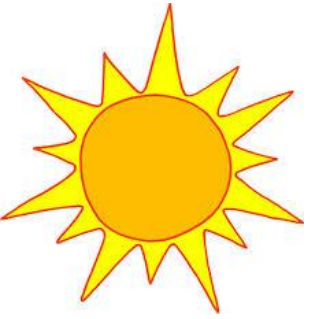


Solution for Bangalore Traffic



An inclusive strategy to trigger solar technology market: Case studies of rural distribution models from Ethiopia

Arvind Garimella (arvind.garimella@teri.res.in)

Debajit Palit (debajitp@teri.res.in)

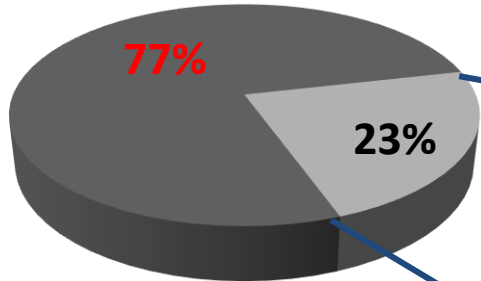
Rita Effah (rita.effah@teri.res.in)

Etsub Assefa (etsuba@hoarec.org)

Background

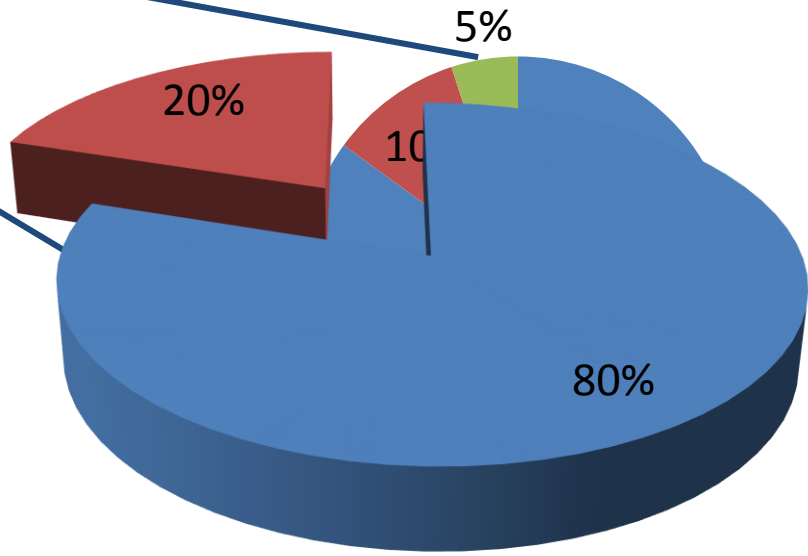
Electricity Access in Ethiopia

■ Unelectrified ■ Electrified



Ethiopia Population Distribution Distribution of Electrified Population

■ Rural ■ Urban ■ Rural ■ Others



Barriers to Off-Grid Energy Access

Solar PV Market Potential

52MW

Results Based Financing

Affordability

Accessibility

Awareness

Standards in quality and Consumer Understanding

Lack of technical financial and marketing capacities at regional and local level

Government Regulations

DFID-TERI Africa

The DFID-TERI Partnership Project is a collaborative action research, aiming to pilot scalable business models for provision of clean cooking and lighting solutions for poor households in Africa, especially in Kenya and Ethiopia. This is being achieved through;

- **Review of existing technological solutions and delivery models** and identification of barriers to the promotion of clean energy (lighting& cooking) options in sub-Saharan Africa;
- **Sharing lessons and best practices** from the Indian context in the area of policy, regulation, financing, technology and delivery models; and
- **Demonstration of the techno-social viability of the decentralized cooking and solar home lighting applications** through innovative business models and financing options to bring improved quality of life to the rural households in the region.

Study

Objective

- Evaluate the potential of incentive based strategy in triggering the solar lighting technology market in the early stage of development towards inclusive market activation through development of the rural distribution channel.

Question

- In an underdeveloped and non-inclusive market does incentive based sales model at the top and bottom level of the supply chain trigger better market activation?

Project Incentive: (TERI-DFID)

- In order to trigger an early development stage market, an incentive of US\$ 10.63-15.2 or 40% of product, whichever is lower, is provided to the national level distributor as an output based aid on reproduction of receipt of sale by the distribution channel partners (suppliers/retailers etc.).

Methodology

Case study based approach

- A primary survey of the end users and MSEs has been done in Arsi Negelle, Ziway, Butajira and Woredas (i.e districts);
- Interviews with: National level distributors such as Lydetco PLC, Rensys Engineering PLC, Solar Woman, Sunlight Electrical Engineering and Solar Energy Foundation and the local NGO partners who support the last mile MSEs

Distribution Channel

- Inputs: finance/incentive, training, physical product, human and institutional resources;
- Outputs: sales, partnerships, marketing & awareness activities, financial products, training and marketing material

Incentive Based Market Trigger

SME (Ethiopia)

- Wholesale price to last mile SME
- Products on credit to SME
- Training on technical aspects
- Training on marketing and promotion

National Level Distributor (Ethiopia)

- Scaling up in to new areas.
- Product feedback and customization
- Introducing new products through opinion leader channel

End User (s)

Marketing

Models

Capacity building

Marketing

Sharing incentive

- Training and capacitation of staff
- Installment purchase

Cooperative (s)

- Vernacular customized marketing
- Market day sales

Energy Bureau

- Sharing incentive with cooperatives.

