

Project Administration Manual

Project Number: 44192
Loan Number: L2661 and [tbd for additional financing]
August 2013

People's Republic of Bangladesh: SASEC
Bangladesh-India Electrical Grid Interconnection
Project

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Project Administration Manual Purpose and Process

The project administration manual (PAM) describes the essential administrative and management requirements to implement the project on time, within budget, and in accordance with Government and Asian Development Bank (ADB) policies and procedures. The PAM should include references to all available templates and instructions either through linkages to relevant URLs or directly incorporated in the PAM.

The executing and implementing agencies are wholly responsible for the implementation of ADB financed projects, as agreed jointly between the borrower and ADB, and in accordance with Government and ADB's policies and procedures. ADB staff is responsible to support implementation including compliance by executing and implementing agencies of their obligations and responsibilities for project implementation in accordance with ADB's policies and procedures.

At Loan Negotiations the borrower and ADB shall agree to the PAM and ensure consistency with the Loan agreement. Such agreement shall be reflected in the minutes of the Loan Negotiations. In the event of any discrepancy or contradiction between the PAM and the Loan Agreement, the provisions of the Loan Agreement shall prevail.

After ADB Board approval of the project's report and recommendations of the President (RRP) changes in implementation arrangements are subject to agreement and approval pursuant to relevant Government and ADB administrative procedures (including the Project Administration Instructions) and upon such approval they will be subsequently incorporated in the PAM.

ABBREVIATIONS

ADB	=	Asian Development Bank
ADF	=	Asian Development Fund
AFS	=	audited financial statements
DMF	=	design and monitoring framework
DPP	=	Development Project Proposal
EA	=	executing agency
EIA	=	environmental impact assessment
EMP	=	environmental management plan
ERD	=	Economic Relations Division
GACAP	=	governance and anticorruption action plan
GDP	=	gross domestic product
HVDC	=	high voltage direct current
IA	=	implementing agency
ICB	=	international competitive bidding
IEE	=	initial environmental examination
kV	=	kilo volt
LILO	=	loop-in loop-out
MOU	=	memorandum of understanding
MW	=	megawatt
PAI	=	project administration instructions
PAM	=	project administration manual
PGCB	=	Power Grid Company of Bangladesh Ltd.
PGCIL	=	Power Grid Corporation of India Ltd.
PMU	=	project management unit
RO	=	resettlement officer
RP	=	resettlement plan
RRP	=	report and recommendation of the President to the Board
SPS	=	Safeguard Policy Statement
TOR	=	terms of reference

I. PROJECT DESCRIPTION

1. The People's Republic of Bangladesh and India will establish a cross-border link (the Interconnection) between the western electrical grid of Bangladesh and the eastern electrical grid of India to facilitate the exchange of electric power between the countries. In accordance with technical, operational, and economic considerations, the proposed Interconnection will include a 112 long kilometer, 400 kV double circuit transmission line between the electrical substations at Baharampur in India and Bheramara in Bangladesh; a 400 kV switching station at Baharampur; a 500 MW back-to-back high voltage direct current (HVDC) sub-station (400/230 kV) at Bheramara, and associated infrastructure on both sides. The Interconnection will facilitate an initial power flow of 500MW into Bangladesh from the Indian grid starting 2013 to partly address the significant power shortages in Bangladesh, with a provision to enhance the power flow to 1,000 MW. The SASEC Bangladesh-India Electrical Grid Interconnection Project (the Project) consists of the Bangladesh portion of the Interconnection.

A. Impact and Outcome

2. The project impact and outcome remain as they are defined in the original project design. The impact will be greater regional cooperation in the power sector contributing to economic growth in Bangladesh. The outcome is the successful development and operation of a power transmission link between Bangladesh and India. The project is expected to alleviate the power crisis in Bangladesh by making available up to 500 MW of additional power starting in 2013.

B. Outputs

3. The physical outputs of the project are 27 kilometers (km) of 400 kV double-circuit transmission line in Bangladesh, a 500 MW back-to-back HVDC substation (400k/230kV) at Bheramara, a 4 km 230 kV double-circuit loop-in loop-out and 230kV switching station at Bheramara to link to the transmission network in Bangladesh.¹ Under separate technical assistance, ADB is facilitating capacity building and information sharing on cross-border electricity trading and the development of interconnection agreements between the two countries.²

II. IMPLEMENTATION PLANS

5. The Project will be commissioned in Q4 2013 and the loan closing will be 31 December 2014 after certification payments are completed. The implementation plan is shown in Figure 1.

¹ Transmission line length reflects the final right-of-way alignment adopted for the project.

² ADB.2010. *Technical Assistance to Bangladesh for Bangladesh-India Electrical Grid Interconnection Project*. Manila.

