

## **Solar Lighting Project planned for Himalayan Kingdom of Bhutan**

The Solar Electric Light Fund (SELF), a Washington, D.C.-based non-profit organization that promises solar rural electrification in the developing world, visited Bhutan in May, 2000 to begin plans for launching a solar photovoltaic (PV) lighting project in rural and remote villages of the Kingdom that have little hope of being connected to the electric grid in the foreseeable future.

This trip was the culmination of an exchange of ideas that had developed over the past two years between SELF's Executive Director, Bob Freling, and Yishay Dorji, the Managing Director of Tshungmed Solar, Inc., Bhutan's first -- and thus far only -- private solar company. Mr. Dorji had first learned of the Solar Electric Light fund several years ago when SELF introduced solar power to a remote Gurkha village in neighboring Nepal.

In order to make solar home systems (SHS) more affordable to rural families in the developing world, SELF has developed various credit financing mechanisms which enable these families to purchase solar home systems over a period of three or four years, paying only slightly more than what was previously spent on kerosene, candles, and dry-cell batteries for their radios. Interest is built into the credit schemes, and as monthly installments are collected, payments are placed into revolving loan funds which can subsequently be used to finance additional units for other families.

SELF's success in setting up revolving loan funds as well as training solar technicians at the village level convinced Yishay Dorji that adopting a similar type of approach might work in Bhutan as well. He contacted the Bhutan Development Finance Corporation (BDFC), which is the Royal Government of Bhutan (RGoB) appointed bank responsible for providing low-interest loans to meet the needs of rural communities who wish to improve their standard of living. Mr. Karma Rangdroel, Managing Director of BDFC, enthusiastically embraced the idea of collaborating with Tshungmed Solar, Inc. and SELF to establish a revolving loan scheme that would facilitate the dissemination of solar lighting systems in Bhutan.

During his visit to Bhutan, Mr. Freling, accompanied by Yishay Dorji, met with a number of high-ranking government officials who welcomed the idea of launching a SELF project in Bhutan, and promised their full cooperation and support. It was clear to everyone that solar energy could quickly, and dramatically, improve the quality of life for thousands of rural villagers in Bhutan who still burn kerosene or wood chips as a source of household lighting. It was agreed that Tshungmed Solar and SELF will work closely with the Rural Energy Cell in the Department of Power (DoP) to make sure that villages selected for participation in this project are not already targeted for grid extension during Bhutan's Eighth Five Year Plan.

In addition to meeting with government officials, Freling and Dorji also met with Dr. Kinlay Dorjee, who heads up the Bhutan chapter of the World Wildlife Fund (WWF) as well as the Royal Society for the Protection of Nature (RSPN), a Bhutanese NGO that promotes environmental conservation. As a result of their meeting, it was decided

that SELF's pilot project in Bhutan would focus initially on providing solar lighting systems to villagers in the Phobjikha Valley, an unelectrified area on the edge of the Black Forest that provides a safe haven for the rare and endangered Black Necked Cranes that winter every year in Bhutan.

In its efforts to preserve fragile ecosystems, RSPN has recognized the need to also address the development concerns of people who live in and around protected areas. Dr. Kinlay Dorjee was therefore delighted at the prospect of partnering with Tshungmed Solar and SELF to bring solar lighting to some of the families in the Phobjikha Valley, for this initiative will further the objectives of RSPN's "Integrated Conservation and Development Programme". SELF is also quite pleased to have the opportunity to collaborate with RSPN and the Bhutan chapter of WWF to help protect the Phobjikha Valley and the Black-Necked Cranes.

When contacting the American-Bhutan Council upon his return, Freling expressed great excitement about his trip, and about the prospects of working in Bhutan. "With its people-centered approach to rural development, one that emphasizes environmental protection, cultural preservation, self-reliance, decentralization, and popular participation, Bhutan is perfectly suited to the type of solar program carried out by SELF," said Freling. "I am confident that our efforts in Bhutan will be very successful," he added.

For those who wish to have further information about the project or want to contribute may contact Robert Freling at (202) 234-7265. Alternatively, you may write to the:

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