

## **ABSTRACT OF THESIS**

**Thesis title : Energy efficiency in the residential sector in China and Hungary - from trademarks to the uptake of energy-efficient appliances**

**Author name : YANG CHEN**

Course, level of education: MSc Environmental Engineering

Host Department/Institute: Agricultural and Environmental Sciences

*Primary thesis advisor:* Dr. Csegődi Tibor László (Assistant Lecturer)

Institute of Agriculture and Food Economics

### **ABSTRACT**

Energy efficiency improvements in the residential sector can help reduce energy demand and contribute to the environmental goal of zero carbon emissions. However, inadequate energy efficiency policies and public awareness of energy conservation have led to low energy efficiency and high energy consumption in the residential sector. This study examines the current state of energy efficiency in the residential sector based on existing energy efficiency policies and energy efficiency targets in the EU and China, which contribute to the achievement of "safe, clean, and efficient energy".

Drawing on two case studies from the residential sector in Hungary and China, this paper assesses the development of energy efficiency in the residential sector in terms of policy measures, the diffusion of energy efficiency labels and the use of energy-efficient appliances. A literature research, questionnaire survey and statistical analysis were used. The study shows that the Hungarian and Chinese governments have implemented a series of better policies that, together with the increased awareness of energy efficiency among households, have significantly reduced energy consumption. Despite the improvements in energy efficiency, financial and fiscal incentives may be of greater use due to the large volume of older buildings in Hungary and the low renovation rate, which makes it difficult to make further improvements. In addition, the findings of this study may help policy makers to make effective policy decisions for energy efficiency improvements in both countries.

**Keywords:** energy efficiency, residential sector, Hungary, China, energy policy, energy efficiency labeling, energy efficient appliances.