



State of Energy Access in India

Towards Energy Access in India: The Role of End-user Engagement around Quality Lighting Solutions

29th March 2016



ENERGY ACCESS
PRACTITIONER NETWORK



Energy Access Practitioner Network (EAPN)

GOALS:

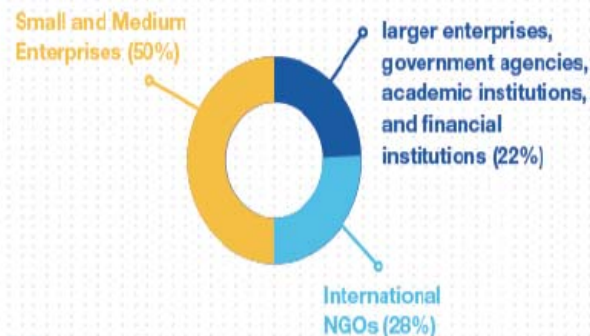
- PROMOTE NEW TECHNOLOGIES AND INNOVATIVE FINANCIAL & BUSINESS MODELS,
- PROVIDE A PLATFORM TO CONVENE AND CONNECT A RANGE OF STAKEHOLDERS AROUND NEW PARTNERSHIPS,
- FACILITATE THE DEVELOPMENT AND ADOPTION OF QUALITY STANDARDS.

AT A GLANCE

- The Practitioner Network supports primarily market-led decentralized energy applications towards

ACHIEVING UNIVERSAL ENERGY ACCESS BY 2030.

- **OVER 2,000 MEMBERS, BASED IN 85 COUNTRIES AND OPERATING IN 170 COUNTRIES.**



○ VALUE

Members value the Practitioner Network for: information sharing, peer-to-peer learning, networking opportunities, connecting access to finance, enabling partnerships and increased visibility.



Statistics based on responses from the UN Foundation's 2014 annual survey: "Growing the Network: Building Impact"

Clean Energy Access Network (CLEAN)

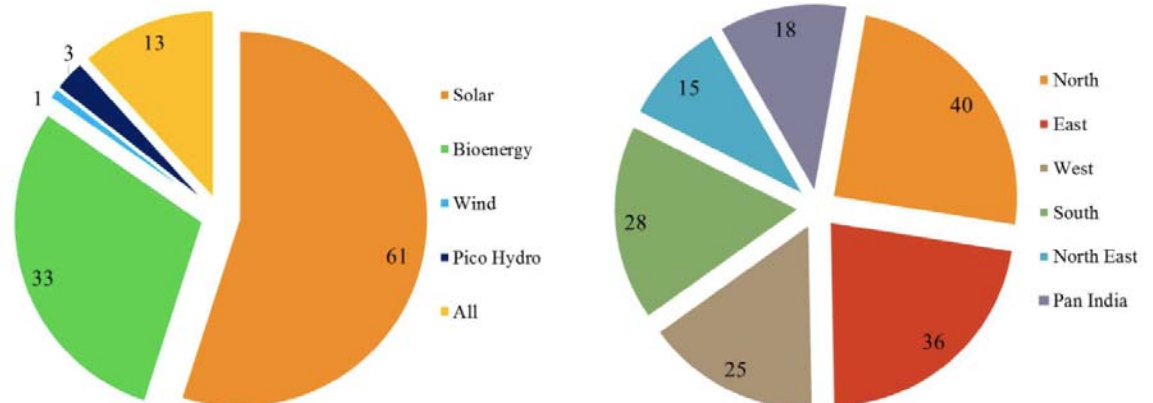
CLEAN is a technology agnostic, member-driven network of energy enterprises/practitioners in the off-grid clean energy space in India. CLEAN aims to support, unify and grow the decentralized clean energy sector in India.

