

## Abstract Details

**Title:** Low Cost Green Building with Low Energy Consumption towards use PP in External Envelope

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**Abstract:** The role of external envelope is very important to control heat gain and loss through it. So, should improve building envelope, design, and materials to increase thermal resistance. In Additional to increase thermal resistance, that can help to decrease energy consumption internal building space. Energy efficient in the building is one of the most significant principals in economic benefits of green architecture. The study point out the significant that design housing external envelope is more sensitive to the thermal comfort indoor living in low house costing. Therefore the study will include some cross sections in walls without opening which can use to design the external envelope of building in North Sinai to achieve the most suitable section in wall appropriate with the environment of north Sinai that reduces the Overall heat transfer coefficient on the external envelope of the building. Finding will improve the indoor thermal comfort which can impact directly in decrease use equipment (which used for cooling in summer– heating at winter) internal the building to achieve thermal comfort and that effect on energy consumption in the low-cost house in North Sinai.

**Keywords:** Low cost house, energy consumption, Thermal comfort, Heat Transfer, Energy consumption, Heat flux density, Building envelope, Thermal conductivity, Thermal Resistance, Thermal Efficiency, Sinai.