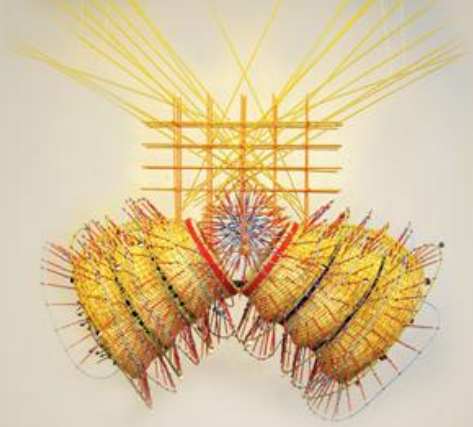
TECHNOLOGIES WITHOUT BORDERS ACROSS BORDERS



Citizenship & Social Responsibility

"The Pico Power Revolution: Off-Grid Energy Services for Low Income People in Africa, Asia, and Beyond"

Department of Human Ecology, Rutgers Energy Institute and Initiative on Climate and Society

28 FEBRUARY

10:30AM | Institute of Marine & Coastal Science, Alampi Room, 71 Dudley Rd. Cook Campus (refreshments 10AM)

Arne Jacobson

Director of the Schatz Energy Research Center, Associate Professor Environmental Resources Engineering, Humboldt State University

This event is co-sponsored by Department of Human Ecology, Rutgers Energy Institute, Initiative on Climate and Society, and The Centers for Global Advancement and International Affairs as part of their Biennial theme "Technology across Borders/Technology without Borders."

Solar powered LED lights, mobile phone chargers, and other pico-power devices have emerged as affordable solutions for energy service needs for many people in rural areas of Africa, Asia, and beyond. The proliferation of pico-power devices is driven largely by technology advances, falling component prices, and creative delivery approaches. Over the past two years, sales of quality assured solar powered lights in Sub Saharan Africa have doubled annually, indicating very rapid growth in the sector.

Although they are not a reasonable substitute for grid-based rural electrification, the socio-economic, health, and environmental benefits of pico-power adoption can be substantial relative to baseline technologies. Many small solar powered lamps that replace kerosene lighting have economic payback periods on the order of 8-12 months. Solar lights that include provision for mobile phone charging can have even shorter payback periods due to avoided mobile phone charging expenses. Moreover, a transition from kerosene lighting to solar powered electric lighting can provide significant health benefits and environmental benefits through improved indoor air quality, reduced incidence of house fires, and avoided carbon dioxide and black carbon particulate emissions.

While the recent growth in the use of pico-power systems has occurred through market-based sales of commercial products, policies and regulations aimed at overcoming market failures and protecting consumer interests have played an important role. Measures aimed at ensuring product quality, raising consumer awareness, and facilitating access to finance have enabled successful delivery of good quality, affordable lighting and energy services to end-users in several countries. Continued delivery of affordable and reliable lighting and energy services through pico-power systems depends on continued development of these policies and measures, including extension into a number of other countries in Africa, Asia, and the Americas.