

Ghana: renewable energy for rural, social, and economic development

Malawi: barrier removal to Malawi renewable energy

Peru: PV-based rural electrification

Sri Lanka: renewable energy capacity building

Uganda: PV pilot project for rural electrification

Zimbabwe: PV for household and community use.

UNEP has recently sponsored a new PV program in Africa, supporting early-stage financing of solar energy ventures (or, “enterprises”). This program has been funded by the UN Foundation, under the guidance of UNDESA.

The World Health Organization (WHO) funds a program for PV-powered refrigeration for storing medicines in remote areas of Africa.

24.6.3 World Bank Solar Home System Projects

The World Bank, with grant support from the GEF, has funded 12 projects around the world providing basic “energy services” such as lighting, radio, television, and operation of small appliances, using solar home systems in rural households that lack access to electricity grids, including

Argentina: renewable energy in rural markets project

Benin: off-grid electrification project

Cape Verde: energy and water sector reform project

China: renewable energy promotion project

India: renewable resources development project, through IREDA

Indonesia: solar home system project

Lao: PDR rural electrification project

Sri Lanka: energy services delivery project

Togo: off-grid electrification.

There are three more projects pending approval of the World Bank:

Peru: PV-based rural electrification

Guinea: rural energy development

Mexico: renewable energy for agriculture.

Most of the World Bank’s early experience with photovoltaics and other renewables came from its Asia Alternative Energy Unit (“ASTAE”), funded by a number of donor agencies since 1992. A key finding from ASTAE’s early work was that “the lack of term financing was not the sole obstacle to renewable resources or end-use energy efficiency development. The absence of adequate regulatory and institutional arrangements, local technical capacity, and appropriate energy service delivery infrastructure can pose equal or greater barriers to alternative energy development” (see Reference [22]).

On the basis of this experience, the World Bank is concluding that future PV projects will seek to incorporate six elements: support private sector and NGO delivery models, pilot consumer credit delivery mechanisms, pay first-cost subsidies, support policy development and capacity building, enact standards and establish certification, testing, and enforcement institutions, and conduct consumer awareness and marketing programs.