A. Project Readiness Activities

For 44192-01

Activities (Starting March 2010)	1	2	3	4	5	6	7	8	9	10	11	12	Who responsible
Advance contracting actions	X												PGCB
Retroactive financing actions		X											PGCB and ADB
Establish project implementation arrangements	X												PGCB
ADB Board approval						X							ADB
Loan signing								X					ADB and ERD
Government legal opinion provided										X			ERD
Government budget inclusion								X					ERD and PGCB
Loan Effectiveness											X		ERD

For 44192-14

Activities (Starting January 2013)	1	2	3	4	5	6	7	8	9	10	11	12	Who responsible
Advance contracting actions	NA												PGCB
Retroactive financing actions								X					PGCB and ADB
Establish project implementation arrangements	NA												PGCB
ADB Board approval									X				ADB
Loan signing									X				ADB and ERD
Government legal opinion provided													ERD
Government budget inclusion	X												ERD and PGCB
Loan Effectiveness										X			ERD

B. Overall Project Implementation Plan

Figure 1: Overall Project Implementation Plan

[illegible]

III. PROJECT MANAGEMENT ARRANGEMENTS

A. Project Stakeholders – Roles and Responsibilities

Project Stakeholders	Management Roles and Responsibilities
Executing Agency Power Grid Company of Bangladesh (PGCB)	<ul style="list-style-type: none"> Responsible for supervising and monitoring of project operational performance on the Bangladesh side
Project Management Unit	<ul style="list-style-type: none"> PMU, headed by a project director, will implement the project
Steering Committee	<ul style="list-style-type: none"> Chaired by the Power Secretary of Bangladesh
Bangladesh Power Development Board	<ul style="list-style-type: none"> Single buyer procuring power in Bangladesh
Asian Development Bank	<ul style="list-style-type: none"> Will undertake regular project reviews and facilitate in implementation of the project

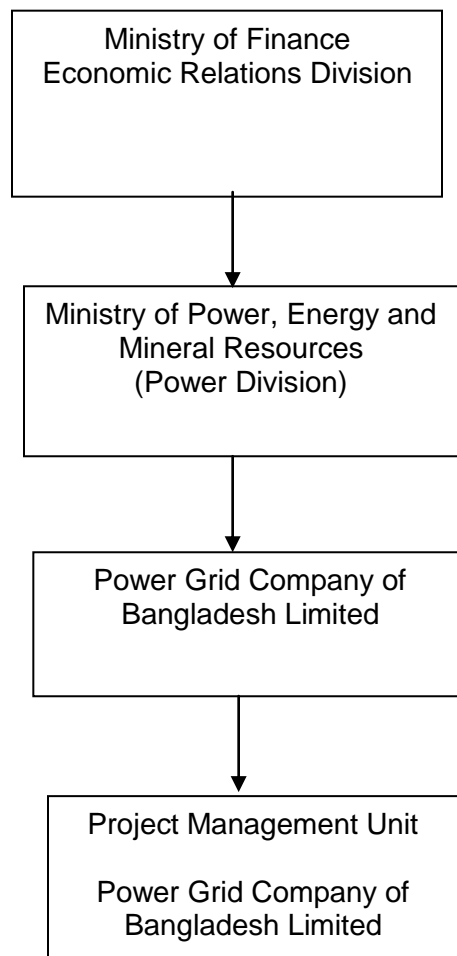
B. Key Persons Involved in Implementation

Executing Agency	
Power Grid Company of Bangladesh Ltd.	K I Hasan Project Director Red Crescent Concorde Tower (6 th Floor) 17 Mohakhali C/ A, Dhaka-1212 Email address: project-gi@pgcb.org.bd Telephone No.: +8802714099363
Asian Development Bank	
Division Director	Yongping Zhai Director, Energy Division Telephone No.: (63-2) 632-6301 Email address: yzhai@adb.org
Mission Leader	Len George Energy Specialist Telephone No.: (63-2) 632-6633 Email address: lgeorge@adb.org

C. Project Organization Structure

6. Power Grid Company of Bangladesh Ltd. (PGCB), a state electric transmission utility, will be the Executing Agency (EA) as well as the Implementing Agency (IA) for the Project. It will be responsible for supervising project implementation and monitoring of project operational performance. To ensure effective project implementation, a project implementation unit (PMU), headed by a project director, has been established. A Steering Committee chaired by the Power Secretary has been constituted to review the progress and achievements of the Project.

Figure 2: Organization Structure



IV. COSTS AND FINANCING

7. The total estimated cost of the Project (interconnection facilities on the Bangladesh side) will be \$199.0 million. The HVDC substation and 400 and 230 kV transmission facilities are proposed to be funded by ADB and the Government of Bangladesh. The Government of Bangladesh will finance taxes and duties, land acquisition and development costs, environment and social mitigation, overheads and consulting services for project implementation.

