

STUDY OF THE PERFORMANCE OF NEW BUILDING INTEGRATED PHOTOVOLTAIC (BIPV) PANELS FOR METAL ROOF

Project by:
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COLLABORATION WITH:

PvFoundry[®]

PROJECT OBJECTIVES

To set up a testbed in Singapore Polytechnic to test two types of new BIPV panels for metal roof and develop a Visual Basic for Applications (VBA) program for data acquisition and analysis to evaluate the performance of the BIPV panels.

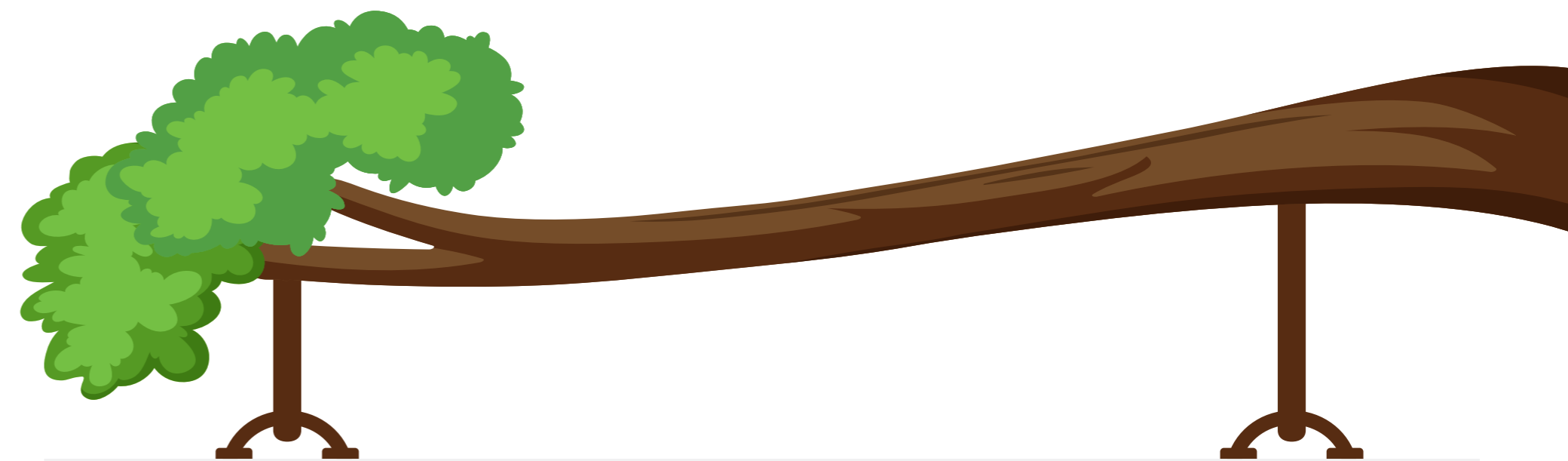
PROJECT SUMMARY

The new PvFoundry's BIPV panel combines PV panel with metal roof to maximise the utilisation of metal roof, and helps reduce system costs. The project team set up a testbed in Singapore Polytechnic to test BIPV panels under the site conditions and developed a VBA program for data acquisition and analysis. The program aims to:

