Are cost-reflective tariffs the solution? Assessing Mozambique Electricity Supply Company (Electricidade de Moçambique – EDM) challenges to provide affordable and reliable services to residential customers

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Introduction

- Electricity is considered one of the top priorities for both social and economic development in Mozambique;
- Mozambique has made significant strides in expanding electricity access from 6% in 2006 to 32% in 2019;
- Mozambique is planning to achieve 50% access to electricity in 2023 and universal access by 2030;
Introduction (Cont.)

• EDM has been registering an average annual increase in power consumption of 6 to 8 %;
• Electricity reliability, affordability, and sustainability remain a challenge.
Electricity reliability

• Mozambique has frequent power outages, oscillations and load issues:
  - Old and overloaded infrastructures;
  - Electricity supply shortages;
  - Lack of or insufficient technical staff/financial health;
  - Erratic weather events;
  - Clandestine power connections
  - Vandalism;

• 2015: over 1700 power outages in Maputo city, with an average transmission interruption of 1 hour;
Electricity reliability (cont.)

Fig 1: Load index of critical transformers (left) and distribution lines (right) in Maputo and Matola cities (source: EDM)
Electricity reliability (Cont.)

“I have a three-phase connection but I never have the recommended voltage (220kV). Because of that, I always have to keep a rag on the floor of my kitchen to soak the water from the fridge since it is always defrosting. This all happens because the expansion of electricity was not accompanied by improvement in quality (interview EDM staff, december 2019).”
Electricity affordability

- EDM has a growing debt (upwards of US$1 billion) with suppliers:
  - Selling power at a loss;
  - Buying 30% of its total energy needs with the IPPs at 3 to 4 times higher than with HCB;
  - Debts of electricity bills by governmental institutions of around 280 million meticais (US$4.8 million).
Electricity affordability/Sustainability (Cont.)

Table 1: Electricity tariffs applied by energy suppliers in Mozambique (source: Nhamire and Mosca, 2015)

<table>
<thead>
<tr>
<th>Energy Supplier</th>
<th>Applied Tariff (USc/kwh)</th>
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<tbody>
<tr>
<td>HCB</td>
<td>3.6</td>
</tr>
<tr>
<td>Central Termica de Ressano Garcia (CTRG)</td>
<td>8.5</td>
</tr>
<tr>
<td>Gigawatts</td>
<td>9.47</td>
</tr>
<tr>
<td>Aggreko</td>
<td>12.2 – 14.8</td>
</tr>
<tr>
<td>ESKOM</td>
<td>30</td>
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</tbody>
</table>
Electricity affordability/Sustainability (Cont.)

EDM proposed solution:

• Cost-reflective tariffs to ensure their financial balance to invest in maintenance, operation and quality services;
• Since 2015, tariffs increased on average of 118.6%, but still not cost reflective yet;
• Consumers are struggling to afford the high tariffs.
Electricity affordability/ Sustainability (Cont.)

Fig 1: Tariff increase from 2013 – 2019 by level of consumption (left) and tariff increase scenario 2018 – 2027 (right) (source: EDM)
Electricity affordability/Sustainability (Cont.)

The public integrity centre (CIP) recommends:

• The removal of some of the costs that are part of the electricity price structure that should not be charged to consumers;

• The state to pay EDM its debts in electricity bills to prevent the debts from being indirectly transferred to the citizen;

• EDM to renegotiate contracts with the IPPs;
Electricity affordability/
Sustainability (Cont.)

- Look for alternative sources of electricity generation to provide cheaper energy.
- The energy regulatory authority to start exercising its powers and responsibilities;

Consumers proposed solutions:
- Change of electricity meters;
- Market liberalization;
- Existence of an operational Energy Regulatory Authority;
WHAT ARE THE SOLUTIONS FOR THE PROVISION OF RELIABLE AND AFFORDABLE ELECTRICITY SERVICE?
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Thank You

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