
POWER FOR ALL RESEARCH SUMMARY

A mini-grid market opportunity assessment of Burkina Faso

**POWER
FOR
ALL**

80%

POPULATION ACTIVELY
EMPLOYED IN AGRICULTURAL
SECTOR.

90%

HOUSEHOLDS THAT USE
BIOMASS AS MAIN
SOURCE OF ENERGY.

37%

POPULATION BEST SERVED BY
OFF-GRID SOLUTIONS.

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SEforAll Africa hub in conjunction with the African Development Bank recently published a Mini-Grid Market Opportunity Assessment of Burkina Faso¹ as part of the Green Mini-Grid Market Development Programme (GMG MDP) document series. Here we highlight the key messages:

Burkina Faso's energy sector is still not able to meet most of the country's energy needs.

- » Burkina Faso, with a population of 18 million people, is a landlocked country in West Africa with a total area of 274,220km².(12)
- » The population and energy demand is growing fast, especially as the economy has been growing at a sustained rate of 5.5% over the last decade (7).
- » However, the energy access stands at rate 18% nationally, 59% in urban areas and 3% in rural areas which is low by regional standards, while settlement coverage rate stands at 33% on average (7,13,25,26).
- » Supply is not able to keep up with demand growth, leading to significant load shedding. 90% of power is based on thermal generation fueled by expensive diesel (26), meaning high power production costs and a loss making power utility (7,13,25).
- » Burkina Faso has relatively extensive transmission and distribution network, 63% of the population lives within 15km of the network, however, rural electrification is a challenge because of financial and technical constraints that plague rural electrification local cooperatives (7).

Local cooperatives form a major part of the electrification solutions in Burkina Faso.

- » The country has been divided in two distribution segments, with distinct regulations and actors. The first served by SONABEL (National Utility) covers main population centers. SONABEL has a monopoly over transmission and distribution, but generation is open to other parties and IPPs (7).
- » The second is served by Electrification Development Fund (FDE) which provides funding for COOPELs (local cooperatives) in the form of loans and grants (25).The COOPELs promote rural electrification where SONABEL can't reach due to financial and technical constraints.
- » Regulatory agency ARSE was created in 2007 to regulate operators, arbitrate issues and protect consumer rights (25).
- » Mini-grids have been promoted since 2005 when the Electricity Development Fund (FDE) was established (13). In fact there are 93 existing mini-grids promoted by local cooperatives.
- » However, the current rural electrification model favours network-connected mini-grids, where local cooperatives and distribution companies purchase power from SONABEL, and then do distribution and bill collection (16). COOPELs must get a concession from the ministry of energy when their installed capacity is above 25kW and an authorization when their installed capacity is above 10kW.
- » Currently, most, if not all, existing mini-grids are not profitable and rely on continuous subsidies from FDE to purchase fuel or to pay for the maintenance and operational services (28).

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By the Numbers:

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There could be a major mini-grid market in Burkina Faso.

- » Based on current grid coverage, the analysis estimates that 37% of the country (6.6 million people) would be best served by mini-grids and off-grid solutions. The report estimates a current mini-grid market size of US\$ 117.1 million based on regional annual per capita expenditures on energy services (8,17). The potential drops to US\$ 20.9 million when including the planned network extensions up to 2025 (17).
- » The analysis finds that 1.2 million people would be best served by independent mini-grid solutions entirely (15). Therefore, promoting electrification through green mini-grids is a priority in the government agenda.
- » In 2015, national action plans which were drafted to support renewable energies (PANER) and drive implementation of the SEforALL initiative (26).

There is still a lot to be done to fully tap into the mini-grid market potential that exists. Existing policies hamper green mini-grid development.

- » Few investment incentive policies targeting specifically renewable energies exist (27).
- » Growth of the sector will require addressing existing regulatory frameworks such as the current nationwide low electricity tariff (8). Tariffs are non-cost reflective, averaging CFA 90.5 per kWh (approximately 15 US cents per kWh).
- » SONABEL therefore depends on continuous government subsidies to sustain its operations (7) and FDE provides subsidies to the COPELS to bridge the gap (34).
- » But the national tariff limits the freedom of small independent companies to operate (30).
- » There has been limited capacity building for COPELS, that are volunteer based. They therefore rely on external technical providers to manage the distribution network.(34)
- » FDE's resources are extremely limited and are insufficient on their own to meet the 2030 electrification targets. The strain on public finances is further magnified by SONABEL's persistent poor financial performance (30).

Share the Message

Clean energy mini-grids are an opportunity to increase energy access in Burkina Faso. Join Power For All and share the following message:

- » Support is needed to develop alternative financing solutions in Burkina Faso. Local capacity development is critical for the sector, from low-level system maintenance to financial management skills.
- » Support is needed to encourage renewable energy and mini-grid investment in this market

Sources:

1. [Mini-grid Market Opportunity Assessment: Burkina Faso. \(2017\). Green Mini-grid Market Development Programme](#)
Page numbers are cited in parentheses. This Research Summary was produced in partnership with the Strathmore Energy Research Center.