

Performance of thin-film BIPV as double sloped pitched roof in buildings of Malaysia

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ABSTRACT

Solar energy in built environments became more popular in the recent years emerging as building integrated photovoltaics (90° façade and 0° roof BIPV). However, in most cases, residential buildings have varying roof pitches instead of 0° roof. In this context, it is significant to assess the energy output and performance of double-sloped pitched roof thin-film BIPV at different angles and orientation. Results show that the performance of the BIPV inclined at 15° and east orientation is better among the other orientation and angles.

KEYWORDS:

BIPV; energy performance; performance ratio; pitched roof; yield factor