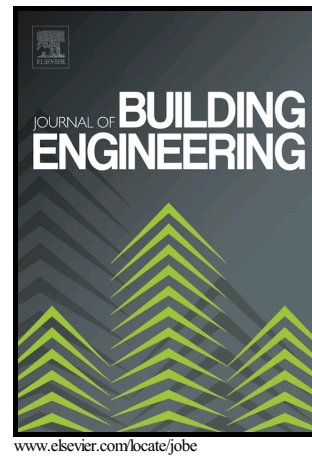


Author's Accepted Manuscript

Dutch Sustainable Schools towards Energy Positive

Milad Golshan, Hester Thoen, Wim Zeiler



PII: S2352-7102(17)30600-9
DOI: <https://doi.org/10.1016/j.job.2018.05.002>
Reference: JOBE479

To appear in: *Journal of Building Engineering*

Received date: 5 October 2017
Revised date: 1 May 2018
Accepted date: 2 May 2018

Cite this article as: Milad Golshan, Hester Thoen and Wim Zeiler, Dutch Sustainable Schools towards Energy Positive, *Journal of Building Engineering*, <https://doi.org/10.1016/j.job.2018.05.002>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Dutch Sustainable Schools towards Energy Positive

Milad Golshan MSc, Hester Thoen., Prof. ir. Wim Zeiler*

Technical University Eindhoven, Department of the Built Environment, Group Building Services.

*Corresponding author: w.zeiler@bwk.tue.nl

ABSTRACT

Due to the effects of Global warming, the Built Environment needs to become more sustainable and use less energy. This means that also schools have to become energy neutral or even energy positive. Classrooms are considered to be very important for children's mental and educational development. On average, kids spend over 30% of their time in classrooms in the pursuit of their academic goals. Therefore, great care must be taken to ensure the learning environment for kids is comfortable, vibrant and healthy. This paper aims to evaluate the indoor environmental conditions of 10 energy conscious schools in the Netherlands ranked amongst the top 15 efficient schools in the Netherlands in 2016. For evaluation of the environmental conditions in schools, focus was placed on the thermal comfort and indoor air quality (IAQ) conditions. The results from the study indicate that the situation is less than desirable in some cases and the focus had been placed mostly on energy aspect rather than comfort or healthy indoor environment of the occupants.

Keywords: Dutch schools, sustainable, IAQ, heating, cooling, energy efficiency, ventilation system, building performance.

Download English Version:

<https://daneshyari.com/en/article/6749744>

Download Persian Version:

<https://daneshyari.com/article/6749744>

[Daneshyari.com](https://daneshyari.com)