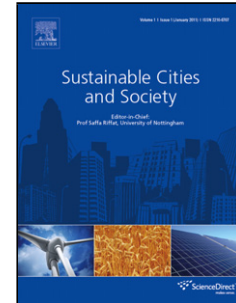


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Practical and low-cost monitoring tool for building energy management systems using virtual instrumentation

Note: Changes are marked in grey

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Highlights

- A new monitoring tool called Virtual Energy Management System (VMS) was developed for building energy management systems (BEMS).
- VMS is a user-friendly and a low-cost remote monitoring tool developed on the LabVIEW 2013[®] platform.
- VMS displays and records data of electrical parameters, energy demand, electricity costs and carbon footprint. The information can be viewed and collected locally or from any location through the internet.
- VMS was tested at a university building to verify its functionality and accuracy, besides obtaining, economic, environmental, performance and energy indicators.
- Findings show that by using this monitoring tool, the investment cost can be reduced by 40%.

Abstract

Building Energy Management Systems (BEMS) have been acquiring greater importance in the world; nowadays are a novel trend, especially for building performance, electricity cost and carbon footprint. Actually, tools for BEMS present some technical and economical disadvantages for building managers; to overcome these limitations, a practical and cost-effective tool is presented. To achieve this, we propose a

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