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Field measurement dataset of a nearly zero-energy office building in temperate oceanic climate

Version 2.1

Amaripadath, Deepak; Attia, Shady, 2022, "Field measurement dataset of a nearly zero-energy office building in temperate oceanic climate", https://doi.org/10.7910/DVN/NLEAKA, Harvard Dataverse, V2

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Description

This dataset contains the building performance values of a nearly zero-energy office building, Clinic Saint-Pierre, in the temperate climatic zone (Cfb) as per the Köppen-Geiger-Peel classification near Brussels, Belgium. From May 2018 to April 2019, the indoor thermal conditions and energy consumption of the building were monitored. The dataset was used to investigate the time-integrated thermal discomfort, primary energy use, and GHG emissions from the building. The hourly outdoor air temperature was gathered from the weather station installed outside Clinic Saint-Pierre. The monitored data was obtained from the Energy Management System (EMS) maintained by Engie Cofely. For this dataset, formal data analysis was carried out using a state-of-the-art workstation at the SBD Lab, the Super COmputeR ProcessIng wOrkstatioN (SCORPION), which uses a processor with 6 cores, 128 threads, and a 256 MB cache for the computing power and performance. This is in combination with 128 GB of Random Access Memory (RAM) and a graphics card of 24 GB that masters most scientific applications. (2022-08-29)

Read full description

Subject

Engineering

Keyword

Building performance, Thermal discomfort, Energy efficiency, HVAC, Overheating, Overcooling

Related Publication

D. Amaripadath, M. Velickovic, and S. Attia, “Performance evaluation of a nearly zero-energy office building in temperate oceanic climate based on field measurement,” Energies, vol. 15, p. 6755, Sep. 2022. doi: 10.3390/en15186755

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