



FACT SHEET

NANO-POWER AFRICA

CHALLENGE

Higher education is providing rich opportunities for students and communities alike as educators and scholars come together with an innovative goal to develop sustainable and affordable access to power across remote African regions.

APPROACH

The American Council on Education and the Higher Education for Development, in collaboration with the University of Cincinnati, the University of Cape Town, Kigali Institute of Education in Rwanda, and Haramaya University in Ethiopia, is implementing a \$1.37 million project to support human capacity development and nanoscience research with the intent to develop innovative, cost-effective photovoltaic technology. This four year project which began in early 2011 develops new curricula, improves teaching and learning facilities in African institutions, builds an international network of researchers, and provides clean energy solutions to African communities living in peri-urban and rural areas.

OBJECTIVES

Higher education partners will collaborate to:

1. Develop and enhance teaching and research capacity in African institutions to support nanoscience and other related disciplines,
2. Advance nanoscience to ultimately lead to the commercialization of indigenous African solar cell technology,
3. Create a research network which will support entrepreneurial activities in African countries,
4. Develop indigenous solar panels based on electrical performance of nano-structured materials.



RESULTS

- 11 MSc, 3 PhD students, and 1 BSc Honors (3 women) have been supported by the program.
- The web-based “Solar Power for Africa” course was developed and taught with participation from University of Cincinnati and seven African universities, serving as a framework on which to develop further interactive educational experiences for U.S. and African students.
- Students from UCT and Haramaya University installed solar panels to support a village health clinic in Ethiopia.
- Collaborative research on printed electronics technology has produced promising results for electricity transmission.

CONTACT INFORMATION

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