A. Detailed Cost Estimates by Expenditure Category (Overall Project)

For 44192-01 and 44192-14

(\$ million)

Item	Current Amount ^a	Additional Financing ^b	Total Amount ^c	% of Base Cost
A. Base Cost				
1. Civil Works, Equipment, Freight and Insurance ^d	137.4	39.4	176.8	92.3
2. Environment and Social Mitigation	0.1	0.6	0.7	0.4
3. Land Acquisition and Development Costs	9.5	(1.5)	8.0	4.2
4. Consulting Services (Project Implementation)	4.9	0.1	5.0	2.6
5. Overheads	1.1	(0.1)	1.0	0.5
Subtotal (A)	153.0	38.5	191.5	100.0
B. Contingencies^e	0.0	1.6	1.6	0.8
C. Financing Charges During Implementation^f	5.6	0.3	5.9	3.1
Total (A+B+C)	158.6	40.4	199.0	103.9

^a Refers to the original amount. Includes taxes and duties of \$ 15.5 million to be financed from government resources.

^b In mid-2013 prices.

^c Includes taxes and duties of \$ 35.4 million to be financed from government resources.

^d Civil works, equipment, freight and insurance costs combined based on turnkey package bids.

^e Physical contingencies not considered based on advance stage of project completion in June 2013. Includes only price contingencies computed at 1.9% on foreign exchange costs and 7.8% on local currency costs.

^f Includes interest during construction to be paid by PGCB.

Source: Revised Development Project Proposal, 2013 and ADB staff estimates in June 2013.

B. Allocation and Withdrawal of Loan Proceeds

For the Original Project

CATEGORY				ADB FINANCING
Number	Item	Total Amount Allocated for ADB Financing (SDR) Category Category		Percentage and Basis for Withdrawal from the Loan Account
1	Equipment	65,986,000		
1A	Transmission Lines		6,214,387	100 percent of total expenditure claimed*
1B	HVDC Substation		59,771,613	100 percent of total expenditure claimed*
2	Unallocated			
	Total	65,986,000		

* Exclusive of all duties and taxes imposed within the territory of the Borrower.

For the Additional Financing

CATEGORY				ADB FINANCING
Number	Item	Total Amount Allocated for ADB Financing (additional financing)		Percentage and Basis for Withdrawal from the Loan Account
		(SDR) Category	Category	
1	Equipment	7,904,000		100 percent of total expenditure claimed*
	Total	7,904,000		

* Exclusive of all duties and taxes imposed within the territory of the Borrower.

C. Detailed Cost Estimates by Financier (Overall Project)

(\$ million)

Item	ADB		Govt. of Bangladesh (incl. PGCB)		Total
	Amount	% of Cost Category	Amount	% of Cost Category	Amount
A. Investment Costs					
1. Civil Works, Equipment and Freight and Insurance	110.6	63%	66.2	37%	176.8
2. Land Acquisition and Development Costs	0.0	0%	8.0	100%	8.0
3. Environment and Social Mitigation	0.0	0%	0.7	100%	0.7
4. Consulting Services (Project Implementation)	0.0	0%	5.0	100%	5.0
5. Overheads	0.0	0%	1.0	100%	1.0
Total Base Cost	110.6	58%	80.9	42%	191.5
B. Contingencies	1.4	88%	0.2	12%	1.6
C. Financing Charges	0.0	0%	5.9	100%	5.9
Total Project Cost (A.+B.+C.)	112.0	56%	87.0	44%	199.0
% Total Project Cost	56.3%		43.7%		

ADB = Asian Development Bank, PGCB = Power Grid Company of Bangladesh

Taxes and Duties included under Civil Works, Equipment, Freight and Insurance are funded by Government of Bangladesh.

Source: In June 2013 based on 2013 prices, discussions with PGCB and revised development Project Proposal (2013).

D. Detailed Cost Estimates by Year (Overall Project)

(\$ million)

