



CONCEPT PAPER

Lighting a Million Lives PROJECT





Buksh Foundation along with *TERI* India, has initiated 'Lighting a Million Lives' Project which aims to enable energy impoverished communities across the country to access clean and reliable sources of lighting through solar technologies to improve their quality of life. A female micro entrepreneur will be selected from each village where a solar charging station of 50 lanterns will be set up for her. She will then either rent out these solar lanterns every evening at a very affordable cost or will sell them to individual households as per the need arises. This will not only help fulfill the energy needs of the entire village but will also create a permanent source of income for the entrepreneur. By illuminating various villages, *TERI* aims to complete its project of lighting up the lives of a billion people.

Through this initiative, millions of people would be able to enjoy the basic facility of clean, healthy and adequate light in their homes without any pollution emission at a very low cost. In addition, it would generate permanent sources of income for the entrepreneurs.



BACKGROUND

Over View of Pakistan Energy Conditions:

Pakistan's **196.7M** (2014) population is currently in the midst of an escalating energy (**5,500 MW**) National Energy deficits crisis resulting from inadequate power generation and distribution capacity relative to its rapidly growing demand.



<1%

of the electric demand is currently supplied through renewable energy resources.



49 PERCENT

of the population living in multi-dimensional poverty
Marginalized people hardly earn \$2/ day



70 PERCENT

of the population living in 50,000 villages are detached from the national grid and have no access to electricity.



7% ECONOMIC GROWTH RATE

To meet this target annually energy deficit is expected to exacerbate to 46% by 2015 and 64% by 2025.
(Planning Commission's Medium Term Development Framework 2005-2010)



Female POPULATION

Mostly falls below the poverty line, is illiterate and malnourished. unemployment rate 2014 has been recorded as 6% with women unemployment at 9%



2.8% & 3.6%

rural inhabitants expenditure on kerosene and on cow dung.
Increase in greenhouse gas emissions that cause global warming

A close-up photograph of a woman with dark hair, wearing a green headscarf, smiling warmly. She is holding a solar lantern that is illuminated, casting a bright light. The background is dark, making the light from the lantern stand out. In the top left corner, there is a vertical bar with a yellow top half and a red bottom half.

PROPOSED SOLUTION

Buksh Foundation initiated the project 'Lighting a Million Lives' in partnership with TERI (India) to provide solar energy access to rural, un-electrified villages of Pakistan. LAML is the foundation's first impact project in the developmental sector that aims to provide 360-degree turnkey solutions to un-electrified 57% of the population of Pakistan, vulnerable conditions of women and the poor quality of life in the poverty-stricken off-grid villages.

LAML brought access to energy to off-grid communities struck with absolute poverty in an innovative turnkey approach—establishing Solar Charging Stations (SCS) with 50 Solar lanterns, creating a social enterprise led by a female entrepreneur (Light Lady) given technical and non-technical trainings to run SCS along with 2 technical agents. Light Lady retains 2/3rd of the rental income as her remuneration while the remaining goes to Monitoring and After-sales fund.

Certified by the UN Foundation & IFC, LAML has proven to be a successful model of change in Pakistan after its immense success in India over the last decade. LAML provided a turnkey approach to address multiple issues in a unique multi-tier impact sustainable energy model with a great potential for scalability.



OBJECTIVES OF LaML



- **WOMEN EMPOWERMENT**
- **HIGH LITERACY RATE**
- **HEALTH BENEFITS**
- **ENTREPRENEURSHIP**
- **WILD LIFE CONSERVATION**
- **RENEWABLE, SUSTAINABLE AND RELIABLE ENERGY PROVISION**
- **GREEN ENVIRONMENT**
- **INCREASED EFFICIENCY AND PRODUCTIVITY**
- **GOODWILL FOR DONORS**
- **SAFETY- DECREASE IN THEFT, VIOLENCE, RAPE CASES AND ASSAULT**
- **IMPROVED PAKISTAN INDIA RELATIONSHIP**
- **INCREASE IN DISPOSABLE INCOME**
- **INCREASE IN LITERACY RATE AND QUALITY OF EDUCATION**
- **MENTAL PEACE**
- **REHABILITATION OF AFFECTED AREAS**
- **WILDLIFE CONSERVATION**
- **AWARENESS ON WATER SANITATION AND HYGIENE**
- **NIGHT CROPPING- BOOST IN AGRICULTURE SECTOR**
- **GLOBAL IMPACT- CREATING LINKAGE BETWEEN VARIOUS DONORS**
- **TRANSPARENCY**
- **BETTER COMMUNICATION**

LAML TURNKEY PROJECT

WORK FLOW

1- Selection of Area

- Current source of energy and poverty level
- Acceptance of the population
- Need capacity for solar energy

2- Community Mobilization

- Create awareness amongst local community
- Grant ownership to the community
- Take elders consent
- Distribute entrepreneurial selection forms

