

# Designing the residential complex based on energy optimization

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Due to the importance of energy conservation, including fossil energy sources and the rise in energy prices, building industry and urban development in Iran and other countries, should go to energy efficiency and sustainability. Behavior regarding energy consumption of buildings and the design of low energy buildings, not possible without using a tool that can calculate the energy consumption of buildings before building them. Proper design of buildings as one of the most important energy consumers and producers of greenhouse gases can be an effective step toward improving the situation. The tool used to calculate the energy consumption of buildings and cognitive behavior, is Energy modeling software. Today, there are several modeling software that in the developed countries in the process of teaching, research projects and executive projects are used. This research presents an overview of the design of passive energy buildings, strategies to reduce energy consumption in buildings activist, general simulation of the building, its history, its procedures and its various types have been allocated. Continuing variety of applications in building energy simulation methods and a case has been raised. Attempts to find an efficient way to use of simulation for building energy design process is the topic of this research to determine the effectiveness of simulation software in the process. Finally, a case design examples using the proposed method has been tested in practice it works

**Keywords :** residential optimization

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