For 44192-01 and 44192-14

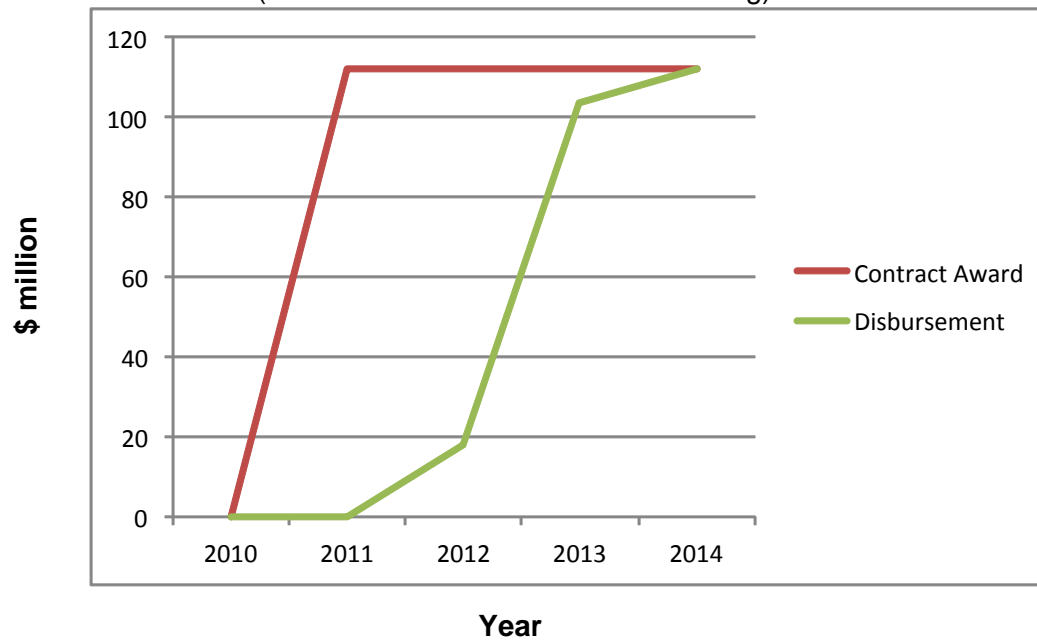
Item	Total Cost	Year 1		Year 2		Year 3		Year 4	
		Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category
A. Investment Costs									
1. Civil Works, Equipment and Freight and Insurance	176.8	25.9	15%	4.6	3%	117.4	66%	28.9	16%
2. Land Acquisition and Development Costs	8.0	5.4	67%	1.1	14%	1.0	13%	0.5	6%
3. Environment and Social Mitigation	0.7	0.1	17%	0.0	0%	0.6	83%	0.0	0%
4. Consulting Services (Project Implementation)	5.0	1.2	24%	1.3	26%	1.7	34%	0.8	17%
5. Overheads	1.0	0.0	3%	0.3	27%	0.5	51%	0.2	18%
Total Base Cost	191.5	32.6	17%	7.3	4%	121.2	63%	30.4	16%
B. Contingencies	1.5	0.0	0%	0.0	0%	0.0	0%	1.5	100%
C. Financing Charges	5.9	0.5	9%	1.1	19%	2.9	50%	1.3	22%
Total Project Cost (A+B+C)	199.0	33.1	17%	8.5	4%	124.2	62%	33.2	17%
% Total Project Cost	100.0	16.7%		4.2%		62.4%		16.7%	

Source: In mid-2013 prices, discussions with PGCB, revised Development Project Proposal (2013)

Note: Differences in the percentages are due to the rounding-off of figures.

E. Contract and Disbursement S-curve (Overall Project)**Figure 3: Contract Award and Disbursement**

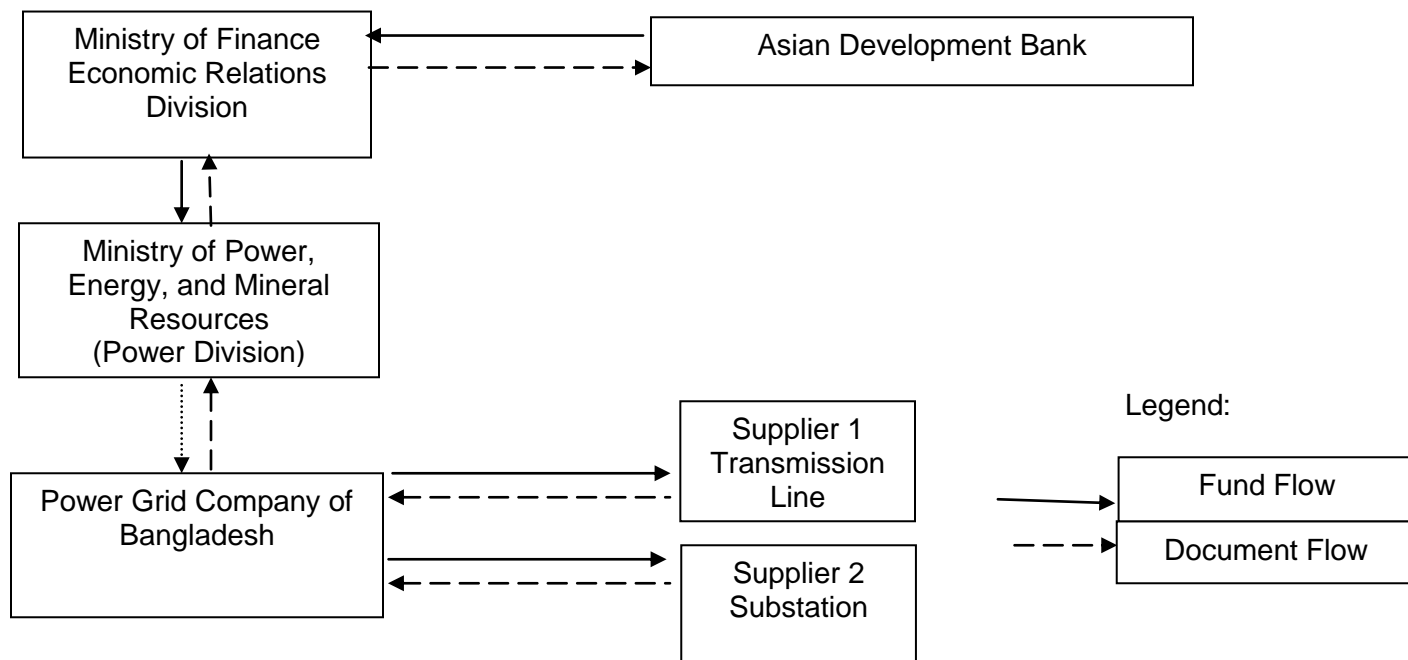
For 44192-01 and 44192-14 (contracts awarded under ADB funding)



