



Visit to Institute Comprehensive “Alighieri” of the Municipality of Ripalimosani - Molise Region on 14.03.2017

The project’s partners and their stakeholders attended here during the study visit organised by Molise Region in March 2017. Regarding the technical details of the energy efficiency system, it is relevant that the gym is completely heated with a geothermal system.



Prior to the visit partner's were provided with a presentation showing the demolition and reconstruction of the adjoining gym of the Institute Comprehensive "Alighieri" of the Municipality of Ripalimosani.

Works of reconstruction of the adjoining gym on the municipal school complex were part of the proposals for improvement bids during the tender in relation to sub-item 1 "improving heating system energy efficiency and air resulting in reduced consumption energy ". The works carried out included the construction of a heating system with geothermal heat pump at low enthalpy, with heat exchange through vertical probes, and terminal elements in floor radiant panels.



The duration of the project was several months which commenced and completed in 2016. Public funding was secured through the seismic improvement interventions in the post-quake reconstruction for Italy, the total cost of the installation was €45k. The design was based on improvement of the energy performance and was quantified in a range of values comprised between 25% and 30%.

Furthermore, the replacement of the traditional system provided (gas boiler - storage tank - solar thermal system) with a geothermal heat pump system resulted in an undoubted "simplification" of plant. The choice therefore had important consequences in terms of ease and cost of managing and operating the plant over the years.

The actions designed and implemented represented a solution characterised by elements of great interest both in terms of technological innovation and environmental sustainability. The choice of low energy geothermal and radiant floor undoubtedly represented an easily replicable model and in other local contexts and for other structures to different intended uses.

Moreover, the use of the heat pumps integrates seamlessly with other low environmental impact solutions such as photovoltaics.

Choices of this type represented a real breakthrough towards the goal of a Nearly Zero Energy Buildings (NZEB).