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Press release

The general public of the world is looking forward to the UN's Copenhagen conference with great expectations, and awaiting firm measures towards restraining climate change. In this context, PannErgy, as the committed advocate of the exploration and use of domestic geothermal energy, would like to call the attention to the weighty processes that have started globally and particularly in Europe – especially to the fact that **with the more intensive utilization of the domestic geothermal potentials Hungary could contribute to our struggle against climate change to a much larger extent than it is foreseen today**.

These days, the developed part of the world is on the threshold of the "**third industrial revolution**": it is how experts tend to call the efforts that are made towards the development of a completely new energy system and the deceleration of climate change. In the focus of these efforts, there stand the use of fossil energies and the reduction of the emission of greenhouse gases (GHG).

In its pioneering manner, the European Union is a forerunner in these global processes: moreover, the Community encourages the creation of jobs with its new energy strategy. EU has undertaken to reduce GHG emission by at least 20% or – if any international collaboration can be forged – up to 30% by 2020 in comparison with the 1990 emission levels. The accomplishment of the above objectives of energy strategy means that Europe will potentially become an energy economy of outstanding energy efficiency and low CO_2 emission, and thereby the **catalyst of a new industrial revolution**.

The ambitious goals of Europe have already had their influence on the research and exploitation of renewable energies. Nevertheless, a particular dichotomy has emerged: on the one hand, the use of biomass and biofuels does reduce our dependence on hydrocarbons, yet their burning is accompanied by additional CO_2 emission. Since the announcement of the new energy strategy, that is during a short period of 18 months, carbon-free ways of alternative energy production have become revaluated within the EU overnight, including wind, hydro- and solar energy, as well as **geothermal energy**, which has seen an especially positive change of approach.

With respect to the indirect (production of electric power) and direct (heating and cooling systems) use of the associated energy, this latter sector utilizing the inexhaustible heat of the Earth is regarded by both the experts of the European Union and independent analysts to carry the most remarkable potentials. **According to Brussels' calculations, until 2030 the appropriate utilization of the European geothermal potentials would mean 700 million tons less in CO_2 emission and 16 Mtoe (million ton oil equivalent) fossil fuel savings in total. (Source: SETIS, European Commission)**.

Deemed to be considerable even in European scales, the domestic geothermal potentials could allow Hungary as early as by 2015 to cut her CO_2 emission by 220,000 tons annually, and then with the implementation of adequate technological developments achieve 650–700,000 tons as the annual quantity of reduction within just a short period of time.

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In additional, geothermal energy can be described by the following characteristics:

- **Clean, renewable, permanent and available** – these are the four key characteristics of geothermal energy. Its use involves nearly no environmental contamination, whereas some of the solutions regarded to be "green" (biomass, biogas) result in CO_2 emission.
- **Hungaricum** – even in European comparison, Hungary has exceptional endowments, because in the Carpathian Basin the Earth's mantle over the magma supplying heat tends to be much thinner than at other locations. Therefore, geothermal sources are easier to reach, explore and utilize.
- **Cheap** – if the infrastructure needed for utilization is set up, the associated costs are almost ignorable.
- **Safe** – it poses no hazards – not even indirect ones – to either the environment, or the users (in contrast, for instance, with hydro or nuclear power plants).
- **Calculable and controllable** – geothermal heat and energy production can be regulated in the light of the existing demands, there are no unutilized losses generated in the process (in contrast with hydro-power and wind energy).
- **Long-term solution** – with appropriate maintenance, investments can provide for energy supply for long decades.
- **Energy security** – it moderates our dependence on imported fossil energy resources, and contributes to the preservation of domestic ownership in the given part of the energy sector.
- **Energy efficiency** – the new geothermal projects perfectly fit the other elements of the energy revolution, and thus in a complex approach the enhancement of energy efficiency (insulation standards of new housing types, passive energy demand – geothermal energy offers ideal solutions).

It is a welcome fact that in view of the internationally outstanding, highly favourable geothermal endowments of Hungary the experts of the European Union and the analysts of the energy market evaluate our domestic outlooks much more positively than the Hungarian studies having been regarded to be official so far. Opinions tend to converge to a consensus when stating that an appropriate legislative background and taxation regime with the definite financial funding from the Community and the government will result in the development of the geothermal sector by leaps and bounds.

Via applied sciences, geothermal energy generates positive opportunities for the scientific and research sphere, as well. According to the data of the European Union again, the Community and governmental financing earmarked for the development of the sector, as well as market-based investments will channel funds of tens of billions of euros to research and development (R&D) activities.

It is therefore desirable to see the impacts of these European trends in Hungary's national energy strategy, as well. In this case, the domestic geothermal energy sector could in fact give a crucial impetus to the climate protection efforts of the European Union and Hungary in association with the Copenhagen process, and on the other hand the continuation of the noblest traditions of domestic geological research where domestic scientists may have an important role in the adoption of the advanced and state-of-the-art technologies of the world.

Our opportunities in geothermal energy are at hand, yet their employment calls for such a national energy strategy that considers the quick growth potentials of the sector.

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