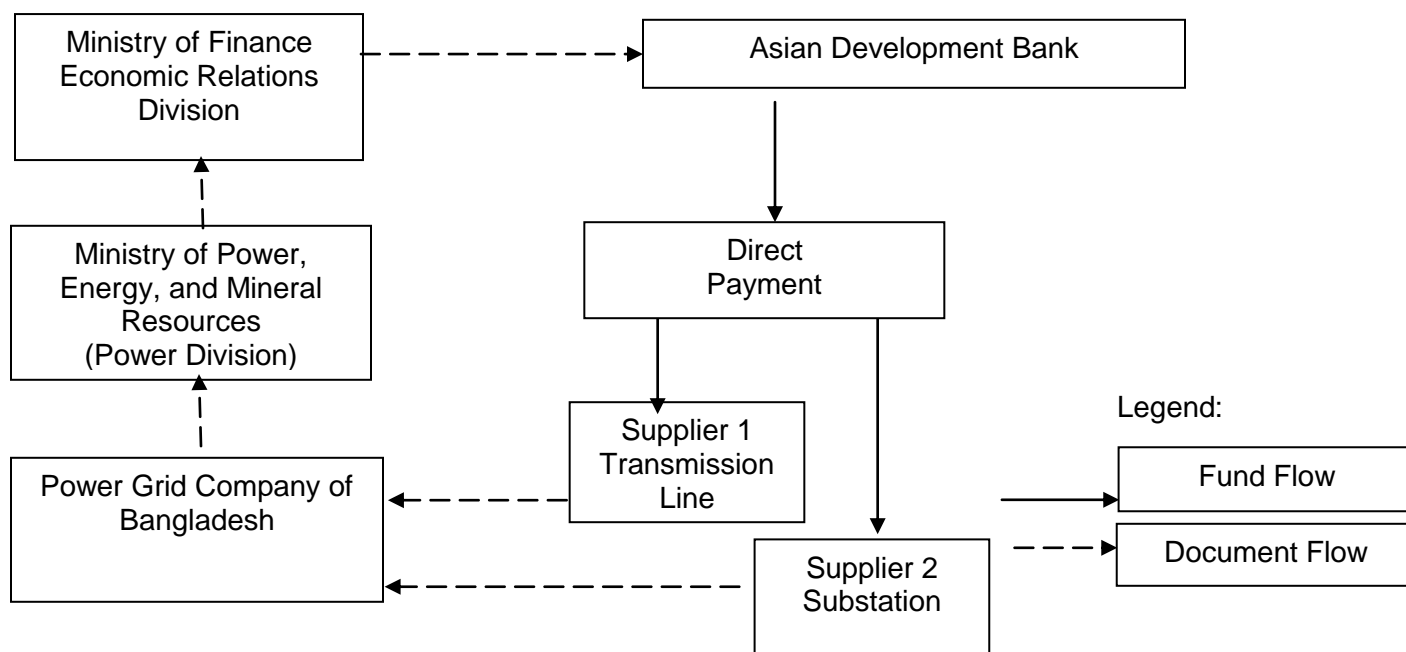
F. Fund Flow

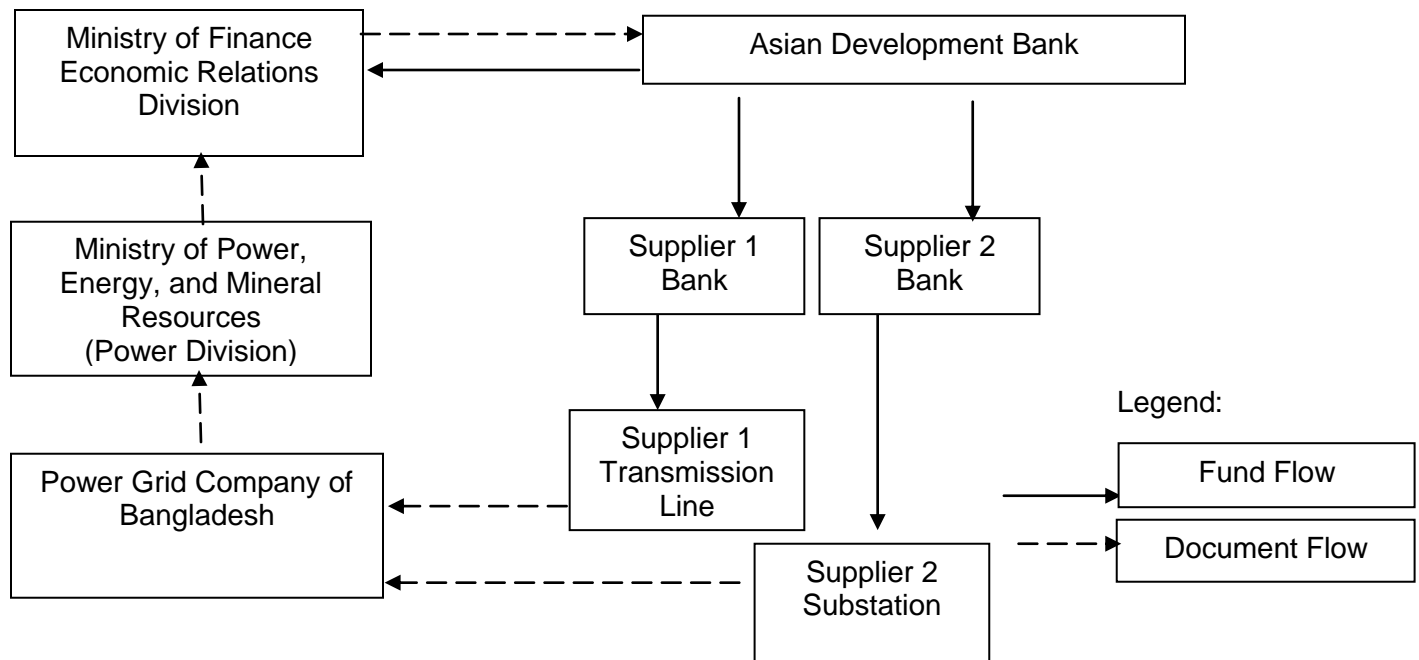
Figure 4: Fund Flow Diagram

For Reimbursement Procedures



For Direct Payment Procedure



For Commitment Procedure

V. FINANCIAL MANAGEMENT

A. Financial Management Assessment

8. The EA for the Project, PGCB, was incorporated under the Companies Act 1994 as part of the Government's restructuring of the power sector. PGCB is responsible for the construction, operation, and maintenance of high voltage transmission system in the country. The financial management assessment (FMA) was conducted in accordance with ADB's *Financial Management and Analysis of Projects*, 2005 during Project preparation and was found to be acceptable. PGCB, a recipient of ongoing ADB loans including Loan 2039: BAN Power Sector Development Project, Loan 2332: BAN Sustainable Power Sector Development Project and is an Executing Agency for the 2012 Power System Expansion and Efficiency Improvement Investment Program. It is familiar with ADB's procedures and reporting requirements. There are no major changes between the financial management assessment for PGCB conducted in 2010 and 2012. PGCB is listed on the Dhaka Stock Exchange and its financial parameters are disclosed on a quarterly basis. PGCB has been rotating its external auditors on a periodic basis. PGCB is capable of managing fund flow, disbursement procedure, accounting and financial reporting under the Project.

9. The levels of accounts receivables for PGCB in 2012 are 1.98 months of sales. The debt equity ratio is currently at 72:28 while the debt service coverage ratio at 1.78 is higher than the requirement of 1.2. The ratio of total operating expenses to total operating revenue is below 85%. The notification of