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## Energy performance assessment and a retrofit strategies in public school buildings in Rome

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### Abstract

*The aim of this paper is to assess the quality of public schools in Rome in order to create a good data base as a first-step in defining possible intervention strategies to reduce energy consumption in this sector. The urgency is not only determined by the criticality of the current situation but also by the observation of how a very important voice of losses is related to inefficiencies in the management of buildings and plants that can be easily overcome with simple and low cost actions. The measures adopted to reduce consumption in school building sector were defined according to the dimensional, technological and architectural features of the schools. The analysis was performed by comparing the costs parameterized for standard retrofit interventions for the existing envelopes and plants to the benefits achievable by the interventions in terms of energy and money saving through a simple payback time analysis (PBT) useful to identify priorities for action. Finally, it has been estimated the environmental benefit achievable in 20 years through a spread action of refurbishment on plants and on envelopes.*

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