Because of its geological structure and hydrogeological conditions, and in terms of utilising geothermal energy, the territory of AP Vojvodina belongs to the most favourable group, not only in Serbia, but also throughout entire Europe.







- 78 boreholes in Vojvodina,
- Temperature on 500m varies from 34,20C 43,60 C
- Heating power of hydro-geothermal resources from 78 wells on the territory of Vojvodina is 72.61 MWt
- Depth of hydro-geothermal wells: 300-2,520 m
- Average depth of hydro-geothermal wells: cca 897 m
- The highest mineralisation of thermal water is 13.66 g/.
  and the lowest 0.42 g/l
- Most hydro-geothermal wells have been tested for self-flowing capacity or by using deep well pumps.
   The flow has varied from 1.6 l/s to 42.8 l/s.





## GEOTHERMAL ENERGY DAYS NOVI SAD, AP VOJVODINA 21-23 MAY 2015

## An event of

The Assembly of European Regions (AER) and the Autonomous Province of Vojvodina

## How to Use This Source of Clean Energy at Regional level?

Autonomous Province of Vojvodina, in cooperation with the Assembly of European Regions (AER), is hosting the Conference of geothermal energy from 21-23 May 2015, with the aim to explore potentials and usage of this clean, renewable, energy source.

This event will gather around a hundred participants from European regions, representatives of local-self-governments from Vojvodina, experts in green energy, environmental protection and energy efficiency, as well as Private stakeholders, in particular companies active in the geothermal field.



Geothermal Energy Days: How to Use This Source of Clean Energy at Regional level?

More information on: gte@skupstinavojvodine.gov.rs

Assembly of the Autonomous Province of Vojvodina 21-23 May 2015

Dear Madam, dear Sir,

the Autonomous Province of Vojvodina, in cooperation with the Assembly of European Regions (AER) would like to invite you to the Geothermal Energy Days, from 21 to 23 May in Novi Sad.

Through a combination of seminars, panel discussions, training academies with experts and field visits, you will enjoy a full overview of geothermal energy's potential for Regions in Europe and how to make the most of it. The particular focus on geothermal potentials of the Autonomous Province of Vojvodina will help to illustrate the relevance of this clean source of energy for all of us.

There is indeed a wide range of possibilities to use geothermal energy to support sustainable development and growth in the Regions (see below the example of AP Vojvodina for further details). Using geothermal energy sources also includes challenges for the Regions: How to finance the projects? Which kind of partners to select? How to get the acceptance from the citizens?

To bring some answers to these questions, the Assembly of the Autonomous Province of Vojvodina will gather researchers from Austrian, German and Hungarian universities, as well as from the University of Novi Sad and Belgrade and representatives of the Provincial Secretariat for Energy and Mineral Resources. Private stakeholders, in particular companies active in the geothermal field, will also be invited. Representatives of European regions and in particular all interested AER members are all warmly invited to join us.

The Assembly of the Autonomous Province of Vojvodina will be the place of great encounters of science and practice. Let us employ the Geothermal Energy Days to put AP Vojvodina on the green map of Europe!

A detailed programme about these events, as well as practical information and a registration form will soon be available on the AER website. In the meantime, we invite you to save the date in your agenda!

Welcome to Novi Sad!

István Pásztor President of the Assembly, AP Vojvodina

## Geothermal potential of AP Vojvodina and possibilities of use

Due to geological structure and hydrogeological conditions and in terms of utilising geothermal energy, the territory of AP Vojvodina belongs to the most favourable group, not only in Serbia, but also throughout entire Europe. Basin structure and sequencing of rocks of various properties, in the vertical profile of the terrain, have resulted in establishing of four basic hydrogeological systems within which geothermal resources, different in terms of temperature, quantity and chemism, have been formed

In addition to the direct or indirect use of geothermal hot springs, the use of well water and soil energy is widespread for buildings heating and cooling by using heat pumps. The territory of AP Vojvodina is due to the large reservoir of shallow groundwater particularly attractive for this technology.







For exactly that reason, possibilities of using geothermal energy are numerous. Geothermal resources may be used for district heating in facilities, different in type and purpose (residential, education, health, industrial, warehouse facilities), also in greenhouse cultivation, for the purpose of various industrial processes, as well as in the development of spa centres. Through the use geothermal energy, considerable savings are yielded both in the public, as well as in the private sector, having in mind that estimated available thermal power of geothermal resources is around 20% out of the total estimated required thermal power for district heating in urban settlements.

Compared to its potentials, the use of geothermal energy in AP Vojvodina is at the very beginning. Synergy of science and good practice makes it possible to trace the path for which this part of Serbia will be famous in future, on the green map of Europe, as a positive example of utilisation of geothermal resources.