BERC transmission tariff regulations based on a cost plus regulated rate of return and its implementation has been delayed. Notification of these regulations would improve the long-term financial sustainability of the company. The Government has indicated these tariff regulations would be notified in 2014 following which it would be implemented by PGCB. It is also recommended that PGCB review its tariff structure to re-orient to a capacity tariff mechanism based on its underlying cost structure. Actuarial valuation for gratuity scheme has not been conducted and there are legacy issues from the restructuring period. PGCB's audited financial statements indicate that the company needs to take steps for proper fixed asset register and physical verification of assets and PGCB is undertaking studies for this starting 2012. Audited project financial statements for the loan were received on time and presented a fair view with audit observations being settled by PGCB. The recommendations on tariff notification, fixed asset register, verification of assets need to be addressed.

B. Disbursement

10. The Loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2012, as amended from time to time), and detailed arrangements agreed upon between the Government and ADB. Disbursement of loan funds under the Project will be for the two turnkey packages. ADB's direct payment, commitment, reimbursement procedure will be followed. Reimbursement procedures will be applicable under retroactive financing in case payments are released prior to loan effectiveness. For effective cash-flow management linked to the additional loan, PGCB will obtain no-objection from the contractor for the last 10% milestone payments and price variation to be financed under the additional loan.

