



MAINSTREAMING CONSERVATION & RENEWABLES

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Winner of the NGOs and Initiatives Category 2007

Information

Nominee: Russell deLucia, President, The Small Scale Sustainable Infrastructure Development Fund, Inc. (S3IDF)

Project Title: S3IDF's Social Merchant Bank Approach to Provide Efficient Lighting Services to Poor Households, Communities and SMEs in South India

Country: United States

Nominating Institution: Worldwatch

Category of Award: 1. NGOs and Initiatives
2. Product (agriculture, mining, industry, utilities)

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Project

Short Project Description:

Lighting is a critical service for households and small enterprises both for improving the quality of life and for income generation activities (hawkers, weavers, beedi rolling etc). S3IDF has implemented 35+ small investment lighting projects (photovoltaic for individual systems and to charge a battery bank, UPS, efficient mobile emergency lamps, electricity generation using biogas, etc.) for both urban and rural poor (households, communities and small enterprises), benefiting about 5,500 people to date. Besides creating employment, increasing income generation (due to extended working hours), the lighting initiative has the evident health and safety benefits and is environmentally responsible. Through its lighting Initiative, S3IDF aims to implement 50+ additional lighting projects in the next 2-3 years. These investments will directly benefit 1,500-3,000 families. In addition, they are structured to provide sufficient additional transaction experience to allow the detailed design of a multi-step scale-up that can target 5,000-10,000 direct household beneficiaries through 100+ additional transactions. Dr. Russell J deLucia, founder and president of S3IDF, has worked in 60+ developing countries on large-scale infrastructure projects for the governments, bilateral, the World Bank, and the Asian Development Bank. Dr. deLucia applies this experience of business development, financial and technology linkages to small-scale pro-poor infrastructure/energy projects.

Links: <http://www.s3idf.org/>

Nominee's Details:

Name: Russell deLucia

Address: The Small Scale Sustainable Infrastructure Development Fund, Inc. (S3IDF)
The Carriage House,
5 Hastings Square,
MA 02139-4724 Cambridge, MA

Innovation

Innovation for the broad use of clean energy:

S3IDF's Social Merchant Bank facilitates extensive use of clean energy, especially by the poor who lack access to mainstream modern energy services. This is made possible because of its following unique/innovative elements: a) Environmental and financial sustainability while ensuring these projects always benefit the poor, often in multiple ways as owner/operator and/or users of the lighting infrastructure. Thus, benefits are primarily in terms of increased income other than health and safety benefits; b) Arranging of innovative 'gap-filling' financing menu (debt, equity, partial guarantees), which are more or less designed to induce participation of local financial institutions in these lighting projects that were otherwise non-bankable under 'business as usual' practices. S3IDF's projects require cash/sweat equity from the end-beneficiaries and preferably leveraging finance from local banks; c) Partnering and linkage approaches (financing, technology know-how and capacity-building assistance) involving stakeholders mentioned above for pro-poor projects/enterprises; d) Highly replicable for similar communities with similar financial and technology access problems. Monitoring and evaluation and lessons dissemination efforts are geared to induce 'big players' like government, the World Bank, etc. to support such projects and adopt such methodologies which can be very cost-effective in poverty alleviation and environmental benefits.

Number of people that directly benefit from the project:

As per the latest report on 'India Rural Infrastructure Report' by the National Council of Applied Economic Research (NCAER), in the four states in South India (namely Karnataka, Kerala, Tamil Nadu and Andhra Pradesh), which is presently S3IDF's focus area, there are about 10 million households that remain unconnected to the electric grid. S3IDF's lighting initiative has currently benefited only thousands of people, but it aims to replicate its Social Merchant Bank approach on a far larger scale. With increased visibility and resources, S3IDF hopes to benefit many more in terms of direct users of the lighting services, owners/operators, different points along the supply chain, and non-governmental organization (NGOs).

S3IDF's lighting initiative effectively addresses lighting solutions for the poor such as:

- a) Micro-enterprises that are daily economies like vegetable/fruit/flower vendors etc requiring cost-effective and reliable lighting to replace typically used kerosene lanterns.
- b) Poor households requiring improved quality of light due to current unreliable grid electricity or with no access to grid electricity.
- c) Cottage/Home based industries owned by the poor - such as basket weavers, handloom weavers, cocoon rearing for silk production, tailors, home based pickle and jam units, etc. - who require focused lighting and/or lighting for extended hours.
- d) Migrant households requiring bare minimum lighting solutions. These are households living in temporary sheds, without land records and hence can never get access to grid electricity. These houses typically use indigenized wick lamps (naked flame) running on kerosene, which has risks of fire hazards. S3IDF provides lighting solution to them at a price equal or lower to their existing expenditure on lighting.
- e) Improving lighting supply chain by creating players like entrepreneurs and local NGOs to provide lighting solutions and services to the households and small enterprises in their market area.

Benefits for individuals / society / economy / environment:

S3IDF's lighting initiative is targeted towards delivering essential lighting and related services to poor households and small enterprises for improving the quality of life (e.g. allowing children to study in the evenings) and for income generation activities (hawkers, weavers, etc). The technologies used for providing lighting solutions are environmentally responsible such as Compact Fluorescent lights (CFL) and Light Emitting Diode (LED) lights which are powered by solar, biogas or grid-based Uninterrupted Power Supply (UPS) system. Also included under this initiative are projects (presently in pipeline) that utilize small-hydro and biomass technologies.

