% 2005 costs)
Deep geothermal	2 to 40	7,2	+11
Geothermal District Heating[1]	40 to 80	50	-5
Shallow geothermal Heating only	10,8 to 320	19	-9
Shallow Heating and Cooling	7,2 to 270	61	-8

In some regions of Europe, geothermal power plants already substantially contribute to an environmentally friendly and sustainable energy supply. This is done notably in Tuscany.
The Tuscany region presented its Renewable Energy action Plan and showed how geothermal energy can contribute to a sustainable energy future.

The regional plan for renewable energy fixes at 20% the target for 2020. Geothermal energy plays a most important role to reach this objective.

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[1] The figures for deep and shallow geothermal are from the IEA report 2007: *Renewables for heating & cooling*. The data on District Heating are EGEC projections for geothermal DH in Europe.