11. Before the submission of the first withdrawal application, the Borrower should submit to ADB sufficient evidence of the authority of the person(s) who will sign the withdrawal applications on behalf of the Borrower, together with the authenticated specimen signatures of each authorized person. The minimum value per withdrawal application is US\$100,000, unless

otherwise approved by ADB. The Borrower will consolidate claims to meet this limit for reimbursement claims. The EA will be responsible for preparing disbursement projections for each year, requesting budgetary allocations for counterpart funds, collecting supporting documents and preparing and sending withdrawal applications. Withdrawal applications and supporting documents will demonstrate, among other things that the goods, and/or services for the two turnkey packages were produced in or from ADB members, and are eligible for ADB financing. Government counterpart funds will be used to finance the remaining miscellaneous works, services, taxes and duties.

C. Accounting

12. PGCB will maintain separate project financial statements and records by funding source for all expenditures incurred on the Project. The PMU will prepare consolidated project financial statements in accordance with the government's accounting laws and regulations which are consistent with international accounting principles and practices. Consolidated project financial statements shall include receipts and payments relating both the original loan as well as the additional financing. Separate financial statements shall not be prepared for the additional financing.

D. Auditing

13. PGCB will cause the detailed consolidated project financial statements to be audited in accordance with International Standards on Auditing and with the Government's audit regulations, by an independent auditor acceptable to ADB. The audited project financial statements will be submitted in the English language to ADB within six months of the end of the fiscal year. The annual audit report will include an audit management letter and audit opinions which cover (i) whether the project financial statements present a true and fair view or are presented fairly, in all material respects, in accordance with the applicable financial reporting framework; (ii) whether loan and grant proceeds were used only for the purposes of the project or not; (iii) the level of compliance for each financial covenant contained in the legal agreements for the project; (iv) use of the imprest fund procedure; and (v) the use of the statement of expenditure procedure certifying to the eligibility of those expenditures claimed under SOE procedures, and proper use of the SOE and imprest procedures in accordance with ADB's Loan Disbursement Handbook and the project documents. In addition, PGCB shall submit a copy of its own annual financial statements within one month of their approval by the governing body of PGCB.

14. Compliance with financial reporting and auditing requirements will be monitored by review missions and during normal program supervision, and followed up regularly with all concerned, including the external auditor. The Government and PGCB have been made aware of ADB's policy on delayed submission, and the requirements for satisfactory and acceptable quality of the audited project financial statements.¹ ADB reserves the right to require a change in

¹ ADB Policy on delayed submission of audited project financial statements:

- When audited project financial statements are not received by the due date, ADB will write to the executing agency advising that (i) the audit documents are overdue; and (ii) if they are not received within the next six months, requests for new contract awards and disbursement such as new replenishment of imprest accounts, processing of new reimbursement, and issuance of new commitment letters will not be processed.
- When audited project financial statements have not been received within 6 months after the due date, ADB will withhold processing of requests for new contract awards and disbursement such as new replenishment of imprest accounts, processing of new reimbursement, and issuance of new commitment

the auditor (in a manner consistent with the memorandum and articles of association of the recipient, or for additional support to be provided to the auditor, if the audits required are not conducted in a manner satisfactory to ADB, or if the audits are substantially delayed. ADB reserves the right to verify the project's financial accounts to confirm that the share of ADB's financing is used in accordance with ADB's policies and procedures.

15. Public disclosure of the project financial statements, including the audit report on the project financial statements, will be guided by ADB's Public Communications Policy (2011)². After review, ADB will disclose the project financial statements for the project and the opinion of the auditors on the financial statements within 30 days of the date of their receipt by posting them on ADB's website. PGCBs own annual financial statements and the Audit Management Letter will not be disclosed.

VI. PROCUREMENT AND CONSULTING SERVICES

A. Advance Contracting and Retroactive Financing

16. All advance contracting and retroactive financing were undertaken in conformity with ADB's *Procurement Guidelines* (2013, as amended from time to time) (ADB's *Procurement Guidelines*) and ADB's *Guidelines on the Use of Consultants* (2013, as amended from time to time) (ADB's *Guidelines on the Use of Consultants*). The issuance of invitations to bid under advance contracting was subject to ADB's prior approval. The Borrower and the EA have been advised that approval of advance contracting and retroactive financing does not commit ADB to finance the Project. PGCB has implemented ADB-financed projects and is conversant with ADB's guidelines and procedures. Further, PGCB has recruited Power Grid Corporation of India Ltd. (PGCIL) to assist in procurement and project management. PGCIL has extensive experience in ADB and World Bank –financed projects. Hence, it is assessed that both PGCB and PGCIL are fully capable of handling the two components under the Project.

