ADB ASIAN DEVELOPMENT BANK

Myanmar: Power Distribution Improvement Project

Project Name	Power Distribution Improvement Project
Project Number	46390-003
Country	Myanmar
Project Status	Active
Project Type / Modality of Assistance	Loan
Source of Funding / Amount	**Loan 3084-MYA: Power Distribution Improvement Project** concessional ordinary capital resources lending / Asian Development Fund — US$ 60.00 million
Strategic Agendas	Environmentally sustainable growth Inclusive economic growth
Drivers of Change	Governance and capacity development
Sector / Subsector	**Energy** - Electricity transmission and distribution
Gender Equity and Mainstreaming	No gender elements
Description	The project will rehabilitate the distribution network in five townships in Yangon region (Hlaingthaya, Insein, Kamayut, Mayangone, and Mingaladon), four districts in Mandalay region (Kyaukse, Meikhtila, Myingyen, and Yameethin), five districts in Sagaing region (Kalay, Katha, Monywa, Sagaing, and Shwebo), and two townships in Magway region (Aungland and Magway). These areas were selected in consultation with the Ministry of Electric Power (MOEP), Yangon City Electricity Supply Board (YESB), and Electricity Supply Enterprise (ESE). The project will help reduce system losses and subsequently increase the electricity supply to urban and rural consumers to support inclusive and sustainable economic development.

Project Rationale and Linkage to Country/Regional Strategy	Strengthening power supply capacity is critical for reducing poverty and enhancing the medium- and long-term development prospects of Myanmar. Persistent power brownouts during the dry season adversely impact economic and social activities. Electrification is urgently required; without it large areas of the country will be severely hampered in their efforts to advance economically. Basic and socioeconomic needs also depend on electrification, without which, health, education, and other essential services will inevitably suffer. About 68% of available electricity is used in Yangon (46%) and Mandalay (22%) regions (the country has 14 regions and states). Low national electricity coverage. Although electricity consumption in Myanmar has doubled during the last 10 years, total electricity consumption in 2012 was 8,434 gigawatt-hours. With a population of about 60 million, Myanmar's per capita electricity consumption was only 140 kilowatt-hours (kWh) per year_the lowest among the 10 Association of Southeast Asian Nations member countries. The low consumption is due to lack of industrial development, lack of investment, and poor electrification ratio. The country's average electrification ratio increased from about 16% in 2006 to 28% in 2012. Yangon City has the highest ratio (72%), followed by Nay Pyi Taw (65%), Kayah (42%), and Mandalay (35%). The remaining rural areas have electrification ratios averaging about 21%. High distribution losses. As of December 2012, total system installed power generation capacity was 3,495 megawatts (MW), comprising 2,660 MW (76.1%) hydropower, 715 MW (20.5%) gas-fired, and 120 MW (3.4%) coal-fired. Due to scheduled maintenance and various limitations of operations at several power plants, the actual firm capacity as of December 2012 was 1,957 MW. Although the installed capacity exceeds the 2012 peak load of 1,796 MW, during the dry season hydropower plants cannot generate to full capacity due to lack of water. Hence, the country's power grid is experiencing of up to 400 MW_500 MW of load shedding during the dry season. The transmission lines and transformers have limited capacity. The network also has high transmission and distribution losses. Technical and nontechnical losses of the distribution system were as high as 23% in 2003 and decreasing to 18.2% in 2012. Therefore, improvement of the distribution network is urgently needed. Sector governance and institutions. The regulatory framework for power includes the Electricity Act of 1948 (as amended in 1967), the Myanmar Electricity Law (1984), and the Electricity Rules (1985). MOEP is responsible for the power subsector. Within MOEP, Myanmar Electric Power Enterprise is responsible for the development and implementation of the transmission network, covering the voltages of 66 kilovolts (kV), 132 kV, and 230 kV. Two distribution enterprises operate the distribution systems in the country_YESB and ESE. YESB is responsible for the supply of electricity to consumers in Yangon City and ESE for the rest of the country comprising 13 states and regions, including off-grid generation and distribution. Operation and maintenance capacity of the two distribution enterprises is adequate, but due to limited availability of parts and manual operation of distribution systems, performance of the distribution systems is poor. Low electricity tariffs. From January 2012, the electricity tariffs was MK35/kWh for general purpose (households), street lighting, and government offices; and MK75/kWh for domestic power, and small and bulk power. On 27 October 2013, the government announced the increase in electricity tariff with effect from 1 November 2013: MK35/kWh for households (until 100 kWh) and MK50/kWh (for 101 kWh and above); MK100/kWh for industry, enterprise, and lumpsum (until 5,000 kWh) and MK150/kWh for industry, enterprise, and lumpsum (for 5,001 kWh and above); MK50/kWh for government offices; and MK100/kWh for industrial use of government departments. Off-grid consumer tariffs vary depending on the cost of generation by diesel or other means (e.g., solar, mini-hydropower) and may range from MK100/kWh to MK300/kWh. Priority areas for future investments. Significant investments are needed to (i) improve and upgrade the distribution systems, especially in Yangon and Mandalay regions; (ii) address the current shortage of power generation through rehabilitation and new additions; (iii) reinforce the transmission grid and associated substations; and (iv) extend transmission and distribution networks to connect more consumers, particularly in rural areas. A consolidated development and investment plan for the power subsector is not available. The preparation of a long-term power master plan commenced in July 2013, with assistance from the Japan International Cooperation Agency (JICA); it is expected to be completed by June 2014. ADB assistance. Up to 1987, ADB provided five loans totaling $31.6 million and three technical assistance (TA) projects totaling $1.27 million for the power subsector. Since 1987, no loans and TA were provided. Until reengagement in March 2012, ADB obtained limited information on the power subsector through the Greater Mekong Subregion Economic Cooperation Program. The Myanmar Energy Sector Initial Assessment (October 2012) recognizes that ADB should resume providing assistance to the power subsector to enhance reliability by rehabilitating and expanding transmission and distribution networks. The New Energy Architecture: Myanmar defines the enabling environment for achieving the long-term objectives of economic growth and development, energy access and security, and environmental sustainability. Since reengagement, ADB has provided a total of about $4.7 million of TA to enhance capacity, strengthen planning, enhance the legal and regulatory framework, and prepare power projects. To enhance MOEP capacity, ADB assistance includes (i) a power advisor to MOEP; (ii) international and national experts for preparing a transmission and distribution grid code, and electric standards and specifications; (iii) preparation of a financial management assessment of four enterprises within MOEP; and (iv) formulation of proper safeguard requirements and procedures. Also, to strengthen the legal framework, ADB provided assistance for drafting the revised electricity law and subsequent electricity regulation, and introducing the regulatory authority to enhance transparency and attract private sector participation. In addition, project preparatory TA conducted a feasibility study for transmission expansion. The project is included in the draft country operations business plan for Myanmar and is in line with ADB's interim country partnership strategy for Myanmar for 2012_2014, which emphasizes the need to support power infrastructure. Development coordination. ADB, JICA, and the World Bank have closely coordinated their assistance for the power subsector with MOEP following reengagement. They have agreed that (i) ADB will undertake rehabilitation of distribution networks in Yangon, Mandalay, Sagaing, and Magway regions; (ii) the World Bank will carry out rehabilitation of a 108 MW gas-fired plant at Thaton; and (iii) JICA will undertake rehabilitation of gas-fired plants within Yangon, a hydropower plant, and distribution networks in other townships in Yangon.
Impact	Reduced power distribution loss and improved energy efficiency

