

## **Regions, Cities and Energy transition**





World Forum for a Responsible Economy Lille, 16<sup>th</sup> October 2018



### **ABOUT THE ORGANISATION**





### **AREA OF WORK**



Access

Model Villages

**Renewable Energy** 

Setting up Solar Powered

technology and Financing

solar

Incubating innovative

.

- Intitiatives





Livelihood

- **FPO** Promotion ٠
- Organic Agri Ecosystem Development



Skilling

- Government / CSR ٠ sponsored Skill Trainings
- Imparting Employable Skills ٠



Wellbeing

- After School Program ٠
- Urban Issues Mobility and ٠ Air Quality

















# **KEY FOCUS AREA**



# THE ENERGY PROBLEM



**Unreliable and unaffordable energy for farmers** – Agriculture is largest source of livelihood in India, accounting for 70% of livelihood in rural villages. In most states, farmers only receive between 4-7 hours of electricity per day for their agricultural pumps, causing 55% of cultivable land in India to be dependent on rain. There is a need to get reliable electricity access to farmers, especially those in off-grid villages.

-ò-			
L.			

**Demand for renewable energy** – About 75% of India's electricity generation comes from fossil fuels and India is expected to account for 18% of the rise in global energy consumption by 2035. India also faces an overall power deficit of 0.7% across the country in 2017-18. There is a need for alternative sources of electrical energy to reduce reliance on grid electricity and environmentally harmful fossil fuel.



**Lack of access to energy for rural communities** - India currently reports 99.4% electrification rate yet there are 304 million people in India, especially in off-grid communities, who still lack access to electricity. There is a need for a viable way to enable rural electrification and reach out to off-grid communities.

# **MARKET OPPORTUNITY**

#### Market Gap for Solar Solutions

•India' s energy consumption is projected to grow the fastest among all major economies by 2035, overtaking China as the largest growth market for energy in volume terms by 2030.

•Agriculture accounts for 20% of India's total electricity consumption. There is a huge market for solar irrigation pumps following India's drive to replace over 30 million diesel pumps with solar pumps.



#### Strong Market Growth

• The rooftop solar market in India is one of the fastest growing energy sector, expanding at a compound annual growth rate (CAGR) of 98% in the last four years, reaching a total capacity of 1,020 MW as of end-September 2016.

Total capacity expected to reach 12.7 GW by 2021.

#### Strong Government Support

- The India government is actively pushing for the renewable energy of India, both for industrial purposes and for rural communities.
- The Indian government is offering several tax and financial incentives to support the rooftop solar market. E.g Kisan Urja Suraksha Evam Utthaan Mahaabhiyan (KUSUM) scheme and 24x7 initiative.

#### Lower Cost of Adopting Solar Systems

 Rooftop solar energy is cheaper than commercial and industrial power in all major Indian states in a report released by BNEF.

• There is huge cost incentives for industrial rooftop projects and related off-grid solar projects. Previously it would had taken 7 or more years to pay off solar solution investments, now investments pay off between 3-5 years.



# THE SOLUTION

#### Solar irrigation pumps

 Solar powered pumps to replace costly diesel pump and give farmers the ability to water crops beyond the 4-7 hours



#### Solar rooftop solutions

• Clean alternative source of energy taking advantage of India's high solar insolation and growing consumer base density

### **Rural lighting solutions**

• Simple innovative solar solutions to replace kerosene lamps and provide lighting in off-grid communities



# **INNOVATIVE SOLAR PUMP FINANCING**









# **\*\*\***

1000+

Electrification, Organic Farming, Skilling



### 5000+

Youth, Women, Farmers



Villages Covered



4000+

Enterprises / Livelihoods

Entrepreneurs or Enterprises covered.







### ENVIRONMENT CONSERVATION SOCIETY (SWITCH ON)

info@SwitchON.org.in

# **ON-Powering Opportunities**