

# **Towards Zero Energy School in Palestine**

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## **ABSTRACT**

Buildings have a significant impact on energy use and the environment. However, school buildings differ from other types of buildings because they are the places where children are educated and have the opportunity to learn how to become environmentally-aware citizens. This paper is a part of an ongoing research project Al-Maqdisi Funded by the French government in cooperation between Building engineering department at NNU and GRECAU laboratory at ENSAP in France. Zero energy and energy efficiency concepts are very important in school buildings, as they are associated with comfort and air quality conditions in the interior spaces and energy cost of these buildings are associated with their main operational cost. There is an increasing awareness throughout donors for promotion of sustainable solutions in Palestinian school buildings involving energy efficient technologies and measures. The aim of this paper is to assess the energy and comfort performance, based on subjective and objective approaches, of school buildings in two different climatic zones of Palestine. It also demonstrates, through simulation studies, the potential for achieving Near Zero Energy school buildings in each region and proposed its appropriate strategies.

**Keywords;** school design, ZEB strategies, climate zones, Palestine.