

International Journal of Construction Management >
Volume 16, 2016 - Issue 1

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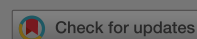
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Building integrated photovoltaics (BIPV): costs, benefits, risks, barriers and improvement strategy

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Pages 39-53 | Published online: 21 Dec 2015

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Abstract

Building integrated photovoltaics (BIPV) refers to photovoltaic or solar cells that are integrated into the building envelope (such as facade or roof) to generate 'free' energy from sunshine, and it is one of the fastest growing industries worldwide. However, up until now, there have been limited studies that analysed cost–benefit and risk

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In addition, this research has identified the fact that there was a lack of detailed BIPV cost data (including individual component costs) and lack of methods for BIPV cost–benefit analysis, and there are risks and barriers in BIPV applications. Following this, this research provides a strategic framework and a number of suggestions to industry stakeholders for integration and collaboration within the BIPV supply chain in order to facilitate the cost reduction of BIPV. Finally, this study proposes several topics for future research. It is anticipated that the results presented in this paper have implications not only for government policy and product development and application, but also for academic research.

Keywords: building integrated photovoltaic (BIPV) construction cost–benefit stakeholder risk barrier supply chain strategy

Disclosure statement

No potential conflict of interest was reported by the authors.

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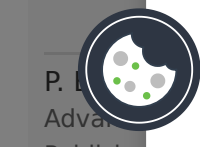
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