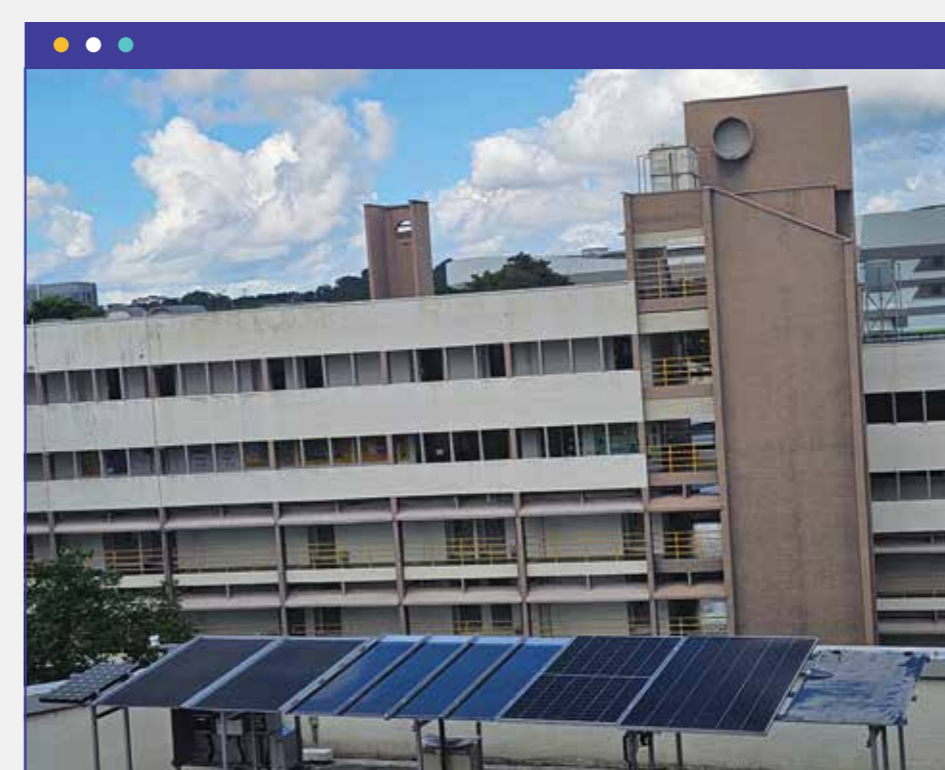
- Acquire the electrical data of PV system from the cloud and weather data from a local datalogger separately;
- Clean and sort raw data, merge the data from two different sources;
- Conduct data analysis for important operational data of PV system; and
- Display the analytic results to the operator for system performance analysis.

PROJECT OUTCOMES

1. Set up a testbed to test the new BIPV panels successfully.
2. Develop a VBA program for data acquisition and analysis to evaluate the performance of BIPV panels.



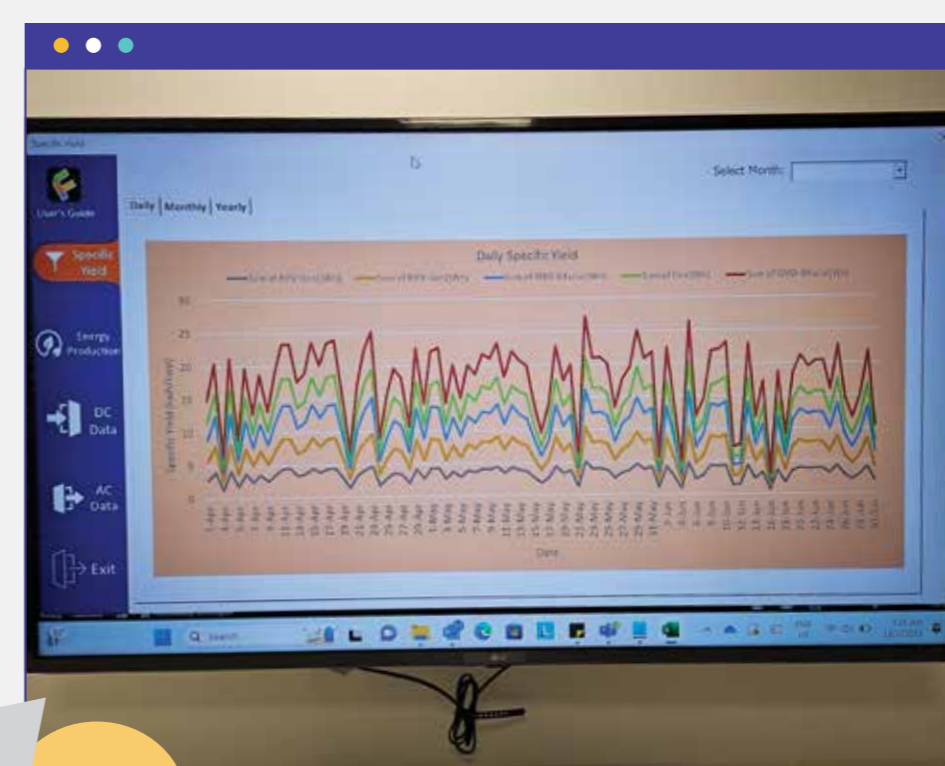
Testbed for New Solar BIPV Panels



Working on the Development of Program App



BIPV Panel Performance Analysis Using Program App



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