

Accepted Manuscript

Title: Optimal scheduling of multi-smart buildings energy consumption considering power exchange capability

Authors: Afshin Najafi-Ghalelou, Kazem Zare, Sayyad Nojavan



PII: S2210-6707(17)31738-9
DOI: <https://doi.org/10.1016/j.scs.2018.05.029>
Reference: SCS 1107

To appear in:

Received date: 20-12-2017
Revised date: 18-5-2018
Accepted date: 19-5-2018

Please cite this article as: Najafi-Ghalelou A, Zare K, Nojavan S, Optimal scheduling of multi-smart buildings energy consumption considering power exchange capability, *Sustainable Cities and Society* (2018), <https://doi.org/10.1016/j.scs.2018.05.029>

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 proof before it is published in its final 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.

Optimal scheduling of multi-smart buildings energy consumption considering power exchange capability

Afshin Najafi-Ghalelou, Kazem Zare* and Sayyad Nojavan

Faculty of Electrical and Computer Engineering, University of Tabriz, Tabriz, Iran, Tel-Fax: +98 41 33300829, P.O. Box: 51666-15813

afshin.najafi95@ms.tabrizu.ac.ir, kazem.zare@tabrizu.ac.ir, sayyad.nojavan@tabrizu.ac.ir

*corresponding author

Highlights

- Energy management of smart buildings is optimized with capability of power exchange.
- The performance of all equipment within the smart building is scheduling optimally.
- Performance of appliances in the presence of DER is scheduling and prioritized.
- The aim is to minimize the total operation cost of smart buildings.
- The mixed-integer programming (MIP) is employed to guarantee the global optimal.

Abstract

In this paper, optimal energy management of interconnected multi-smart apartment buildings considering energy flow among them is presented. It is considered that each smart apartment building includes various equipment such as combined heat and power (CHP) generator, battery storage system, thermal storage system and smart appliances. To assess the effects of power exchange capability among the multiple-smart apartment buildings, two case studies are evaluated with and without considering mentioned capability. It can be found that the operation cost of the interconnected multi-smart apartment buildings by considering the effects of power exchange

Download English Version:

<https://daneshyari.com/en/article/6774865>

Download Persian Version:

<https://daneshyari.com/article/6774865>

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