

**PROJECT INFORMATION DOCUMENT (PID)
ADDITIONAL FINANCING**

Report No.: PIDA31638

Project Name	Siddhirganj Power Project Additional Financing (P154127)
Parent Project Name	Siddhirganj Power Project (P095965)
Region	SOUTH ASIA
Country	Bangladesh
Sector(s)	Energy efficiency in Heat and Power (30%), Oil and gas (30%), Thermal Power Generation (30%), Information technology (10%)
Theme(s)	Corporate governance (10%), Infrastructure services for private sector development (70%), Climate change (20%)
Lending Instrument	Investment Project Financing
Project ID	P154127
Parent Project ID	P095965
Borrower(s)	Government of Bangladesh
Implementing Agency	Electricity Generation Company of Bangladesh (EGCB)
Environmental Category	A-Full Assessment
Date PID Prepared/Updated	09-Sep-2015
Date PID Approved/Disclosed	09-Sep-2015
Estimated Date of Appraisal Completion	03-Sep-2015
Estimated Date of Board Approval	30-Oct-2015
Appraisal Review Decision (from Decision Note)	The review did authorize the team to appraise and negotiate

I. Project Context

Country Context

The Siddhirganj Power Project, which will add 335 MW of gas-fired combined cycle capacity to the system in Bangladesh, is a core element of the Government's least-cost expansion plan for the sector and its strategy is to address infrastructure deficits in the country as efficiently as possible. The CCPP will increase power supply in both peak and off-peak periods. It will address the severe power shortages and meet the goals of Government's massive power generation expansion plan.

Sectoral and institutional Context

The energy sector in Bangladesh has made significant strides over the past decade: access to electricity increased from below 50 percent to 64 percent of the population in 2014; generation capacity has doubled in the last five years to over 11,000 MW; and, transmission and distribution losses have halved, going down to 14 percent between 2002 and 2013. Bangladesh has also been a

pioneer in renewable energy based distributed generation with more than 3.5 million solar home systems (SHS) installed as of May 2015. The Government was able to attract private investment into power generation, including two IPPs with foreign investment in 2001. More recently, it has successfully negotiated the import of power from India to supplement domestic generation.

Despite the increase in power generation capacity, there is a growing gap between the demand for power and the supply available. In FY 2012/13, there was a shortfall in peak capacity of 22% and a 13% shortfall in terms of meeting non-peak demand– the highest level of demand served in 2013 was only 6,675 MW. Currently, peak demand is estimated to be 9,250 MW while available capacity is around 8,000 MW.

The availability and reliability of power supply is a key concern for businesses in Bangladesh. Data from the World Bank Enterprise Survey of 2013 indicate that outages resulted in an output loss of 2.87% of GDP in Bangladesh that year. Firms in Bangladesh face ten times as many outages in a typical month as the average for all countries for which Enterprise Survey data are available and five times as many as the average for low income countries. About 63% of Bangladeshi firms invest in back-up generation, which mitigates some of the actual impact of power outages on output, but the additional expense impacts the firms' cost of production.

Energy requirements are projected to rise nearly five-fold to over 190 tera watt hours (TWh) by 2030 (from the 2013 level) as efforts to increase access to grid electricity (presently only 53 percent of the population is connected to the grid) bear fruit and in view of 6 percent per annum projected economic growth. At 294 kWh/annum, per capita consumption of power in Bangladesh is one of the lowest levels in the world with considerable scope for growth. Electricity supply is constrained for several reasons, the most important of which is limited investment over the past decade in new base-load generation capacity and inadequate growth in fuel availability, mainly natural gas. About 2,300 MW of the new capacity added came through short-term rentals relying on relatively expensive imported fuel oil; and, the sector needs significantly more investment to keep up with the 8-10% projected increase in demand associated with growth over the next decade. Many power plants are decades old and operate below rated capacity due to inadequate attention to operations and maintenance, and with reduced output of electricity per unit of fuel. Efficient, combined-cycle gas power plants make up only 2.4 GW of the approximately 7 GW of gas-fired capacity. The average efficiency of the aging gas generation fleet is 34%, which is well below the 50-60% efficiency of new built combined cycle plants.

II. Proposed Development Objectives

A. Current Project Development Objectives – Parent

Increase supply of electricity to Bangladesh grid network.

III. Project Description

Component Name

Part A) Siddhirganj 335 MW combined cycle power plant (CCPP), and Part D1) Associated technical assistance for capacity building of EGCB.

Comments (optional)

The proposed AF will cover the financing gap resulting from : (i) upgrading of the project from a

300 MW gas-fired peaking power plant (original project cost: US\$ 470 million) to a 335 MW combined cycle power plant (CCPP; revised project cost: US\$ 652.50 million); and (ii) reduced purchasing value of IDA Credit (to US\$ 327.29 million from original value of US\$ 350 million equivalent) due to appreciation of US dollar since Board approval. The AF proceeds will be used to cover the additional capital cost of the CCPP (over the cost of the peaking plant) and related capacity building contracts and would enable the completion of activities envisaged under the re-designed project. No further changes to the project are envisaged.

IV. Financing (in USD Million)

Total Project Cost:	205.21	Total Bank Financing:	176.71
Financing Gap:	0.00		
For Loans/Credits/Others			Amount
BORROWER/RECIPIENT			28.50
International Development Association (IDA)			176.71
Total			205.21

V. Implementation

The project has demonstrated significant implementation progress over the past year and is expected to meet its PDO within its implementation time frame (June 30, 2018 closing date). The simple cycle power plant is scheduled for commissioning in November 2015 and the combined cycle in August 2016. Other project components, including the construction of a gas pipeline and electricity transmission line, are at an advanced stage of construction or complete. Ninety-two percent of the current Credit (SDR 205 million) has been committed, 74% disbursed and only three contracts (for capacity building) are currently under procurement. The IP rating has been in MS status since December 2014 and the both IP and DO are in S status since May 2015. Implementation is being carried out by the same agencies as in the original project. These are, the Energy Generation Company of Bangladesh (EGCB), the Power Grid Company of Bangladesh (PGCB), and the Gas Transmission Company of Limited (GTCL).

VI. Safeguard Policies (including public consultation)

Safeguard Policies Triggered by the Project	Yes	No
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

Comments (optional)

A detailed EIA of the CCPP was carried out in July 2012, cleared by the Bank and disclosed in the country and in the World Bank's Info Shop. EIAs for the other two components (power

transmission line and gas transmission line) were carried out and disclosed in country and Info Shop during project preparation in 2008/9. Acquisition of land and distribution of compensation for both power and gas transmission lines have been substantially completed. The three implementing agencies have been reporting regularly on their environmental compliance.

VII. Contact point

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