PROJECT INFORMATION DOCUMENT (PID)
APPRAISAL STAGE

Report No.: PIDA982

Project Name	Electric Power Project (P143988)
Region	EAST ASIA AND PACIFIC
Country	Myanmar
Sector(s)	Thermal Power Generation (100%)
Theme(s)	Rural services and infrastructure (100%)
Lending Instrument	Investment Project Financing
Project ID	P143988
Borrower(s)	Republic of the Union of Myanmar
Implementing Agency	Ministry of Electric Power, Myanmar Electric Power Enterprise
Environmental Category	B-Partial Assessment
Date PID Prepared/Updated	10-Jul-2013
Date PID Approved/Disclosed	17-Jul-2013
Estimated Date of Appraisal Completion	25-Jul-2013
Estimated Date of Board Approval	26-Sep-2013
Decision	

I. Project Context

Country Context

1. Myanmar is the largest country in mainland Southeast Asia with a land area of about 654,000 square km. It is located between China, India, and Thailand, with more than 2,800 miles of coastline. This geographic advantage, and the country's endowed natural resources leaves it well positioned to resume its traditional role as a regional trading hub and key supplier of minerals, natural gas and electric power.

2. Myanmar is one of the poorest countries in East Asia, with an estimated GDP per capita of US$900 and a poverty headcount of 26 percent. Since 2011, leaving behind decades of isolation, fragility, and conflict, Myanmar is embarking on a triple transition: from an authoritarian military system to democratic governance; from a centrally directed economy to market oriented reforms; and from 60 years of conflict to peace in the border areas.

3. The government has set economic reform as a key priority. Major economic policy reforms have taken place, in particular more liberal exchange rate and trade policies, rationalization of tax rates, and fiscal decentralization and reforms of the budgetary process. Also, the government recognizes that expanding the quantity and quality of basic infrastructure and improving access to

modern energy in an efficient and sustainable manner is crucial to both economic growth and poverty reduction.

Sectoral and institutional Context

4. Myanmar has one of the lowest rates of electrification in Southeast Asia with only 26 percent of the population having access to electricity. In rural areas only 16 percent of households have access to grid-based electricity. Also, access to modern fuels for cooking is limited to around 30 percent of population leaving in urban areas. Consequently, traditional biomass is widely utilized, and accounts for about two-thirds of Myanmar's primary energy consumption. Electricity shortages, rotating outages and frequent blackouts severely reduce reliability and quality of electricity supply for those who have access to the existing power grid.

5. Despite the underdeveloped domestic energy market, Myanmar is one of the major energy exporters in the region due to its abundant hydropower and natural gas resources. Since the first exports of natural gas to Thailand in 1998, the gas sector has been the country's most important source of export revenues, which are expected to peak at 6.5% of GDP in 2014-2015. Also, about a third of the foreign direct investments is in the oil and gas sector.

7. In the hydropower sector, Myanmar has identified 92 potential projects with a total installed capacity of 46 GW out of an estimated 100 GW of total hydropower resources. Currently, the total installed capacity of hydropower plants is 2,660 MW, which accounts for around 70 percent of installed capacity and two thirds of electricity production. The remaining balance mostly coming from gas-fired power plants.

8. Most existing Gas Turbine (GT) stations are obsolete, being more than 30 years old, and use single-cycle gas turbines with efficiency as low as 20 percent for base-load duties. The overall efficiency of the power supply system is further reduced by large losses in transmission and distribution (T&D) networks which amount to 25 percent of the power supply.

9. Furthermore, the domestic price of gas and electricity is not fully cost-reflective. The price of gas for domestic power generation is priced at about half of the export parity price. Nonetheless, the average electricity tariff does not cover the cost of electricity supply and power enterprises depend on the Union budget for investment support. Pricing policies in the gas and electricity sector may change again in 2013, which raise concerns about price volatility and financial sustainability of sector enterprises.

10. Overall, rapidly increasing electricity demand, investment delays, seasonal fluctuation in electricity production, obsolete infrastructure, high T&D losses, and underpricing are root causes of electricity shortages which amount to about 20 percent of power demand. The Government strategy to address these challenges is based on two pillars. First, an inter-governmental National Energy Management Committee (NEMC) was established in 2013 with the mandate to formulate the National Energy Policy, and ensure coordinated implementation. Second, a new Electricity Law was drafted clarifying conditions for private investments and concessions in the power sector.

11. As detailed in the Outline of Energy Development Policy, main challenges facing the energy sector can be divided in two time horizons. In the near-term (2013-2015), the main challenges are: (i) to ensure financial viability of sector enterprises; (ii) to secure affordable funding

for capital investments in urgently need power generation; and (iii) to maximize efficiency of gas-fired power generation and reduce losses in transmission and distribution networks. In the medium to longer term, the main challenge facing the energy sector is to secure reliable, affordable and environmentally and socially sustainable energy supply.

12. The proposed project targets the near term challenges due to the urgent need to increase power generation, focusing specifically on efficiency improvements in the existing Gas Turbine (GT) stations. Replacing outdated and low efficiency GTs with modern, high efficiency GTs and CCGT (Combined Cycle Gas Turbine) technology is the fastest and least cost approach to increase capacity and electricity production without increasing the consumption of gas, while reducing air emissions from the existing GT stations.

C. Relationship to CAS

13. After more than two decades of absence, the WBG is re-engaging in the development of Myanmar. On October 30, 2012 the WBG approved an Interim Strategy Note (ISN) covering an 18-month period. The ISN outlines support around three pillars: the first aimed at supporting government's efforts to transform institutions to allow them to deliver for citizens; the second at building confidence in the ongoing reform process; and the third focused on preparing the way for the resumption of a full country program.

14. In line with the ISN, the proposed project contributes to the ISN's Pillar II by focusing on quick and tangible impact for communities through the improvement of reliability and quality of electricity supply; and Pillar III by starting WBG's engagement in infrastructure and addressing urgent needs in coordination with other development partners, and by responding to the government's request to support the modernization and expansion of gas-fired power generation. Furthermore, the project will serve as a cornerstone for the future engagement, underpinning policy dialog in the energy sector and strengthening institutional capacity in the Ministry of Electric Power (MOEP) and Myanmar Electric Power Enterprise (MEPE).

II. Proposed Development Objectives

The project development objective is to increase capacity and efficiency of gas-fired power generation and strengthen the institutional capacity of the Ministry of Electric Power and the Myanmar Electric Power Enterprise.

III. Project Description

Component Name

17. Component 1: CCGT Power Plant. The main component of the proposed project is the expansion of the existing Thaton gas turbine station into a new CCGT power plant

Comments (optional)

Component Name

18. Component 2: Technical Assistance and Advisory Service.

Comments (optional)

The project will provide technical assistance and advisory serviced to MOEP and MEPE in two main areas.

IV. Financing *(in USD Million)*

Total Project Cost:	140.00	Total Bank Financing:	140.00
Total Cofinancing:		Financing Gap:	0.00

For Loans/Credits/Others	**Amount**
BORROWER/RECIPIENT	0.00
International Development Association (IDA)	140.00
Total	140.00

V. Implementation

VI. Safeguard Policies (including public consultation)

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

Comments (optional)

VII. Contact point

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