

Promoting Rural Electrification through Mini-grids

Supporting Myanmar's untapped mini-grid market

Background

Despite its abundant natural resources, Myanmar has one of the lowest electrification rates in the region. As of late-2016, it is estimated that a mere 34% of households have access to basic electricity services nationwide – a figure which drops to just 16% in rural areas. Most recent estimates suggest that the average consumption in Myanmar is about 263 kWh per household, which is about 12 times less than the global average.

Since at least the 1980s, thousands of community-owned mini-grids – small-scale decentralized power generation and distribution systems – have been established in a grassroots manner, but the technical quality and socioeconomic sustainability of these systems remains lacking.

In September 2015, the Government of Myanmar approved an ambitious new target for the country – Universal Access to Electricity (7.2 million new connections) by 2030 – in the form of a new National Electrification Plan (NEP).

In off-grid areas (those not likely to be connected to the national grid before 2026), the NEP predicts that as many as 2.4 million new household connections could be made through solar home systems and mini-grids by 2021, plus tens of thousands more community connections and public lighting connections.

On behalf of German's Federal Ministry for Economic Cooperation and Development (BMZ), GIZ is supporting Myanmar's government in the implementation of the off-grid component of NEP, with a particular focus on mini-grids.

This project contributes to the targets of **Sustainable Development Goal 7** by promoting renewable energy-based mini-grids to supply affordable, reliable, and high-quality energy services to the people of rural Myanmar.

Commissioned by	Federal Ministry of Economic Cooperation and Development (BMZ)
Main implementing partner	Department for Rural Development (DRD) Ministry of Agriculture, Livestock and Irrigation
Geographical focus	Union level + Shan State
Duration	March 2016 – February 2018

Challenges & Opportunities

The Government of Myanmar is in a unique position to build upon the experiences of an existing local mini-grid private sector and to adapt lessons-learned from other regional examples of scaled mini-grid programs which feature innovative business models and sustainable ownership strategies. At present, however, no regulatory environment exists to further support the mini-grid effort. Therefore, first and foremost, a supportive policy and regulatory framework will be required to safeguard developers, investors, and communities from unnecessary risk and to attract new investors to the market. Simultaneously, the operational capacities of Department of Rural Development (DRD) officers at Union-, State-, and Township-levels must be improved to ensure sustainability of the program in the long-term, while the technical and financial capacities of local private sector stakeholders must also be honed to enable the cost-effective development of high-quality mini-grids.

Finally, with a regulatory framework enacted, a capacity development strategy in place, and buy-in from local and international investors, the foundation is set to sustain a project pipeline, showcasing private-public partnership and long-term, sustainable ownership of Myanmar's rural energy infrastructure.



Contact person

Regine Dietz
regine.dietz@giz.de
 No. 27/B, Aung Zay Ya Lane (2)
 Golden Valley (1) Ward
 Bahan Township
 Yangon, Myanmar

Objective

The project will build on existing knowledge and local practice to support the government, private sector, and community stakeholders during the implementation of the National Electrification Plan, with a special focus on mini-grids in the off-grid and “pre-electrification” strategies. The overall objective is to build and strengthen the competence of relevant stakeholders engaged in Myanmar's rural electrification (public and private) to be able to plan, develop and implement decentralised off-grid electrification solutions, primarily renewable energy-based mini-grids.

Approach

The activities are structured alongside following action fields:

Policy Strategy & Regulation



Support the Government of Myanmar in the design of rural electrification policy, in particular for mini-grids

Human Capacity Development



Strengthen the competence of state and private sector actors in relevant areas of technology, administration, management, and business and operator models

Private Sector Participation



Actively engage private sector in the process of designing the framework conditions and support the knowledge transfer and innovation exchange on rural electrification technologies

Why we focus on renewable energy mini-grids?

- **Local business and community development:** Mini-grids can support entrepreneurship, leverage international investments, provide jobs, and empower communities, thereby advancing the country's overall economic progress
- **Sustainable economic development:** Tapping into the potential of Myanmar's abundant renewable energy resources to develop commercially viable mini-grid business models would support socio-economic development of the country - a recognised priority for the current government
- **Best-invest option:** For the remotest areas, where the extension of the national grid is not yet economically feasible, renewable energy/hybrid generation is a lower-cost option than fossil fuel-based power generation.
- **Pre-electrification:** Functional temporary mini-grid systems in rural areas can be connected to the national grid when it later arrives.



Published by

Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

Registered offices Bonn and Eschborn, Germany

Promotion of Rural Electrification in Myanmar
No. 27/B, Aung Zay Ya Lane (2)
Golden Valley (1) Ward,
Bahan Township Yangon, Myanmar
giz-myanmar@giz.de
www.giz.de

On behalf of

Federal Ministry for Economic
Cooperation and Development (BMZ)

Addresses of
the BMZ offices

BMZ Bonn
Dahlmannstraße 4
53113 Bonn, Germany
T +49 (0)228 99 535-0
F +49 (0)228 99 535-3500

BMZ Berlin
Stresemannstraße 94
10963 Berlin, Germany
T +49 (0)30 18 535-0
F +49 (0)30 18 535-2501

poststelle@bmz.bund.de
www.bmz.de

Author(s)

Patrick Pawletko, Regine Dietz

Layout

Adriana Karpinska

As at

January 2017