

Assessing the Energy Access Space in Afghanistan and Developing an Energy Access Program

The program's overall objective is to encourage investment in the off-grid small-scale renewable energy technologies. The first phase focusses on the demand of Solar Home Systems and Solar Water Heaters. The program plans to expand in subsequent phases to other renewable energy solutions such as solar pumping, water purification systems etc. The target markets were urban, peri-urban and rural households and micro and small enterprises that were not connected to the central electricity grid, which need energy for services such as lighting, cell phone charging, powering fans, computers, TVs and small pumps and motors.

The objective of the study is to evaluate the potential to develop an energy access program exploiting renewable sources, focused on two market sectors: i) solar lighting devices (solar lanterns and solar home systems, SHS) and ii) solar water heaters (SWH) based on sound market intelligence. It includes development of an initial concept for a SHS program with the purpose of developing a functioning market for supply, after-sales service and financing of such systems for the electrification of off-grid areas in Afghanistan.

As a part of a larger component, Sambodhi has undertaken the task of assessing the consumer-side of market for off-grid solar lighting, Solar Home Systems (SHS) and Solar Water Heaters (SWH). The key indicators that will be captured under the study are demographic and socio-economic profile, current non-grid lighting and mobile phone charging practices, current non-grid water heating systems market, awareness and perception of solar systems, preferences and price points for solar (lighting and SWH) products, social or cultural factors influencing consumer perception, buying behaviour and usage patterns, usage of media, and demand and supply analysis, forecasting and overall market potential.

A cross-sectional study design will be adopted in the study. The sample will be spread across the rural and urban areas. A multi-stratified sampling approach will be followed to ensure representation from rural and urban areas. Households in the sampled areas will be covered under the study. A quantitative tool will be administered to the households to gather information on the above areas of enquiry. The qualitative interviews will be used to understand the "hows" and "whys" related to the usage of the solar products.