Mainstreaming

Effects of the project:

S3IDF is a partner driven organization. In all its lighting projects three or more of the following partners are involved: a) Entrepreneur or Community Based Organisation b) Local grass roots NGO c) Technology supplier d) Local Financial Institution and e) End user beneficiaries. Such a partnership approach helps in better understanding the end-beneficiaries' requirements, providing appropriate lighting solutions. It also ensures local servicing, and helps change the local financial institution's 'business-as-usual' mindset to include such pro-poor projects in their portfolio. In addition, each partner becomes a source for dissemination and eventual replication of such initiatives. S3IDF's lighting initiative has implicitly and explicitly targeted replacing kerosene usage for lighting. In India, kerosene is subsidized for the poor and the subsidy is borne by the oil companies and the government. The subsidy assisted by corruption has led to black markets where the subsidized kerosene is sold at commercial rates, and at times even higher-than-commercial rates. The lighting initiative undertaken by S3IDF helps both the government and the oil companies at this stage, albeit in a very miniscule manner, by reducing kerosene usage for lighting. The approach employed by S3IDF makes a case for both government and oil companies to adopt or support/promote such an approach. S3IDF is already in dialogue with one of the oil companies (Hindustan Petroleum Corporation Limited) to undertake such lighting initiatives. S3IDF's

social merchant bank approach is slowly gaining acceptance in the international arena as well, as is evident from the funding by REEEP (Renewable energy and Efficiency Program), the Energy Collaborative, and GVEP (Global Village Energy Program) to name a few. S3IDF's approach for providing lighting for micro-enterprises was also the only non-SHLS (Solar home lighting systems) model considered by the UNEP (United Nations Environment Program) under its interest subsidy program. As mentioned above, NGOs represent some of S3IDF's partners in implementing projects. The success of this initiative has led to increased NGO partnership, particularly in new geographic locations. S3IDF is also intermittently in dialogue with academic institutions, both in India and the United States, on newer technologies in the lighting sector (such as the recent dialogue with Amy Smith lab students who visited India to understand S3IDF projects and demonstrate some of the lighting products tested in their labs).

Impact:

Mainstreaming clean energy is an explicit primary role played by S3IDF in its lighting initiative and this is done by the following mechanisms: a) Creating lighting supply chains that provide appropriate lighting solutions ? identifying entrepreneurs and facilitating NGOs to provide lighting services to communities and small enterprises in a financially sustainable manner. b) Inducing local banks to finance such lighting projects for the poor, thus bringing a change in mindset that these projects can be bankable. Over time, with sufficient proof of concept, it is assumed that banks will readily finance such pro-poor projects without S3IDF's participation. c) Building business models around lighting services that create employment. These models are highly replicable, and do not necessarily need S3IDF's involvement. d) Encouraging use of modern energy by providing appropriate financial structuring such that clean energy is cost-effective for the poor and comparable to their current expenditure on lighting (such as usage of kerosene).

Sustainability:

As with all its projects, S3IDF ensures sustainability in its lighting initiative by: a) Financial sustainability of the project? a thorough willingness-to-pay and ability-to-pay survey is carried out and this information is then used for appropriate financial structuring. Business models are built around the service to ensure that the services can be paid for. Often, a local financial institution is involved so that future replications of similar projects can be done without S3IDF's participation. b) User acceptance of product - demonstration of different lighting solutions is carried out and appropriate products installed as per users' acceptability, for example, fixed concentrated lighting for particular types of occupation, or dispersed lighting for households, or mobile lighting products for use on farms, etc. c) Warranties and service agreements form an integral part of the project design to ensure efficient maintenance of the lighting products. Increasingly, local suppliers have been encouraged to be part of the supply chain to improve the servicing that rural and remote areas typically suffer from. d) The technology solution chosen is always the most cost effective and efficient solution depending on the natural resource available, thus making it environmentally responsible as well. All lighting projects implemented to date replace kerosene or Liquefied Petroleum Gas (LPG) usage.

Leverage

Leverage of the project:

Using solar, biogas and other renewable energy sources, in combination with energy-efficient lighting options to benefit the poor in rural areas of developing countries who don't have access to the electric grid or to a reliable source of power; could also be used in poor areas of urban communities. People can come to understand that clean energy is highly reliable (more so than conventional energy that they might have access to) and that it gives them more control over their decisions regarding energy needs, income generation, etc. The primary aim of this project is income generation for the poor - the first emphasis is on creating or advancing micro-enterprises; a secondary emphasis is on the environment and clean energy. But because income generation (along with health improvements, educational opportunities, etc.) are also priorities for the people being served, this is probably the right order of priorities to help mainstream the use of clean energy. Initially, such projects will likely be more helpful in rural areas than urban, but this model offers significant potential for the spread of clean energy, in rural and urban areas alike and throughout the developing world.

Files

[S3IDF_Social_Merchant_Bank_Approach.April07.ppt](#)