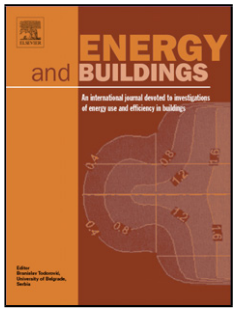

Title: Cost-Effective and Comfort-Aware Residential Energy Management under Different Pricing Schemes and Weather Conditions

Author: Amjad Anvari-Moghaddam Hassan Monsef Ashkan Rahimi-Kian

PII: S0378-7788(14)00857-3
DOI: http://dx.doi.org/doi:10.1016/j.enbuild.2014.10.017
Reference: ENB 5397

To appear in: *ENB*

Received date: 8-6-2014
Revised date: 27-9-2014
Accepted date: 7-10-2014

Please cite this article as: A. Anvari-Moghaddam, H. Monsef, A. Rahimi-Kian, Cost-Effective and Comfort-Aware Residential Energy Management under Different Pricing Schemes and Weather Conditions, *Energy and Buildings* (2014), http://dx.doi.org/10.1016/j.enbuild.2014.10.017

Title:

Cost-Effective and Comfort-Aware Residential Energy Management under Different Pricing Schemes and Weather Conditions

Authors:

Amjad Anvari-Moghaddam, School of ECE, College of Engineering, University of Tehran, Tehran, Iran.

Hassan Monsef, School of ECE, College of Engineering, University of Tehran, Tehran, Iran.

Ashkan Rahimi-Kian, School of ECE, College of Engineering, University of Tehran, Tehran, Iran.

Corresponding Author:

Hassan Monsef, School of ECE, College of Engineering, University of Tehran, Tehran, Iran.

Mail Address:

School of ECE, College of Engineering, University of Tehran, North Kargar Ave., P.O.BOX 14395/515, Tehran, Iran.

Tel: +98 21 82094222

Fax: +98 21 88633029

Emails:

a.anvari@ut.ac.ir

hmonsef@ut.ac.ir

arkian@ut.ac.ir

Highlights

- Joint scheduling of energy supply options and controllable loads is presented
- User's satisfaction degrees and comfort levels are considered
- A detailed thermo-electrical load model for a residential smart house is proposed
- Assessment of demand response actions is presented under different scenarios

Abstract: Nowadays with the emerging of smart micro-grids(SM-Gs) in residential sectors, a large portion of energy consumption can be saved through optimal scheduling of household devices and management of domestic hybrid energy sources. By the aid of such technologies, residential consumers have the capability to mitigate their energy costs and