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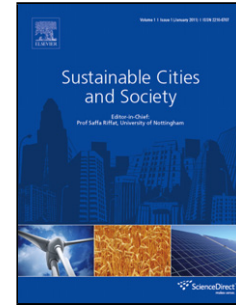
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QUANTITATIVE ANALYSIS OF THE IMPACT OF MAINTENANCE
MANAGEMENT ON THE ENERGY CONSUMPTION OF A HOSPITAL IN
EXTREMADURA (SPAIN)

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Highlights

The impact of maintenance management on the energy consumption of a hospital is put forward.

Maintenance hospital indicators is put forward.

Air conditioning installations, Low Voltage systems and Plumbing installations consume more than 80% of the resources applied to hospital maintenance.

An increase on preventive hospital maintenance operations saves energy.

ABSTRACT

The aim of this paper is to analyse the impact of maintenance management on the energy consumption of a hospital in Extremadura (Spain) and to look for existing relationships between the time spent on maintenance operations and the energy consumption of the building.

The results show that an average annual increase of 6% in time spent on preventive maintenance operations, over a period of 5 years, resulted in a 20% decrease in the demand for corrective maintenance and an average annual saving of 500 MWh in energy consumption. This in turn prevented the release of 186 tons of CO₂ and other greenhouse gases into the atmosphere. This represents an annual saving of 75,000 € with no increase in either human resources used nor in maintenance costs. Air conditioning installations, Low Voltage systems and Plumbing installations consume more than 80% of the resources applied to building maintenance.

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