Between July 2018 and May 2019, SRUC supported Electricidade de Moçambique (EdM) to develop and deploy its first holistic customer engagement strategy for its distribution department, “EdM com a Comunidade,” which will help move the company towards its goals of increasing the number of connections and better orienting itself toward its customers.

**THE CHALLENGE**

EdM is facing a number of challenges as it works to improve and formalize its community engagement:

- **Budget constraints**
- **Inadequate human resource capacity** to design and oversee community engagement efforts
- **Lack of understanding of:**
  - Leading practices in community engagement for utilities
  - How effective community engagement can generate revenue and not only costs
  - How to integrate community engagement with other business operations
- **Managing customer expectations** that arise along with increased community engagement

**APPROACH**

With EdM, SRUC developed the CES in 3 stages:

- **Strategy**
  - Met with EdM directors and community leaders to incorporate feedback / concerns.
  - Proposed CES guiding principles, a methodology for stakeholder mapping, and identified roles for CES implementation.
- **Implementation Roadmap**
  - Set priority activities for a cost-efficient national rollout, estimated budget, and associated operational alignment.
- **Training**
  - Developed training procedures and materials for regional offices.

**RESULTS & FOLLOW-ON**

SRUC’s support to EdM in CES development resulted in the following key impacts:

- Laid the groundwork for successful and sustainable execution of the new national electrification strategy, through which EDM hopes to connect an additional 400,000 annually Mozambicans to the grid.
- Provided critical capacity-building support to EdM’s newly established Safety, Health, and Environment Division (SHE).
- Presented the final CES and Roadmap to the Board and executive staff of EdM.
- Helped shepherd EDM into a new model of how to think about customers, why to engage them, and how it can improve financials.

For more information visit: USAID.GOV/SMARTUTILITIES
From July 2016 and October 2017, SRUC assisted Electricidade de Moçambique (EdM) in developing a Commercial Metering Strategy (CMS) and Implementation Roadmap to support the utility’s ongoing transformation and help it adopt improved commercial efficiency and discipline.

**THE CHALLENGE**
EdM is experiencing high levels of aggregate commercial and technical (AT&C) losses costing an estimated US$50 million annually, and needs to substantially reduce these losses to achieve reduction loss targets.

EdM’s loss reduction efforts are currently hindered by a number of weaknesses related to commercial metering, including:

- High failure rate of pre-payment meters, possibly due to voltage spikes.
- Insufficient testing of meters (only 5% of meters tested each year).
- Inadequate meter testing capacity and processes/procedures.

**APPROACH**
In collaboration with EdM, worked to improve commercial metering through two stages:

- **CMS & Roadmap**
  - Evaluated organizational changes and infrastructure investments necessary for CMS implementation, and provided an associated cost estimate for these changes.
  - Developed a toolkit for meter inspections, and advised on new Advanced Metering Infrastructure (AMI) technologies.
  - Developed a detailed Roadmap outlining strategic initiatives for CMS implementation.

- **Meter Testing Laboratory Roadmap**
  - Reviewed meter testing procedures along with a gap analysis. Developed a Roadmap to stand up a laboratory.

Goal was to develop a CMS and accompanying Roadmap with strategic initiatives to address weaknesses along EdM’s commercial metering installations and revenue collection processes as well as to establish adequate meter-testing processes to facilitate implementation of the CMS.

- Identified 9 EDM priority areas for loss reduction and commercial metering improvements.
- Developed specifications for a meter testing laboratory which were adopted and will be used to test all future meters procured by EdM.

**RESULTS & FOLLOW-ON**
SRUC’s support to EdM in CMS development resulted in the following key impacts:

- **Buy-in from the EdM leadership** on the CMS initiatives as transformation priorities.
- **A comprehensive CMS** customized for EdM that will support loss reduction nationwide.
- **Specifications for a meter testing laboratory** in line with international leading practice.

Development of the CMS has set the stage for future SRUC support to EdM focused on:

- Detailed prospectuses on 4 of the 9 initiatives included in the CMS Roadmap.
- Design and implementation of a Network Commercial Integrated System (NCIS) pilot.

**OUR WORK**
Developed specifications for a meter testing laboratory which were adopted and will be used to test all future meters procured by EdM.

**M&E Indicators**
- 6 policies proposed and adopted to enhance energy sector governance.

**Quantitative Impact**

**Cooperating Partners**
- Worked in partnership with USAID Mozambique to support their energy program goals.

For more information visit: USAID.GOV/SMARTUTILITIES
From August 2017 to May 2018, SRUC continued its partnership with Electricidade de Moçambique (EdM) to pilot a Network Customer Information System (NCIS) to better understand its electricity losses through an energy balancing exercise. The pilot registered EdM’s network assets and customers in a small area of Maputo and laid the foundation for a national rollout.

**THE CHALLENGE**

With the national utility experiencing high losses costing an estimated US$50 million annually, there is an urgent need for a better understanding of the energy balance on the distribution network. Improved asset/customer management and measurement capability is critical to improving EdM’s energy balancing capabilities, as the utility prepares to connect another 400,000 customers a year through its new national electrification program.

- AT&C losses in EdM territory are estimated at ~26%, primarily due to power theft.
- Utility staff have minimal experience with national-level project implementation on the scale of NCIS, as well as an understanding of the time, financial, and human resources required for successful deployment.

**M&E Indicators**

- 7,920 beneficiaries with improved energy services
- 76 people (9F, 67M) trained in technical energy fields

**Goal was to undertake a pilot to provide the utility a better understanding of losses on its distribution system as well as to estimate the level of effort required to implement the NCIS on a national scale.**

- 41 Technicians Trained
- 23 Frauds Identified
- 4,750 Light Bulbs Replaced
- 700 Network Assets Registered
- 1,702 Customers Registered

**APPROACH**

Assisted EdM in designing an integrated solution for capturing the location of their assets (network and customer locations) along with the ancillary processes for their loss management program:

- Analyzed EdM’s technology and staff ability to undertake energy balancing.
- Developed six detailed sets of technical instructions to register customers and assets, maintain data, and distribute lamps.
- Developed an interface between GIS and customer management software systems.
- Trained EdM field staff and conducted asset and customer mapping pilot in Magnoine B area of Maputo.

**RESULTS & FOLLOW-ON**

The pilot project resulted in a number of key outputs that will ensure success for the national rollout of NCIS, including:

- Provided baseline data and KPIs for a plan to register all network assets and customers.
- Provided valuable information about the success/failure of past grid improvements and areas in need of further improvement.
- Determined losses may be significantly higher than current EdM estimates - Magnoine B had commercial losses of ~40%.
- Provided technical and organizational groundwork before EdM’s national rollout.
- Rolled out to 5 districts in Maputo; mapped 150 new assets and 38,00 new customers.

**OUR WORK**

- 1,702 Customers Registered
- 4,750 Light Bulbs Replaced
- 700 Network Assets Registered
- 1,702 Customers Registered

**Cooperating Partners**

Laid the groundwork for a national roll-out funded by the $150 mm World Bank Power Efficiency and Reliability Project (PERIP).

For more information visit: USAID.GOV/SMARTUTILITIES