Farmer (s)

- Deposit and order marketing.
- Training to last mile SME on technical and marketing.

Farmer (s)

- Village level of distribution to introduce products and customize products to user needs.
- Cross selling products.

End user (s)

- Private enterprises
- Credit sale to last mile SME network expansion in the form of village level agents
- Whole sale price offered to SME.

Represents distribution channel player

Represents input and direction of input

This is the opinion leader channel.

Sustainability

Barriers

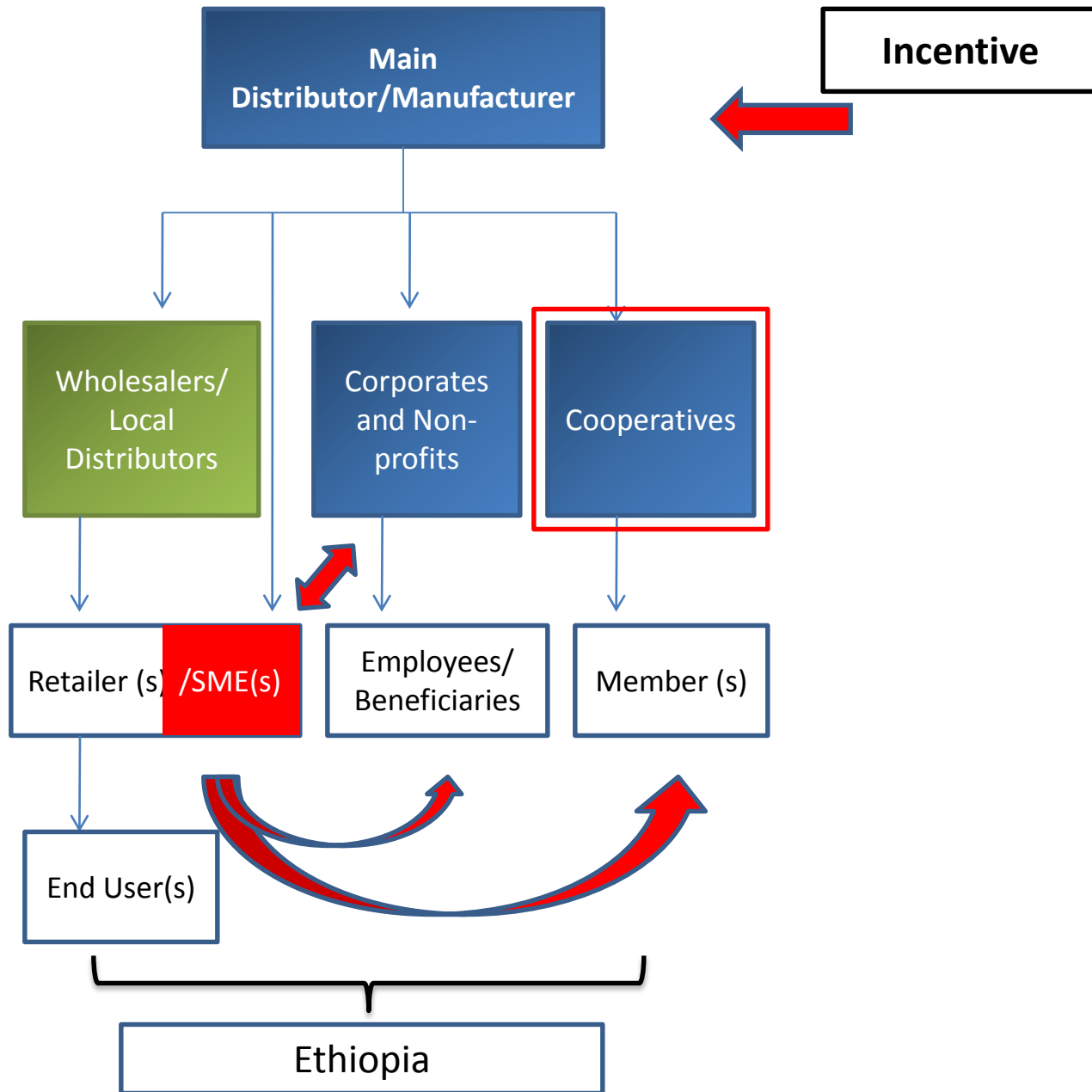
- Affordability
- Price of solar lighting technology
- Accessibility
- Awareness (Product & Quality)
- Lack of technical financial and marketing
- Capacities at regional and local level
- Government Regulation

Tools of Sustainability

- Financial Products
- Bulk Orders for MSE
- CBO Strengthening
- Market Intelligence
- Institutional Partnerships
- Localized Marketing Campaigns
- Training to MSEs
- Product Customization
- Energy Bureau Officer network

Triggering an Underdeveloped Solar Lighting Market

Thank You



Sustainability

Financial
Products

Solar PV Market Potential
52MW

Bulk Orders

Affordability

CBO Strengthening

Price of solar lighting technology

Market Intelligence

Accessibility

Institutional Partnerships

Marketing Campaigns

Awareness

Training to MSEs

Lack of technical financial and marketing capacities at regional and local level

Product Customization

**Engagement of
Energy Bureau
Officer**

Government Regulations