The reconstruction and revitalization of Bračak Manor is a unique example of energy rehabilitation of a historic building under cultural heritage protection focusing on two aspects - application of advanced technical solutions and retrofitting of a public building.

During history the Manor has changed its purpose twice, starting off as an aristocratic summer house in late 1800s and turning into a hospital after WWII. When in 2007 the hospital relocated the old Manor was emptied and in need of a revitalization. A collaboration between the estate owner, Krapina-Zagorje County, and North-west Croatia Regional Energy Agency - REGEA led to the conceptualization of Bračak Energy Centre, a regional hub of excellence and knowledge in energy efficiency and renewable energy sources hosting a business incubator for promising start-up companies in the field of energy, a multi-purpose education and demonstration centre and offices of the regional development agency ZARA and the regional energy agency REGEA.

The idea for the project started in 2011 when the General Hospital Zabok and REGEA signed an agreement on the use of the building. In 2013 Krapina-Zagorje County authorized REGEA to implement the reconstruction and revitalization of Bračak Manor. In 2015 funding was ensured and construction works began which are to be completed until the end of 2016.

Full funding in the amount of 3,2 mil € for this project has been ensured through a Government decision declaring Bračak Energy Centre a project of national importance for the environment, nature, energy efficiency and renewable energy sources. Initial funding for project documentation and concept development came from EU structural funds.

The project has a positive impact on the environment and energy efficiency. The complete reconstruction of the building will result in an upgrade from EPC rating E to rating B with the share of 88% of renewable energy sources. Energy rehabilitation will reduce energy consumption for heating by up to 70%, or from the initial 213,0 kWh/m² to 64,0 kWh/m².
Cutting-edge technical solutions have been applied during the reconstruction process while respecting original form and visual identity of the building. In these terms, innovation has been both an answer to a challenge and the means to raising the bar for energy efficiency.

The reconstruction and maintenance of green areas around the building will contribute to safeguarding the natural surroundings.

The project will improve the quality of lives of local citizens by creating new services, such as the educational centre, business incubator and local restaurant, and contribute to employment and regional development. It is expected that at least 40 new jobs will be generated while the reconstruction process itself has boosted the domestic construction sector and improved the skills of workers and professionals.

Educational programmes will target the entire region of South-East Europe and overall, the project will raise public awareness on the efficient use of natural resources and the importance of sustainable development on a continuous basis.

Main technical features include:

- Highly efficient biomass boiler using wood pellets (ETA up to 94.9%)
- Micro CHP for hot water and power production during summer period
- Air to water heat pump system for cooling and heating in transitional periods
- External wall insulation on the inside and energy efficient windows and doors (U<1.4 W/m2K)
- Highly efficient internal and external lighting systems (LED and FLUO T5)
- HVAC system (heating, ventilation and air conditioning)
- Advanced central monitoring and control system (heating, cooling, energy consumption)
- Rainwater harvesting system for irrigation of green areas and as wastewater treatment
- Electric vehicle charging station and purchase of one electric vehicle
- Comprehensive interior conservation works (decoration and replication)
- Energy efficient appliances for offices and in-house restaurant