Project Outcome

Description of Outcome	Improved infrastructure to provide reliable and sustainable electricity to the selected townships and districts
Progress Toward Outcome	Project implementation is progressing satisfactorily.
Implementation Progress	
Description of Project Outputs	Rehabilitated distribution network in five townships in Yangon region Rehabilitated distribution network in four districts in Mandalay region Rehabilitated distribution network in five districts in Sagaing region Rehabilitated distribution network in two townships in Magway region
Status of Implementation Progress (Outputs, Activities, and Issues)	The delivered equipment/materials are now in the designated warehouses in Yangon, Mandalay, Sagaing and Magway project areas. Distribution transformers were almost installed in each project area. The installation of distribution lines and substations are almost complete. Additional equipment is being procured utilizing loan savings.
Geographical Location	

Safeguard Categories

Environment	B
Involuntary Resettlement	C
Indigenous Peoples	C

Summary of Environmental and Social Aspects

Environmental Aspects	Due diligence, with recommendations for mitigating measures, is being undertaken on workers' health and safety, and material recovery and disposal of replaced materials and equipment. Reporting requirements are being complied.
Involuntary Resettlement	No social assessment is required but the environmental and social implications need to be reviewed regularly.
Indigenous Peoples	No social assessment is required but the environmental and social implications need to be reviewed regularly.
Stakeholder Communication, Participation, and Consultation	
During Project Design	
During Project Implementation	This project is classified as a general intervention and has a general stakeholder communication strategy. The EA will post all relevant information on its website. The website will include at minimum information regarding the bidding process, bidders, contract awards, use of funds disbursed under the Project and physical progress. The project will also follow the ADB's Public Communication Policy 2011 and its guidelines on the disclosure and exchange of information.

Business Opportunities

Consulting Services	A consulting firm will be engaged using the quality- and cost-based selection method with a 90:10 ratio and full technical proposal in accordance with ADB's Guidelines on the Use of Consultants (2013, as amended from time to time).
Procurement	The project will procure six procurement packages with international competitive bidding using the single-stage, one-envelope method under the ADB loan. The government will finance procurement of concrete poles using counterpart funds and follow its procurement guidelines. YESB and ESE will undertake rehabilitation, replacement, and installation works, including commissioning.

Responsible Staff

Responsible ADB Officer	Jung, Choon Sik
Responsible ADB Department	Southeast Asia Department
Responsible ADB Division	Energy Division, SERD
Executing Agencies	*Ministry of Electricity and Energy* *No. B-07, Yadana Shwe Pyi St.,* *Zaya Theidi Ward, Nay Pyi Taw*

Timetable

Concept Clearance	22 Mar 2013
Fact Finding	22 Jul 2013 to 02 Aug 2013
MRM	03 Oct 2013
Approval	06 Dec 2013
Last Review Mission	-
Last PDS Update	21 Mar 2017

Loan 3084-MYA

Milestones					
Approval	Signing Date	Effectivity Date	Closing		
			Original	Revised	Actual
06 Dec 2013	28 Jan 2014	31 Mar 2014	31 Dec 2018	-	-

Financing Plan		Loan Utilization			
	Total (Amount in US$ million)	Date	ADB	Others	Net Percentage
Project Cost	73.70	Cumulative Contract Awards			
ADB	60.00	06 Dec 2013	37.93	0.00	70%
Counterpart	13.70	Cumulative Disbursements			
Cofinancing	0.00	06 Dec 2013	35.13	0.00	65%

Project Page	https://www.adb.org/projects/46390-003/main
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