

BIPV in Southeast Asian countries-opportunities and challenges

Akash Kumar Shukla¹, K. Sudhakar^{1,2,}, Prashant Baredar¹ and R. Mamat²*

¹ Energy Centre, Maulana Azad National Institute of Technology Bhopal, India

² Faculty of Mechanical Engineering, Universiti Malaysia Pahang, 26600 Pahang, Malaysia

In building integrated photovoltaic systems, PV elements are integral of the building which displace the use of conventional building materials. BIPV serves as the external lined covering and also acts as a support structure for the building. BIPV system has many benefits such as on-site generation of electricity, architectural elegance, reduced cost of the building construction and increased market acceptance of the buildings. PV professionals from several countries have been working from several years to improve the design for building application. This paper identifies the solar potential for BIPV application, function of BIPV, possible design and integration strategies with reference to Southeast countries. Finally, Barrier and challenges of implementing BIPV system have been examined.