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Study finds that small size a-Si modules perform well in field

Researchers from the University of California at Berkeley, Princeton University, and Energy Alternatives AFRICA of Nairobi, Kenya conducted a study of the field performance of single junction amorphous silicon (a-Si) photovoltaic (PV) modules in Kenya in 1999. The large majority of the a-Si PV modules sold in Kenya are made by three different manufacturers. Results from the study indicate that modules made by two a-Si PV module manufacturers are an effective, low cost alternative to crystalline PV. However, the poor performance of modules made by the third manufacturer indicates a need for measures to ensure the high quality of all modules sold in the Kenyan PV market.

Kenya has an active solar home systems market, with cumulative sales in excess of 100,000 units, and current sales of approximately 20,000 modules per year. Small, 10 to 14 Watt single junction a-Si PV modules make up the majority of these sales. One key reason for the large market share enjoyed by a-Si PV is its low retail price relative to similar sizes of crystalline PV modules. Amorphous silicon modules sell for approximately US\$ 5.50 per rated peak Watt (Wp) in Kenya, while similar sizes of crystalline modules sell for approximately US\$ 9.00 per rated peak Watt.

The results of the study will be published in a paper titled "Field Performance Measurements of Amorphous Silicon Photovoltaic Modules in Kenya", by Arne Jacobson *et al.* The paper will be presented at the American Solar Energy Society's (ASES) conference in Madison, Wisconsin, USA, June 16-21.

For more information, or for a copy of the complete report, please contact:

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