

TERI's campaign to provide clean energy for impoverished communities has attained global success due to its ingenuity and its cascading effects. People worldwide have benefitted from the Lighting a Billion Lives (LaBL) campaign initiated by TERI. The project is financially as well as technologically and operationally replicable, since it appeals to the universal needs of the rural communities and is based on a technology that harnesses the power of sun, a natural resource that is available in plenty all across the world. **Rajul Dube** documents.



Illuminating Rural India through

CLEAN ENERGY

Solar lantern ki roshni mein mere bacche chain se padh sakte hain", says Sushila, a resident of Nagpada village in Naupada district, Odisha. Child education is not the only significant change on the horizon of this village. Most of the villagers depend on bundling tendu leaves, an important component of the beedi manufacturing process, for their livelihood. The average beedi-maker earns around ₹ 1,500 per month, which is barely enough to keep her family fed through the year. The lack of electricity supply significantly cuts the productive hours employed in the tendu-bundling process. Most of the workers are forced to stop work after 6 pm as working under improper light strains their eyes. Kerosene lamps are hard to come by and when available, are expensive. Workers work after dusk, risking their eyesight in the process. The solar charging stations are a boon to many in their village. The rent of the solar lantern is much cheaper than the cost of a kerosene lamp. They increase productive man hours by 2 hours every day, increasing the average income to about ₹ 2,100 per household. Families come together after dinner in the glow of the solar lanterns, laughing and chattering away into the night while they bundle tendu leaves.

Sushila is not alone. Thousands of people around the globe have benefitted from the Lighting a Billion Lives (LaBL) campaign initiated by The Energy and Resources Institute (TERI), in its commitment towards global sustainable development. Till date the programme has reached more than two million people across India and globally, covering 22 Indian states and 2,549 villages in rural India, thereby generating 2,500 green jobs and establishing 131 energy enterprises in association with 114 partner organizations. The campaign has been instrumental in lighting up the lives of households by disseminating around over 1,27,080 solar lanterns, setting up over 10,580 solar micro-grid connections and 7,440 integrated domestic energy systems at the grassroots.

Owing to the programme's collaborative approach and partnerships — with around 87 corporates, 91 individual donors, 125 multi-bi-lateral organizations, 131 central-state government and public sector undertakings, and 147 other sponsors — LaBL has not only become a torchbearer for solar power, but engendered clean energy access for impoverished communities. The initiative has now spread to countries, such as Afghanistan, Sierra Leone, Kenya, Uganda, Ethiopia, Mozambique, and Myanmar.

The campaign compliments the efforts of Jawaharlal Nehru National Solar Mission (JNNSM), Remote Village Electrification (RVE) Programme, Rajiv Gandhi Gramin

Vidhyutikaran Yagna (RGGVY), and the expansion of off-grid/partial grid energy access. Its partners include local and state governments, government agencies and ministries, multilateral agencies, private sector institutions, and multi-national corporates across India.

BRIGHT BEGINNINGS

Initiated in 2007 at the 'Clinton Global Initiative', the LaBL campaign was identified as a pioneering effort towards sustainability globally. The problem of energy access requires innovative solutions encompassing issues of technology, finance, institutional capabilities, and fiscal policy. In response to this problem, LaBL campaign was inaugurated in 2008 by Dr Manmohan Singh, Prime Minister of India, during the Delhi Sustainable Development Summit (DSDS). The system comprises a congenial Public–Private–People participatory approach at the grass roots levels, where technologies such as Solar Charging Stations (SCS)/Solar Micro Grids (SMG) are set up in prioritized areas, aimed at providing affordable and accessible lighting solutions to communities in need.

The high upfront cost of the clean technologies coupled with low income of the rural households to adopt such technologies has been addressed through the campaign's replicable business models for disseminating solar technology. Improved lighting has provided more opportunities for enhancing the local economy. With adequate money flow to the rural households, people are willing to spend a part of their incremental income to pay for the services.

The campaign employs an entrepreneurial model. A local entrepreneur trained by TERI and its partner organizations provides clean energy access to the community at an affordable fee. The technology (reliable, light in weight, robust, and energy efficient) and service delivery is ensured by the cluster level Energy Entrepreneurs who work closely with Village Level Entrepreneurs (VLEs) who own and operate energy service delivery options, such as solar micro-grids and solar lantern charging stations. VLEs majorly comprise women having low social and economic stature. As a result, they have become independent and gained confidence among their fellow villagers. In addition, many women have shown excellent entrepreneurship skills since becoming VLEs.

