



Source: company Prostor Ltd., Bjelovar

# PRIORITY SECTORAL RATIONALE



# ENERGETIC

Considering new sectors in development in Koprivnica Križevci County (further in the text: KKC), **energy sector** is one of the sectors that have biggest opportunities for further development and upgrading.

In the past few years there have been done several local, regional, national and cross-border studies whose main purpose was to explore renewable energy resources potential. By most important renewable energy resources potential in KKC it's considered following:

- geothermal energy
- solar energy
- hydro energy
- energy gained from wind as well as from other materials, as biomass, biogas, waste etc.

The most important part of the energetic history in Podravina is Molve field of natural gas, which in total outputs nearly 70% of the total output of gas in the Republic of Croatia.

In 2005 wider area along Drava river and Slovenian-Croatian-Hungarian border was explored with aim of determination accumulations of drinkable water. This Study, (but also many studies executed before) confirmed that **Croatia is on 5<sup>th</sup> position in Europe and on 44<sup>th</sup> position in the world** when accumulations of **drinkable water** are taken into account. This fact represents one of the biggest potential of Croatia and also of KKC potential in the field of possibilities for future development in general.

This study was also a starting point for initiating of a long-term project for exploitation of **geothermal energy** and for executing more examinations and a new study that confirmed geothermal potential and gave a clear instructions and suggestions for further exploitation. **Location of geothermal energy resource is near City of Koprivnica, in Municipality Kutnjak, called Lunjkovec-Kutnjak.** Government of the Republic of Croatia gave a significant support to the implementation of the project by enlisting it as a demonstration project of geothermal energy exploitation and usage of national importance.

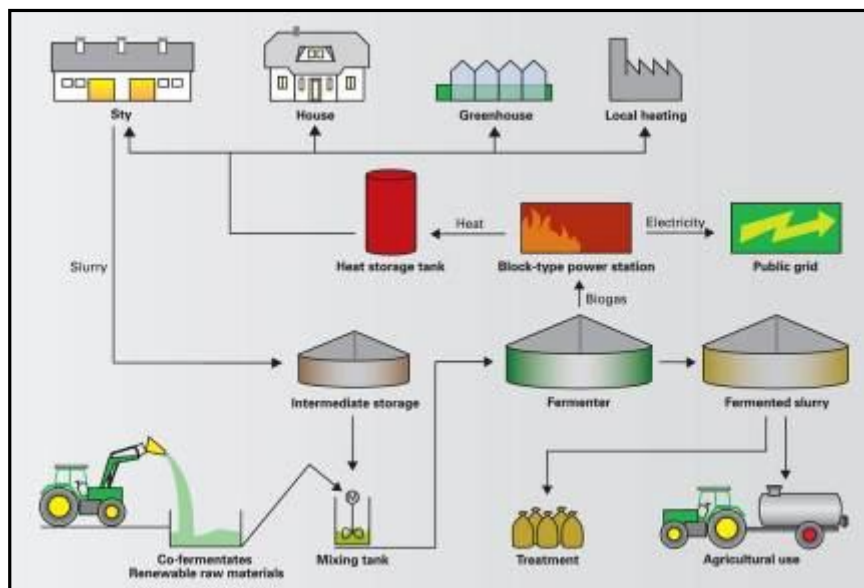
A geothermal field Lunjkovec-Kutnjak can be found North of Koprivnica, near Legrad, with an estimated **potential for production of geothermal water** (approximated temperature of 140°C) in quantities of 4.500 m<sup>3</sup> per day. Planned energy output from the existing and planned wells is estimated between 1.295.086 MWh<sub>t</sub>/year and 1.554.104 MWh<sub>t</sub>/year.

One of the main initiatives within exploitation of geothermal energy resources on Lunjkovec-Kutnjak location is **development of health and spa tourism.**

Considering the production parameters and chemical compound, this field can be used for production of electricity and for heating in various areas of business and production, as well as for production of vegetables, fruits and flowers in greenhouses.

There is a possibility of **solar energy usage**, as well as energy gained from wind and hydro energy usage. Produced energy can be used by private companies/individuals through setting up systems for energy exploitation and this kind of energy can be sold to a main company in Croatia for electricity supply called Hrvatska Elektroprivreda-HEP”.

KKC is a County with highly developed agriculture as one of the most important areas of economy, which produces **significant amount of biomass**. This kind of biomass produced on farms as well as biomass created in nature (e.g. from wood) offers significant possibilities for energy exploitation, usage and production.



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In KKC near City of Koprivnica in a business zones “Koprivnički Ivanec” will be situated a **Regional Center for Waste Management** that will process 109.277 tonnes of communal hard waste and 14.824 tonnes of industrial waste accumulated from area of 4 Counties in North Croatia (area that includes 570.094 inhabitants and area of 4.970 km<sup>2</sup>).

Four Counties established a company called “Piškornica Ltd.” that manages the area of 8,3 ha of land available and ready for building a waste management facilities and coordination of the project. It is expected that until 2028, in the area of this 4 Counties will be produced 300.000 tonnes of communal waste yearly.

Most of documentation is prepared, but for all further information please visit: <http://www.jusz.hr/index.html> and <http://www.rcgo-piskornica.hr/piskornica>.

There are also **significant possibilities of hydro energy usage** as well as usage of **energy produced by wind**.

Mentioned **green energy potentials** can be used for different purposes besides electricity production, such as heating of households, greenhouses etc.