

**CENTRE OF STUDIES FOR QUANTITY  
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**THE IMPLEMENTATION OF BUILDING  
INTEGRATED PHOTOVOLTAIC (BIPV) FOR  
URBAN AREA RESIDENTIAL BUILDING IN  
IPOH, PERAK.**

Dissertation submitted in partial fulfilment  
of the requirement for the award of  
Bachelor of Quantity Surveying (Honours)

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## **DECLARATION**

"I certify that the information in this dissertation was conducted entirely on my own  
and that all references have been cited."

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Date : JANUARY 5, 2024

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## **ABSTRACT**

Photovoltaic materials known as building-integrated photovoltaics (BIPV) are used to replace traditional building materials in areas of the building envelope like the façade, skylights, and roof. BIPV systems are an essential part of the building skin that do double duty by converting solar energy into electricity and offering safety, daylight illumination, weather protection, thermal insulation, and noise reduction all at the same time. BIPV systems can be implemented as part of a retrofit or installed during a building's construction. When a building's aesthetics are important and conventional solar panels might not be an appropriate choice, BIPV systems enable a wider adoption of solar power. This is their primary benefit over more popular non-integrated systems. The purpose of this study is to investigate BIPV technology solutions in the Malaysian urban residential sector as a renewable energy source. This research aimed to identify BIPV awareness, address challenges, and propose solutions to increase renewable energy adoption among Malaysian urban residential. The quantitative data used in this study includes both primary and secondary data. Data was primarily gathered through a questionnaire survey. Thus, a mean of 289 questionnaires were disseminated among Perak's urban inhabitants across all districts yet the total number of answered survey at only 70 respondents from meru height Ipoh. The most highlighted barriers are listed in objective one is government policies and incentives on BIPV. Thus, the second goal that has increased knowledge about the challenges in applying BIPV technology is that building and electrical codes, which differ depending on the location, must be followed by BIPV. The last objective of the strategy in facing the solution to increase BIPV as a renewable energy technology among urban residential is governments can play a pivotal role in promoting BIPV by implementing residential building codes and regulations .

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