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17TH CONFERENCE ON SUSTAINABLE
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ENVIRONMENT SYSTEMS

The logo features a stylized green 'S' symbol composed of three concentric, overlapping loops. To its right, the text '17th sdewes Conference PAPHOS 2022' is written in white, bold, sans-serif font. The background of the logo is a dark green circle. The entire graphic is set against a collage of images including a classical column capital, a marble bust of a woman's head, a globe with white grid lines, and a circular inset showing a modern building facade. The collage is decorated with orange and green geometric shapes and lines.

17th
sdewes
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2022

NOVEMBER
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BOOK OF ABSTRACTS

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The Application of En Iso 52016-1 to Assess Building Cost-Optimal Energy Performance Levels in Italy

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Abstract

In Italy, the cost-optimal calculation procedure, based on the comparative methodology framework established by the Commission Delegated Regulation 244/2012, was firstly applied by means of a monthly quasi steady-state calculation method of the building energy performance. The introduction of the EN ISO 52016-1 new simplified hourly calculation method created the necessity of new procedures. The aim of this work is to analyse the variation of the cost-optimal results by applying the different calculation method of the building energy need for space heating and cooling mentioned before to reference buildings. The cost-optimal analysis was hence performed on a group of buildings representative of the Italian building stock. The differences in terms of cost-optimal levels and packages of energy efficiency measures were assessed in the application of monthly and hourly methods. The results show limited variations in the resulting global cost, while the differences in the cost-optimal package of energy efficiency measures are not negligible.