

Abstract Details

Title: Is Green Low Cost House Possible? Towards Low Energy–Low Cost House

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Abstract: The low income house is not only excluded economically, but this exclusion has social and environmental dimension. Therefore, giving special attention to the low cost house is very essential to be low energy house, to maintaining the cohesion of the three dimensions of green architecture. Energy saving in building is one of the most important principals in economic benefits of green architecture. The study point out the importance that design housing external envelope is more sensitive to the thermal comfort indoor living in low house costing. Therefore the study will include main geometric shapes which can use to design the external envelope of building in North Sinai to achieved the most suitable house shape appropriate with environment of north Sinai, that decrease the total solar radiation on the external envelope of building. Finding will improve the indoor thermal comfort which can effect directly in reduce use equipment (which used for: heating at winter – cooling in summer) inside the building to achieve thermal comfort and that impact on energy consumption in low cost house in Bedouin villages at El-Hasana North Sinai.

Keywords: Low Cost House, Building Envelope, Thermal Comfort, Geometric Building Shape, Energy Consumption, Solar Radiation, Sinai.