The initiative has contributed to the development of several first-of-its kind features, such as implementing solar charging stations on a large scale, introducing and promoting LED lanterns, creating village-level distribution network of solar enterprises, engaging self-help groups, and creating after-sales service network in villages through Energy Enterprises. LaBL has helped in extending the mobile phone charging facility through solar charging stations. It has also designed and developed an online Project Management System, which has facilitated end-to-end mapping, starting from identification of villages to its post-implementation monitoring. At the national policy level, the initiative has been appreciated by the central and the state governments. The delivery model of the initiative has been adopted to provide basic lighting needs in LWE-affected districts and to enhance access to clean energy in energy-impooverished regions of the country.

To support sustainability of rural energy projects, LaBL employs a network of local-level institutions, thus facilitating micro-implementation of project deliverables, training and capacity building, and ensuring after-sales services. Energy Enterprises (UttamUrja Shops), launched by TERI, is a local-level enterprise that caters to after-sales service support to LaBL solar charging stations (SCSs) and is also authorized to market and sell TERI-approved clean energy products, such as solar lights and improved cook-stoves in a specified area. EE also assists in creating local capacities of rural youth for the execution of other energy access projects in the area. Currently, the United Kingdom's Department for International Development (DFID) is supporting TERI in establishing more than 400 such enterprises across the country.



REC FINDS ITSELF VERY PROUD BECAUSE IT HAS DIRECTED ITS CSR FUNDS TO RAJGARH DISTRICT OF MADHYA PRADESH THROUGH TERI TO MAKE SOLAR LANTERNS AVAILABLE. THESE ARE NOT ONLY USED FOR PROVIDING LIGHTING TO THE VILLAGE COMMUNITY, BUT HAVE ALSO RESULTED IN WOMEN EMPOWERMENT. WE ARE VERY PROUD TO BE ASSOCIATED WITH TERI AND WILL PROVIDE OUR SUPPORT EVEN IN THE FUTURE.

**Mr Rajeev Sharma,
Chief Managing Director,
Rural Electrification
Corporation**

 SOLAR LANTERNS PROVIDE ENOUGH LIGHT TO LIGHT UP THE ROOM OF A RURAL HOUSEHOLD FAR FROM THE GRID. BUT, WHEN THESE SOLAR LANTERNS ARE SOMEHOW LINKED WITH EMPLOYMENT-GENERATION ACTIVITIES AND THEREBY INCREASE THE EARNINGS OF THE RURAL HOUSEHOLDS, IT LIGHTS UP THEIR LIVES. THIS REALLY MAKES A DIFFERENCE IN ENHANCING THE QUALITY OF LIFE MANYFOLD.

Mrinal K Chaudhury
Additional Director,
Assam Energy Development
Agency (AEDA), Guwahati



While LaBL raises funds for various project activities, such as hardware procurement, training, project-planning, monitoring, maintenance and communication, the cost of day-to-day operations and maintenance is borne by the daily rental fee collected by the entrepreneur from the users. LaBL has shown how partnerships with public and private enterprises can support developmental schemes and initiatives, particularly in the area of rural energy access. To finance the campaign, TERI moved from the initial grant-based model to an entrepreneurial fee-for-service delivery approach, and finally to a more flexible equity and investment-based model. This process has helped address two key challenges: outreach and sustainability. LaBL offers financial viability to attract equity along with technology customization and an effective monitoring mechanism.

UNQUALIFIED SUCCESS

In 2013, TERI received the Project Management Institute's (PMI) Project of Year (2013) award in the NGO category. The award specifically recognized TERI's work and contribution towards society under the LaBL initiative. PMI took into account LaBL's model in terms of project processes and last mile delivery, which are strategically carried out to effectively provide clean lighting solutions to rural communities across selected states in India. Over the years the campaign has received many prestigious awards, such as Nasscom Innovation Awards 2011 under the social innovation category, CXO Award 2011 under the best IT initiative for social change, etc.

There are numerous examples where the campaign has impacted thousands of lives. While corporates and PSUs have utilized their CSR funds for the same, TERI is ensuring that the campaign, for long-term sustainability, has a high level ownership, with the aim of empowering communities to be informed, self-reliant, and able to manage their resources independently. TERI has successfully mobilized resources for villagers and has created market based solutions in these villages, hence breaking the myth that CSR is just an 'investment strategy' devised to build an image, cultivate stakeholders, and eventually push business. TERI's LaBL programme showcases that strategy for developing a partnership and advocacy with the business sector must be carried out through evoking compassion, consideration, and commitment as a good corporate citizen.

The journey towards lighting a billion lives, over the last six years, has been about using 'light' as a catalyst to spread a billion smiles. The access to modern energy services has helped in reducing poverty, providing health, environment, and economic opportunity and social equality. Massive efforts will continue to expand the range, quality, and quantity of energy services available to the poor, thereby empowering countries to achieve their developmental aspirations. **AU**

*Rajul Dube is a part of the Social Transformation division at The Energy and Resources Institute (TERI).
E-mail: Rajul.Dube <Rajul.Dube@teri.res.in>*