

Grasping the Present Performance of Energy Conservation in "Keio Co-Evolving House"

Yuto Sasaki

Graduate school of Media and Governance, Keio University
Japan
yutossk@sfc.keio.ac.jp

Shouki Kawano

Department of System Design Engineering, Faculty of Science and Technology, Keio University
Japan
kawano@west.sd.keio.ac.jp

Ikeda Yasushi

Graduate school of Media and Governance, Keio University
Japan
yasushi@sfc.keio.ac.jp

Eiko Uchiyama

Graduate school of Media and Governance, Keio University
Japan
eiko@sfc.wide.ad.jp

Abstract

In recent years, the spread of Eco-house is required from the point of view of environmental measure and reducing the running cost of energy, and a lot of housing maker in Japan sets about business expansion to it. The subject in this manuscript is analyzing the efficacy to introduce some apparatuses, systems, and technologies in "Keio Co-Evolving House", which is one of the Eco-house and was built in Keio University at Shonan Fujisawa Campus last summer. Concretely, the comprehensive power consumption and the amount of the generated power will be grasped in the house, as a result of some demonstrative experiments, in which the testers keep the specified schedule modeled on the general lives at home. And, simultaneously, it will be clear hourly variation in the power consumption by using some household appliances which is linked room temperature and luminance. In addition, these data will be compared with the data of the power consumption around that same time in another general residence in which the figure of user and the living environment are like at "Keio Co-Evolving House"; therefore the present performance of energy conservation at it will be rated. One of the expected results is that grasping the electric power self-supply ratio grows into the basis of constructing autonomous power system in case of blackout by some disasters. Another expected result is that the selecting data and evaluation in this demonstrative experiment grow into the fundamental comparative data to the diverse research which will be conducted at "Keio Co-Evolving House" in the future.

Keywords: Ecological house, Energy conservation, Management of energy