

عنوان مقاله:

Review on Energy Efficiency using the Ecotect Simulation Software for Residential Building Sector

محل انتشار:

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خلاصه مقاله:

The building sectors are recognized as one of the essential contributors of global warming and climate change because of their high energy use. The building sector is responsible for ۴۰% of all energy usage and ۴۰% of the CO₂ emissions in the developed countries. Researchers in the world are working on energy management and conservation using simulation software to develop strategies that lead to an overall reduction of energy consumption in the buildings. This review is considered a modeling and simulation approach with a specific focus on residential building. Modeling and simulation methods reviewed are presented categorically as per the strategic approach adopted by the researchers. Simulation results available for residential building energy are also introduced. This research has reviewed the capabilities and performances on Ecotect simulation and modeling, including daylighting, solar radiation, thermal analysis, and shading for energy management and conservation of residential building. Different modeling and simulation approaches, from various building and climate, were reviewed and discussed. The analysis of present work greatly help the researchers' decision-making and selection of software to perform various simulations in energy management of residential buildings.

کلمات کلیدی:

Building energy simulation, Climate zone, critical review, Ecotect analysis, Energy efficiency, Residential Building

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