



# Project Information Document/ Identification/Concept Stage (PID)

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Concept Stage | Date Prepared/Updated: 18-Jun-2018 | Report No: PIDC142398



**BASIC INFORMATION**

**A. Basic Project Data**

Project ID	Parent Project ID (if any)	Environmental Assessment Category	Project Name
P166413		B - Partial Assessment (B)	Myanmar RBF Off-grid Solar
Region	Country	Date PID Prepared	Estimated Date of Approval
EAST ASIA AND PACIFIC	Myanmar	18-Jun-2018	
Financing Instrument	Borrower(s)	Implementing Agency	Initiation Note Review Decision
Investment Project Financing	Ministry of Planning and Finance	Ministry of Agriculture, Livestock and Irrigation	The review did authorize the preparation to continue

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**PROJECT FINANCING DATA (US\$, Millions)**

**SUMMARY**

<b>Total Project Cost</b>	3.45
<b>Total Financing</b>	3.45
<b>Financing Gap</b>	0.00

**DETAILS**

**Non-World Bank Group Financing**

Trust Funds	3.45
Energy Sector Management Assistance Program	0.45
Global Partnership on Output-based Aid	3.00

**B. Introduction and Context**

Country Context

With a population of 52.8 million, Myanmar is one of the largest countries in mainland Southeast Asia. However, Myanmar is one of the least developed countries in the region, with GDP per capita of US\$1,275 in 2016. According to the 2017 World Bank Poverty Analysis, 37% of people still live near or below the poverty line. Poverty in Myanmar is concentrated in rural areas, where poor people rely on agricultural and casual employment for their livelihoods. Many live near the poverty line and are sensitive to economy-wide shocks.



Although GDP growth has remained strong, it has begun to moderate more recently from 8% in 2014/15 to 7.3% in 2015/16, and is projected to slow further to 6.5% in 2016/17. This is partly related to floods in 2015, which severely affected the agricultural productivity, as well as drop-in commodity prices.

Myanmar is five years into a significant political and economic transition. Following 50 years of isolation under military rule, the country opened under a new administration that took office in 2011. The elections in 2012 brought in opposition parties to a newly established Parliament. In November 2015, national elections delivered a landslide victory for the National League for Democracy led by Daw Aung San Suu Kyi.

The government released its economic policy priorities at the end of July 2016. The policy objectives include: (i) national reconciliation and unity around a federal and democratic system of government; (ii) equitable development across states and regions; (iii) creation of economic opportunities for the youth of the nation; and (iv) sustainable and inclusive growth through innovation and people-centered development. Within these policy priorities, the government recognizes the need to improve basic infrastructure in the country, particularly in the transport and electricity sector as prerequisites for economic development.

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#### Sectoral and Institutional Context

More than 60 percent of Myanmar's population has no access to grid-based energy services, and annual electricity consumption per capita is 263kWh, a fraction of the world average. In rural areas, more than two thirds of households rely on candles, kerosene, low-quality batteries and diesel generators to meet their energy needs. To address this development challenge, the Government of Myanmar, with the assistance of the World Bank Group (WBG) and other donors, has adopted the National Electrification Plan which aims to achieve universal access to sustainable electricity services by 2030 through a combination of grid extension and off-grid programs.

The WBG Joint Implementation Plan (JIP) in Myanmar supports public and private efforts to increase electricity access and alleviate acute electricity shortages. JIP leverages combined skills of the WBG and includes activities targeted at increasing the supply and distribution of electricity and set the power sector on a sustainable development path. The WBG dialogue has focused on these areas, inter alia supporting increased efficiency through the value chain, expansion of access to the grid and off-grid electrification, and making the power sector better managed and more financially viable by involving more private participation in environmentally and socially sustainable ways. On-going investments and complementary technical assistance are expected to increase the rate of electrification from 30% in 2014 to 50% in 2020.

The proposed activity complements the Myanmar National Electrification Project (NEP, P152936), which supports the expansion of electricity services in Myanmar through grid and off-grid solutions. NEP is the first in a series of WBG-financed operations supporting public and private sector investments that aim to help the government achieve its goal for universal access to electricity in Myanmar by 2030. This means that the government has to electrify 7.2 million households over a period of 15 years. Specifically, with US\$400



million IDA funding, NEP supports a total of 1.242 million electricity connections (750,000 households via grid and 492,000 households via off-grid) from September 2015 to September 2021 throughout the country. Under the off-grid component, NEP supports solar home systems (SHS) for households, schools, clinics, religious facilities, street lighting under the international competitive bidding (ICB) model and mini-grids.

The activity supports the IFC-led Lighting Myanmar, which is an integral part of national electrification efforts that aims to develop the commercial market solutions for quality-verified solar devices and kits in Central Myanmar. The scope of IFC's program includes: (i) research on consumer preferences, willingness/ability to pay and other market intelligence; (ii) product quality assurance; (iii) consumer awareness and education on product quality and qualified service delivery agents; (iv) business to business support; and (v) access to finance.

