

Low Cost Connection Assessment in Tanzania

From July 2017 to March 2018, SRUC partnered with government owned utility TANESCO to identify low-cost residential wiring alternatives for urban and peri-urban households that, while physically located within reach of existing distribution infrastructure, had yet to connect to the grid, including a comprehensive focus group effort to assess viability of solutions. This included a comprehensive focus group effort to assess viability of wiring solutions.

M&E Indicators

- EG.7.3-2 Number of people trained in technical energy fields supported by USG assistance – 61 people (17 Female, 44 Male)

With a goal to (i) understand the barriers faced by urban customers and (ii) recommend technology solutions and financing schemes that TANESCO could implement to increase connections, this assessment also:



Identified six low cost wiring configurations based on housing stock



Identified several financing options local financial markets would support

Cooperating Partners

- **USAID Tanzania** provided a \$354,000 buy-in for the work
- Collaborated with **Power Africa's** Pillar 2 On-Grid Connections Team for knowledge share



THE CHALLENGE

Despite the progress on connections, only around 9.5 million people out of the population of 50 million are currently connected to TANESCO's grid.

- Approximately **15 million people are physically located within the vicinity of the grid** (less than 1 km away) but are not yet connected.
- Many of the **unconnected customers are located in urban or peri-urban areas**, meaning the logistics of undertaking the physical connections should be relatively simple
- Customers cited challenges with **price and availability of wiring materials**, cost of electrical installations and inspections, and bureaucracy of connection application process.



APPROACH

To design a strategy for TANESCO to approach broad urban and peri-urban grid expansion:

- Reviewed **engineering, safety, and electrical codes** and standards documents
- Field visits in Dar es Salaam to document a **detailed understanding of current market conditions** and barriers to low-cost wiring options, and the range of the current wiring options available to customers
- Undertook 17 focus groups and captured **data from 206 connected and unconnected households across four regions** to gauge the appetite for new low-cost connection options
- Developed LCCA reports and LCCA workshops to **communicate findings**



RESULTS & FOLLOW-ON

Upon conducting the Low Cost Connection Assessment, the team was able to develop and deliver key findings:

- Developed Low Cost Connectivity Dashboard, a dynamic tool that presented the final six low-cost configurations, necessary materials and labor, and prices the alternatives
- Developed a Leading Practices Review, a detailed review of the focus group data and conclusions and a targeted literature review of other connection programs
- Delivered Tanzania Low-Cost Connection Assessment Workshop, to socialize the low-cost wiring solutions and focus group findings and design pilot



OUR WORK