

Net Zero Energy Schools: The Starting Block for the Canadian Energy Neutral K-12 Schools

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Abstract : Changes in the patterns of life in the late 20th and early 21st century have created new challenges for educational systems. Greening the physical environment of school buildings has emerged as a response to some of those challenges and led to the design of energy efficient K-12 school buildings. With the advancement in knowledge and technology, the successful construction of Net Zero Energy Schools, such as the Lady Bird Johnson Middle School demonstrates a cutting edge generation of sustainable schools, and solves the former challenge of attaining energy self-sufficient educational facilities. There are approximately twenty net zero energy K-12 schools in the U.S. of which about six are located in Climate Zone 5 and 6 based on ASHRAE climate zone classification. This paper aims to describe and analyze the current status of energy efficient and NZE schools in Canada. An attempt is made to study existing U.S. energy neutral strategies closest to the climate zones in Canada (zones 5 and 6) and identify the best practices for Canadian schools.

Keywords : Canada K-12 schools, green school, energy efficient, net-zero energy schools

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