

## Nearly Zero-Energy Regulation and Buildings Built with Prefabricated Technology: The Case of Hungary

**Authors :** András Horkai, Attila Talamon, Viktória Sugár

**Abstract :** There is an urgent need nowadays to reduce energy demand and the current level of greenhouse gas emission and use renewable energy sources increase in energy efficiency. On the other hand, the European Union (EU) countries are largely dependent on energy imports and are vulnerable to disruption in energy supply, which may, in turn, threaten the functioning of their current economic structure. Residential buildings represent a significant part of the energy consumption of the building stock. Only a small part of the building stock is exchanged every year, thus it is essential to increase the energy efficiency of the existing buildings. Present paper focuses on the buildings built with industrialized technology only, and their opportunities in the boundaries of nearly zero-energy regulation. Current paper shows the emergence of panel construction method, and past and present of the ‘panel’ problem in Hungary with a short outlook to Europe. The study shows as well as the possibilities for meeting the nearly zero and cost optimized requirements for residential buildings by analyzing the renovation scenarios of an existing residential typology.

**Keywords :** Budapest, energy consumption, industrialized technology, nearly zero-energy buildings

**Conference Title :** ICACC 2018 : International Conference on Architecture, Construction and Conservation

**Conference Location :** Venice, Italy

**Conference Dates :** April 12-13, 2018