Focus Areas

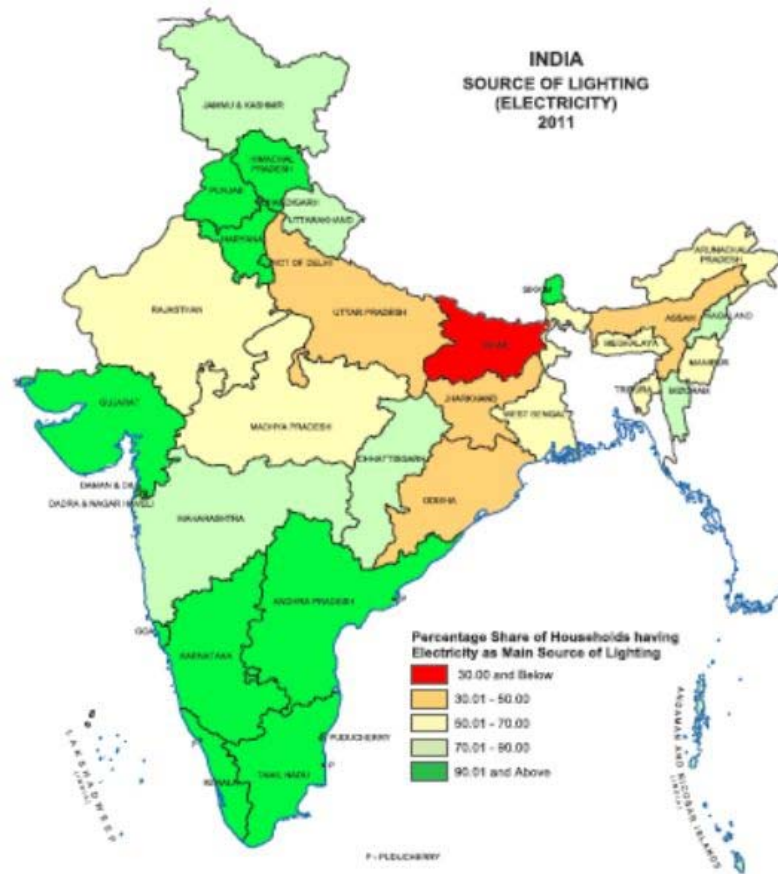
- Information & Networking
- Skills & Capacity Building
- Technology Standards and R&D
- Access to Finance
- Policy Advocacy

In little over a year of operation, CLEAN is already being recognized as the go-to entity in the energy access space in India.

CLEAN has 91 members as of March 2016 with representation across the various off-grid technologies/solutions as well as geographical regions across India.



Access to Electricity – Census 2011



Nearly 33% of the population do not have access to electricity; dependent on kerosene as their primary source of lighting

Lighting/Electrification Market

	Lighting Products	Home Lighting Systems	Mini-grids (Lighting)	Mini-grids (Electrification)
Configuration	LED/CFL Lanterns (1 – 5 W)	<ul style="list-style-type: none"> • 10 – 100 W DC • < 1 kW AC 	200 W DC; connected to 40 h/h within 100 m radius	kW scale DC/AC; connected to 50 – 400 h/h
Service	Lighting + Mobile charging	Lighting + Mobile charging + Entertainment	Lighting + Mobile charging	Lighting + Mobile charging + Entertainment + Productive end-use
Buss. Model	Cash sales; MFI loans	Asset financing through rural banks; PAYG	Entrepreneur driven fee for service model	
Stage of Market	Growth	Growth (boost from the NSM)	Nascent	Nascent
Market Drivers	Non-subsidy market	Partial subsidy (40% on benchmark cost)	Subsidy & Non-subsidy models	Requires significant subsidy

Recent Policy Developments

- 100% village electrification by May 2018
- Key driver for the overall solar PV market in India - revised targets under the National Solar Mission (100 GW, including 40 GW of rooftop solar)
- Off-grid PV Lighting Scheme (LED Systems upto 300 W)
 - < 40 W – Rs. 160/Wp subsidy
 - > 40 W – Rs. 100/Wp subsidy
 - Total Annual subsidy budget – Rs. 1 billion (~ \$ 15 M)
- Framework for promoting private investment in mini-grids under development
 - Principles of interconnection/operation when the grid arrives
 - Principles of exit/compensation for stranded assets when grid arrives
- Uttar Pradesh has recently announced a mini-grid policy and draft regulations

Market Status & Key Barriers

- Market Status
 - 2 million solar lanterns and 1 million SHS upto 2013 (IFC estimates)
 - ~ 500,000 SHS through the subsidy program between 2011 – 2015 (MNRE)
 - 2.92 million lighting products sold between January 2014 – July 2015 (GOGLA)
- Key Barriers
 - Lack of a level playing field – kerosene subsidies
 - Non-market based distribution/state programs
 - Lack of standards/quality assurance
 - Competition from cheap & non-standard imports in a price conscious market

Thank you!

CLEAN

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CLEAN Resource Partners



CLEAN Charter Members

