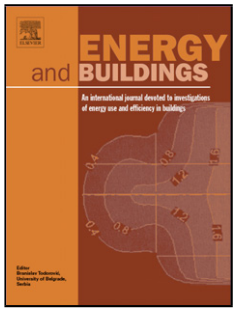

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Analysis of Real-Time Electricity Consumption in Canadian School Buildings

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Highlights

- Electricity use increase in newer schools was statistically significant
- However, spaces in new schools were using less electricity
- Other factors (e.g. increased automation and advanced HVAC) may explain the increase
- Occupancy patterns also significantly affected electricity use in school spaces
- Therefore, efforts to decrease buildings' electricity use should focus on occupancy

Abstract

Previous studies indicate electricity consumption is increasing in new and green buildings highlighting the importance of investigating parameters affecting that increase. The majority of previous studies also focused on studying commercial or residential buildings emphasizing the need to study energy consumption in other building types. This study analyzed historical energy consumption data in a sample of thirty schools in Manitoba, Canada. It showed that the decrease in gas consumption for heating in new schools was counteracted by a statistically significant increase in their electricity consumption. Three cases study schools were selected for further