

# LIGHTING AFGHANISTAN

*CATALYZING MARKETS FOR MODERN OFF-GRID ENERGY*



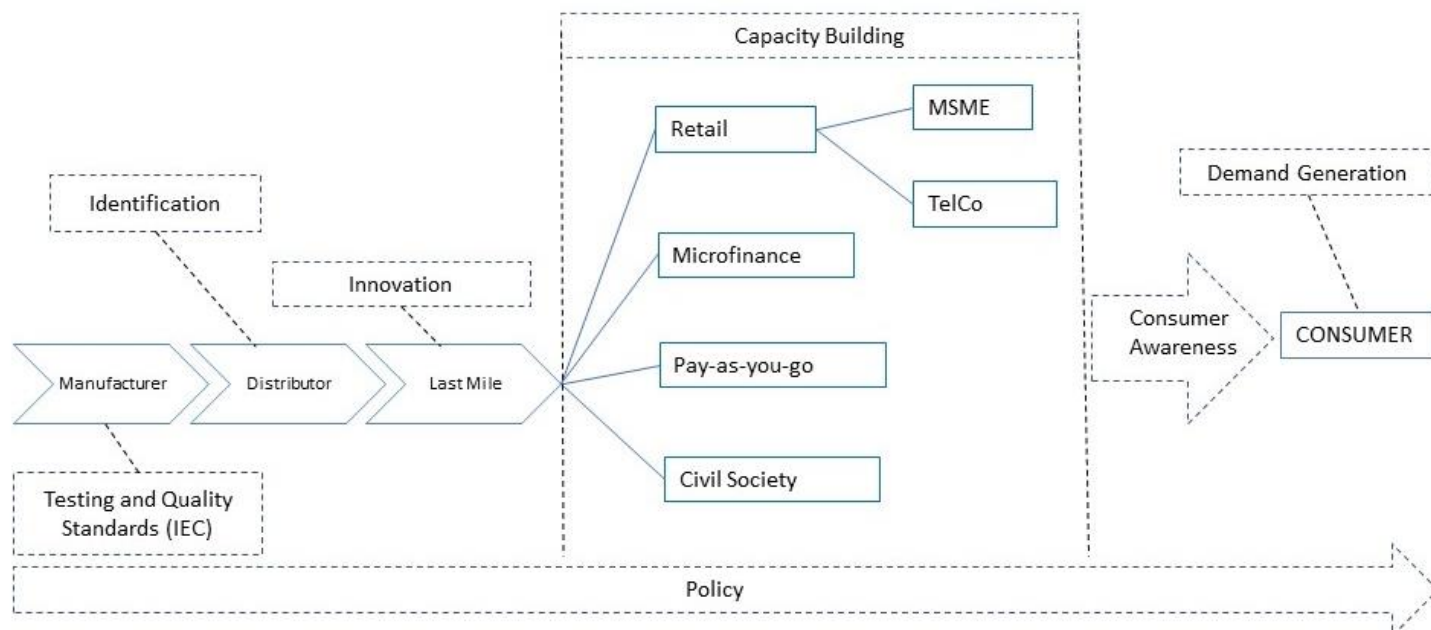
*Creating Markets, Creating Opportunities*



December 16, 2018

# Lighting Global: Toolkit and Impact

Toolkit
Quality Assurance
Market Intelligence
Business Development
Consumer Awareness
Capacity Building



## Overall Impact

>131 million	People have <b>benefited from using Lighting Global quality verified solar lighting products</b> (as of June 2017)
>39.5 million	People have had their basic lighting needs met by Lighting Global quality verified solar lighting products (as of June 2017)
>8.5 million	People in the last 6 months have had their <b>basic lighting needs met</b> by Lighting Global quality verified solar lighting products
>26 million	<b>Lighting Global quality verified solar lighting products have been sold since 2008</b>
>1.75 million	Tons of GHGs avoided annually; CO <sub>2</sub> -equivalent of taking 375,000 cars off the road for a year, as a result of replacing kerosene use with Lighting Global quality verified solar lighting products
>75	Countries in Africa, Asia, Latin America, the Caribbean, and the Pacific are where you can find LG quality verified solar lighting products