3- Electrical Feasibility Plan created

- Feasibility plans are created
- Local conditions are considered
- Procurement is done

4- Female entrepreneur selected based on psychometric analysis

- Preference given to disable and impoverished women
- Selection based on reputation, honesty, leadership skills etc
- After selection detailed technical and non technical training is imparted

5- Selection of Technical Enterprise

- Preference given to female entrepreneurs husband/brother/relative
- Complete technical training is imparted

6- Technical & Non-Technical Trainings

- Detailed trainings of Roshna Bibi on financial literacy, renewable energy, community empowerment etc.
- Technical trainings for field technician
- Brief community trainings / male members of community

7- Setting of Solar charging Station

- Installed in female entrepreneurs house
- Solar charging unit of 50 lanterns, 5 solar panels, 5 junction boxes

8- Rental of Solar Lanterns

- Each solar lantern is rented at PKR 4/day
- Half amount kept as light ladies income and half kept for after sales service

9- Ongoing support and after sales

- Quarterly visits to the village to keep project sustainable
- Consistent support to female entrepreneurs-technical and non technical

10- Post Implementation Donor PR Campaign

- Customized marketing to incentivize every donors CSR mandate
- Accessing diverse donors to catalyze investments

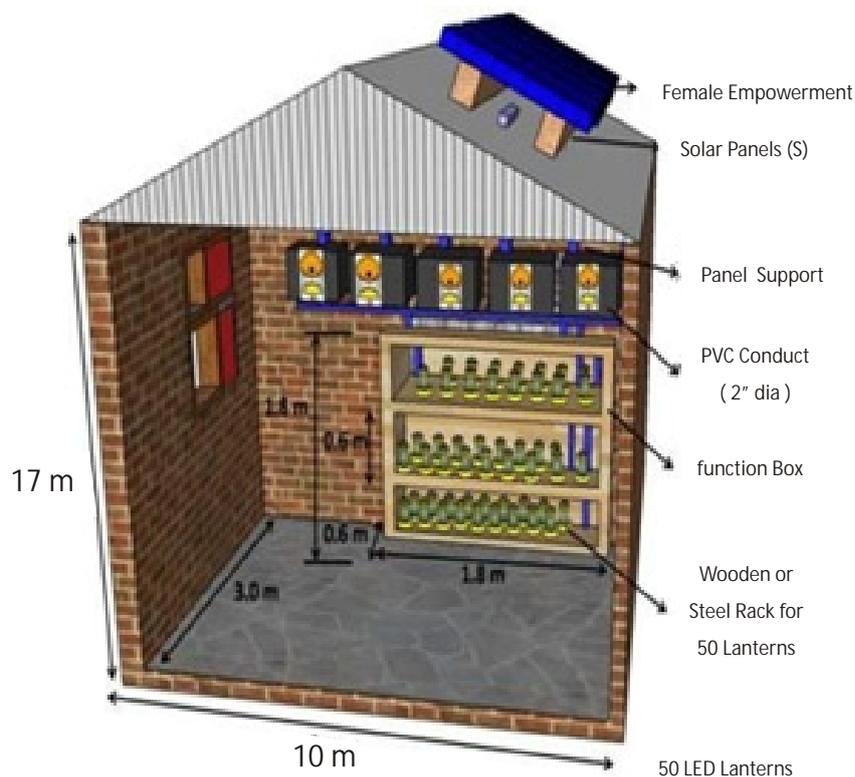
LaML MODEL & PRODUCT

Buksh foundation aims to light up the lives of a million people in Pakistan (**LaML**). The project plans to reach out to **4,000 villages** with a total of **1 million lives lightened by 2017**.

TECHNICAL SPECIFICATIONS OF SOLAR LANTERN



| | |
|---------------------------|---|
| Light Source: | Super Bright White LED |
| Power Consumption: | 2.6W |
| Light Output (at 1 foot): | Horizontal - minimum 60 lux ; Vertical - minimum 128 lux |
| Run Time: | Minimum 5-6 hours at brighter mode and 7-8 hours at normal mode |
| Battery: | 6V/4.5Ah SMF Lead Acid Battery |
| Solar Module: | 3Wp |
| Features: | Three modes of brightness |
| Partner: | Solid Solar (Teri India) |
| Equivalence: | 40W incandescent bulb |



A TYPICAL SKETCH OF SOLAR CHARGING STATION (SCS)



LIGHTING A MILLION LIVES

Project Progress

Mar, 2013 - Dec, 2014



- 135 VILLAGES HAVE BEEN COVERED
- 13 DISTRICTS HAVE BEEN PENETRATED
- 135 FEMALE ENERGY ENTREPRENEURS HAVE BEEN CREATED
- 270 TECHNICAL ENTERPRISE HAVE BEEN CREATED
- 33,750 DIRECTLY IMPACTED LIVES
- 67,500 INDIRECTLY IMPACTED LIVES



