

## Efficiency Energy Usage by Hospitals in Poland in 2010-2019\*

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### Abstract

Energy consumption in Polish hospitals has changed over the years. In order to improve energy efficiency in these buildings, it is necessary to know the trends and determinants of energy consumption. The study aimed to examine the size of the hospitals and the efficiency of energy use by hospitals in Poland in 2010-2019. Data from 3,061 hospital reports on financial data and medical activities for 2010–2019 were used for the analysis. To measure and compare energy use efficiency in hospitals, we developed energy efficiency indicators and analyzed them by hospital size. Means and SDs were calculated for all data. Variables were compared using the Student's t-test. Statistical analysis was performed using StatSoft Statistica version 13.3. The article provides new empirical evidence on the determinants of electricity consumption in Polish hospitals regarding their size. The size of the hospital varies the electricity efficiency use related to the number of doctors, nurses, operating rooms, and the value of fixed assets. As expected, larger hospitals seem to use more energy.

**Keywords:** energy efficiency; Polish hospitals; energy usage trends