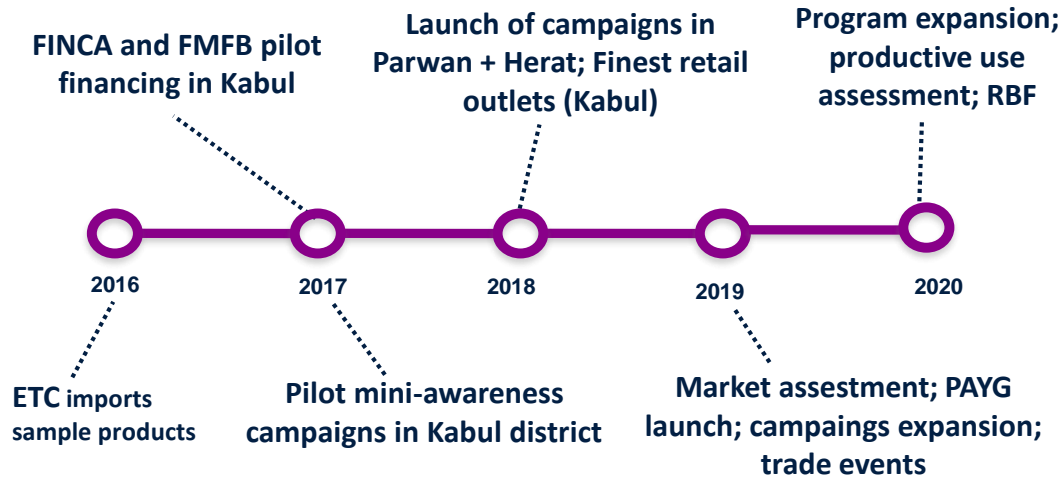
# Climbing the energy ladder



	Pico-powered Lighting Sys.	Solar Home System	Micro / Mini-Grid	Regional Grid
<b>Scale (~Watts)</b>	1 – 10	10 – 200's	100's – 1000's	10 <sup>6</sup> - 10 <sup>11</sup>
<b>Topology</b>	DC Only	DC – some AC	Mostly AC	Nearly all AC
<b>Loads</b>	Lighting and Phone Charging		Television and Fans	
			Range of Appliances	
			Industrial Power	
<b>SE4ALL Tiers</b>	1	2 to 3	1 to 5	4 to 5
	US\$ 10-120	US\$ 140-1000	Highly variable	Highly variable

# Lighting Afghanistan

**Program Budget: \$2.4M**



## Key Aspects

### Project Management

- Agile
- Modular

### Market Intelligence

- Third Party
- Ethnic Differences

### Business Development

- Private Sector
- WBG + GoA

### Consumer Awareness

- Below the Line
- Community Engagement

## Partners



## Core Team

Marco + Efrem





## **Market Intelligence**

**The objective of this study is to evaluate the potential to develop an energy access program exploiting renewable sources, focused on two market sectors:**

- a. solar lighting devices (solar lanterns and solar home systems, SHS)**
- b. solar water heaters (SWH) based on sound market intelligence**

**Process:**

- 1. Assessment of the supply side: current market structure and status**
  - Off-grid solar lighting and SHS providers (focus groups/key informants' interviews)**
  - SWH providers (focus groups/key informants' interviews)**
  - Financial institution active in the solar sector (focus groups/key informants' interviews)**

# Market Intelligence

## 2. Assessment of the consumer-side of the market for off-grid solar lighting (lanterns and SHS) and SWH (detailed market intelligence, quantitative data collection)

- Non-grid lighting uses
- Non-grid water heating uses
- Price points

Electrification rate	Province	Proportion of population	Suggested Sample size
Highest	Balkh	27%	432
	Kandahar	25%	400
Expected to grow	Badakhshan	19%	304
Connection to grid possible	Bamyan	9%	144
Off-grid solution	Faryab	20%	320
	TOT	100%	1600

## 3. Development of a Preliminary Concept Note

Thank you

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WBG - Samuel Hall Energy Access survey (2018)