

## Energy Efficiency in Hot Arid Climates Code Compliance and Enforcement for Residential Buildings

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**Abstract :** This paper is a part of an ongoing research that proposes energy strategies for residential buildings in hot arid climates. In Egypt, the residential sector is dominated by increase in consumption rates annually. A building energy efficiency code was introduced by the government in 2005; it indicates minimum design and application requirements for residential buildings. Submission is mandatory and should lead to about 20% energy savings with an increase in comfort levels. However, compliance is almost nonexistent, electricity is subsidized and incentives to adopt energy efficient patterns are very low. This work presents an overview of the code and analyzes the impact of its introduction on different sectors. It analyses compliance barriers and indicates challenges that stand in the way of a realistic enforcement. It proposes an action plan for immediate code enforcement, updating current code to include retrofit, and development of rating systems for buildings. This work presents a broad national plan for energy efficiency empowerment in the residential sector.

**Keywords :** energy efficiency, housing, energy policies, code enforcement

**Conference Title :** ICEESD 2015 : International Conference on Energy, Environment and Sustainable Development

**Conference Location :** Paris, France

**Conference Dates :** January 21-22, 2016