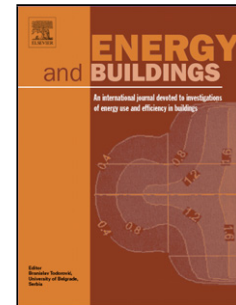


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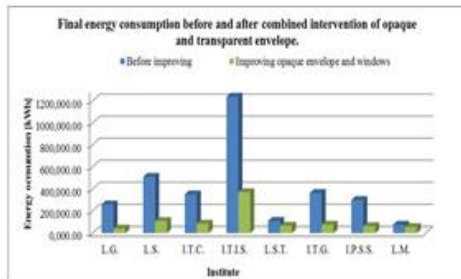
Analysis of the energy performance strategies of school buildings site in the Mediterranean climate: A case study the schools of Matera city

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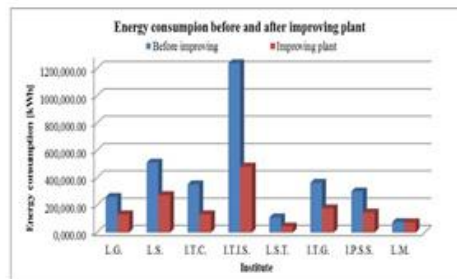
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Graphical abstract



The best energy strategy envelope is windows substitution



Improving system allows an energy saving of more 50%



Highlights

- This study analyses the energy performance of eight schools located southern Italy
- We measured the thermal parameters and the gas consumptions
- The energy performance was validated by the measurements in situ and analysis in dynamic regime
- We implemented different energy performance strategies for envelope and system
- The energy saved and environmental benefits were analysed

Abstract

Energy consumption of the public building stock represents an important cost of the balance of a state. Moreover, public buildings, in particular schools, should be buildings with elevated comfort levels because student and teachers spend much time in these rooms. The wellness and productive capacity of students and teachers are primarily affected by the comfort inside and air quality of school rooms.

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