BUKSH FOUNDATION
gateway to life

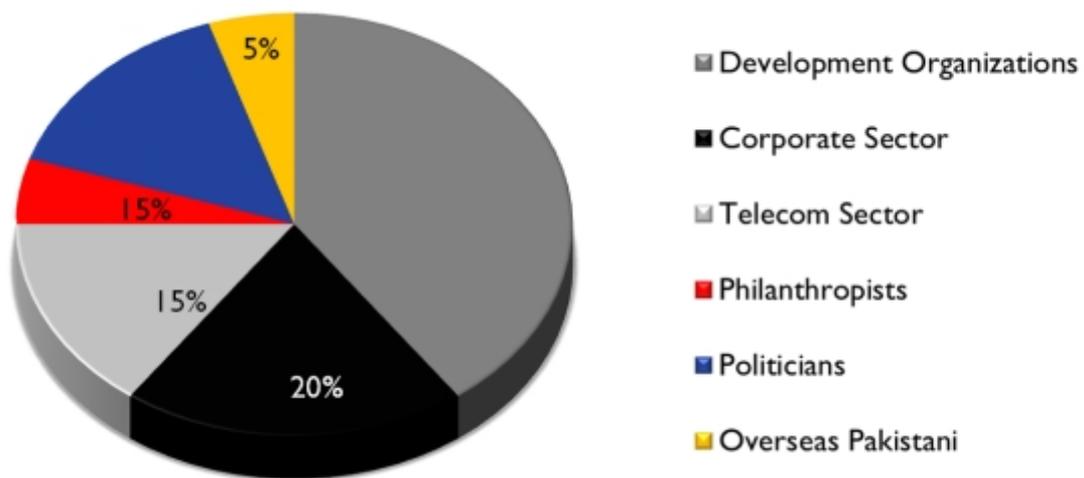
- **HEAD OFFICE**
- **LaML PROJECT AREAS**

INCENTIVES FOR DONORS

- Starting from the initial community mobilization whereby, Buksh team shall create awareness about the project amongst the local community and inform the community about the donor what they want to do for the community by this development project.
- Signing ceremony shall take place between Foundation and the donor- covered by all PR modes to showcase the partnership.
- The Roshna Bibi's house shall be branded with the donors logo/ brand name with a bill board.
- Documentaries, impact assessment reports and coffee table books shall be made by Foundations team to endorse the donor brand
- Foundation shall promote the donor on its forums and amongst all its international linkages.
- After the completion of the project an elaborated event shall be organized to display the impact donor has been able to create through this project for the community.



EXISTING DONORS



The sustainable CSR gains have encouraged Buksh Foundation to mobilize diversified stakeholders of the market by catalyzing investments in Pakistan while remaining intact with their own mandates.



IMPACT & ACHIEVEMENTS

Increased employment rate from **5% to 7 %.**

Savings rate has been increased from **8.5% to 11.7 %**

Increase in disposable income of beneficiaries from **6.7% to 7.5 %** which is leading toward better living standards

Medical emergencies can be catered by **100%**

Female entrepreneurs increase their **disposable income by 100% due to sustainable income generation** mechanism

Night cropping has increased leading to **5% to 7 %** improvement in fertility of land

Prevention of deforestation-Ensuring environmental stability by decreasing **1.5 tons of CO2** emission.

Crime rate (theft and rape) has reduced by **8% to 10 %** increasing night travel

Increase in productive hours from **3 to 4 hours** leading to augmented **productivity by a factor of 0.24% per year**

Infant mortality rate will go down from **6.3% to 5.7%** due to saved child birth rates at night

Increasing median years of education from **6.7 years to 8.5 years** which has **increased girls enrolment in school by 30%**



The project in its pilot phase plans to reach out to **12,500** individuals, with a total of **1 million lives lightened** by the end of 2017

43% of the population of Pakistan lives without access to electricity, of which **70%** individuals lives in rural areas in **50,000 villages**, completely detached from the national electricity grid.

By **2015**, the energy deficit will exacerbate to **46%** and by **2025**, it will rise to **64%**, leaving the entire population of **187 million** in darkness.

Each solar lantern in its life of 10 years replaces about **500-600 liters** of kerosene, mitigating about **1.5 tonnes of Co2**. With **1 million** lanterns we can reduce **1.5 millions tonnes of CO2** produce, save around **25 billion rupees**, and reduce oil imports by **6%** per year.

Conclusion



The scarcity of energy services, especially in poor rural and urban areas of developing economies, contributes to serious social and economic impacts- to overcome this demonstrated innovative solutions are required that can address the global change in climate, energy security, energy access and economic development. We feel our project can significantly bring change from the grass root level and resolve these issues by fostering a community that encourages sustainable energy innovation amongst current and future generations.

Therefore, every contribution matters and can restore hope in lives of millions of people in Pakistan.

One Solar Lantern at a Time,
One Village at a Time
And Together we can...

Lighting a Million Lives!





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