The energy sector's institutional and regulatory framework has been fragmented, particularly in rural electrification. The Ministry of Electricity and Energy (MOEE) is responsible for overall energy policy and leads power sector development. In rural areas, the Department of Rural Development (DRD) in the Ministry of Agriculture, Livestock and Irrigation (MOALI) is responsible for off-grid electrification. In addition to the national (Union level) ministries, the seven States and seven Regions each have their own energy ministry that plans and implements sub-national power projects below 30 MW capacity.

#### Relationship to CPF

The proposed grant is in line with Myanmar Country Partnership Framework (CPF) for 2015-17, which identifies three focal areas: (i) reducing rural poverty; (ii) investing in people and effective institutions for people; and (iii) supporting a dynamic private sector to create jobs. Activities in these areas also integrate four cross-cutting issues: gender, conflict, governance and climate change/disaster risk. The proposed grant would help reduce rural poverty through CPF Objective 1.1: "Improved power generation and access to electricity". Better access to electricity is critical to improve well-being, reduce vulnerability to poverty, and promote income-generating opportunities and human development. The grant supports private sector to create jobs by incentivizing activities for commercial market development for solar energy products.

### **C. Project Development Objective(s)**

#### Proposed Development Objective(s)

The objective of the RBF for Off-grid Solar is to help increase access to electricity in Myanmar.

#### Key Results

The RBF for Off-grid Solar will support the sale of 150,000 Lighting Global certified systems by the private sector on Myanmar's market.



#### D. Preliminary Description

##### Activities/Components

The activity consists has two components: a) results-based subsidies to eligible companies selling Lighting Global certified products; b) implementation support.

Component 1: Results-based subsidies (US\$ 3.25 million) provided to eligible companies/NGOs for solar products ranging from 0.3 watt peak (Wp) solar lamps up to 50 Wp SHS. These products cater for basic needs such as lighting and phone charging (Sustainable Energy for All - SE4All tier 1 access) as well as the operation of direct current (DC) appliances such as televisions and fans (SE4All tier 2 access). The activity will contribute to more sustainable, private sector driven off-grid solar market development. It will address high initial market development costs faced by the private sector in Myanmar, contributing to supply chain development and provision of quality sales and services. As RBF/OBA solar energy programs have demonstrated, potential customers would benefit of increasing market competition, which is expected to result in offer of quality products at competitive price.

RBF grant will promote Lighting Global certified products that are delivered with 1-3 year warranty requirement depending on product and after sales service. The Lighting Global testing procedure for small solar systems up to 10 Wp has become an international standard IEC-TS 62257-9-5, while the testing procedure for SHS kits up to 350 Wp is planned to be formalized as IEC standard in 2018. Companies can either select one of currently 134 certified products of 65 suppliers or submit their untested products for certification.

Companies entering the rural solar market in Myanmar with quality products and services are facing the challenge of high market risks and market entry costs. Risks include uncertainty of market uptake caused by low willingness to pay of the households due to the competition of cheap low quality products and uncertainties of planning rural electrification projects. Market entry costs include marketing, employment and training of staff, rent for office and warehouse space, import and transport logistics, and facilitation of consumer financing. Companies' income consist of sales revenues which are usually low and difficult to predict in the pilot phase. High initial investment is required to bridge the time until increased sales eventually pay off. Depending on their confidence in the market potential, equity investors will accept higher risks to quickly scale-up a company's market entry or require a slower approach, expecting first results before decisions on further expansions are taken. The RBF grant incentive aims to accelerate market uptake by partially compensating companies for risk taking and high marginal retail costs incurred by entering new markets.

A subsidy of maximum US\$ 50 per system sold will be reimbursed to solar companies/NGOs based on certification of sales by an independent verification agent hired by DRD, on sample basis. The subsidy calculation and adjustment mechanism will be presented in the Operating Manual. Commercial practices will be applied for the proposed RBF grant.

Component 2: Implementation support to DRD (US\$ 200,000). Key activities include overall management and promotion of the RBF Off-grid Solar, launch of the RBF call for proposals, communication with companies, processing of RBF subsidy contracts, annual review of the RBF incentive, monitoring of the grant

implementation, hiring and coordination of the independent verification agents (IVA), review of the output verification reports and processing of subsidy disbursement transactions.

ESMAP approved US\$450,000 for the RBF. The ESMAP recipient executed grant will provide results-based subsidy to facilitate the market uptake for Lighting Global certified products. Additional grant funding in the amount of US\$ 3 million has been approved for eligibility (concept stage) by GPOBA as follows: a) US\$ 2,8 million for RBF subsidy; and b) US\$ 200,000 for implementation support.

## SAFEGUARDS

### E. Safeguard Policies that Might Apply

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Safeguard Policies Triggered by the Project	Yes	No	TBD
Environmental Assessment OP/BP 4.01	X		
Natural Habitats OP/BP 4.04		X	
Forests OP/BP 4.36		X	
Pest Management OP 4.09		X	
Physical Cultural Resources OP/BP 4.11		X	
Indigenous Peoples OP/BP 4.10	X		
Involuntary Resettlement OP/BP 4.12		X	
Safety of Dams OP/BP 4.37		X	
Projects on International Waterways OP/BP 7.50		X	
Projects in Disputed Areas OP/BP 7.60		X	

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