17. Advance contracting. This is no longer requested.

18. Retroactive financing. The Borrower has requested approval for retroactive financing which was approved. Retroactive financing under the additional financing loan will be limited to 20% of the loan amount provided that the expenditures are made in accordance with ADB's Procurement Guidelines and safeguard policies and were incurred within 12 months before the effectiveness of the loan agreement.

B. Procurement of Goods, Works and Consulting Services

19. Procurement of goods and works was completed in accordance with ADB's *Procurement Guidelines*. International competitive bidding procedures were followed for the procurement of the transmission line and the substation packages. Procurement under the Project has been completed.

letters. ADB will (i) inform the executing agency of ADB's actions; and (ii) advise that the loan may be suspended if the audit documents are not received within the next six months.

- When audited project financial statements have not been received within 12 months after the due date, ADB may suspend the loan.

² Available from <http://www.adb.org/documents/pcp-2011?ref=site/disclosure/publications>

VII. SAFEGUARDS

20. The Social and Environmental Unit (SEU) of PGCB will be responsible to coordinate and implement the entire social, environment, and resettlement activities (in case of unanticipated impacts) including the implementation of the RP and the environment management plan (EMP) of the project efficiently. The SEU has a dedicated Resettlement Officer (RO) for the project. To monitor activities enumerated in the EMP and RP and report on them, a two tier monitoring system is operational. This includes both internal and external monitoring. The first tier will be internal monitoring, and would be the responsibility of the RO based on specific involuntary resettlement indicators as per the agreed and approved RP. The reports of the internal monitoring would be prepared quarterly and submitted to PGCB and ADB for review and approval.

21. At the second tier, two external experts are engaged by ADB to monitor the progress of the implementation of the RP and the EMP. The external experts will monitor the same using the specific indicators developed in line with the resettlement objectives and activities and verify the claims of the internal monitoring reports. The external experts would prepare the report of monitoring annually and submit the same to PGCB and ADB for review. Monitoring reports prepared both internally and by the external experts would be disclosed in a timely manner, in an accessible place and in a form and language(s) understandable to affected persons and other stakeholders as well as up loaded on the PGCB and ADB websites.

22. All the activities detailed in the poverty and social action plans including livelihood restoration programs, would be monitored, and reported as enumerated in the previous paragraphs. These would be carried out in line with the applicable policies of ADB by way of which, in case of involuntary resettlement, all efforts would be made to improve or at least restore the quality of life of all displaced persons. Pursuant to ADB's *Safeguard Policy Statement (2009)* (SPS), ADB funds may not be applied to the activities described on the ADB Prohibited Investment Activities List set forth at Appendix 5 of the SPS.

VIII. PERFORMANCE MONITORING, EVALUATION, REPORTING AND COMMUNICATION

A. Project Design and Monitoring Framework

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
Outcome Current project Successful development and operation of a transmission link between Bangladesh and India	Current project 250-500MW of power (1,152-3456 GWh) available over the interconnection to Bangladesh from 2012 (2009 baseline: no transfer or power)	Current project BPDB annual reports	Current project Assumptions Availability of 250-500 MW of power from India to Bangladesh on long term basis Power interconnection infrastructure and capacity building are successfully completed by 2012 Risks Cost of delivered power is not competitive compared with options in Bangladesh. Delay in entering into power purchase agreements Inadequate power generation capacity in the eastern region of India
With additional financing Unchanged	With additional financing 250-500 MW of power (about 1,152-3,456 GWh annually) available over the interconnection to Bangladesh from late 2013 (2009 baseline: 0 MW, 0 GWh)	With additional financing Unchanged	With additional financing Assumptions Power interconnection infrastructure and capacity building successfully completed by end of 2014 Risks Unchanged
Outputs Physical Investment Current project 1. Bahrampur–Bheramara power transmission link constructed	Current project 1. Creation of one new HVDC back-to-back substation of 400/230 kV at Bheramara (Bangladesh) by 2012 by PGCB	Current project PGCB annual report	Current project Assumptions Counterpart funds for timely project implementation are made available by the government and PGCB. Approval of contract awards by the relevant authorities is timely.

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
<p>With additional financing</p> <p>1. Unchanged</p>	<p>2. Creation of 40 km of 400 kV double-circuit transmission line from Bheramara to the Indian border by 2012</p> <p>3. Creation of 5 km of 230 kV double-circuit LILO and 230 kV switching station at Bheramara substation by 2012 by PGCB</p> <p>With additional financing^a</p> <p>1. Creation of one new HVDC back-to-back substation of 400/230 kV at Bheramara (Bangladesh) by 2013 by PGCB</p> <p>2. Creation of 27 km of 400 kV double-circuit transmission line from Bheramara to the Indian border by 2013</p> <p>3. Creation of 4 km of 230 kV double-circuit LILO and 230 kV switching station at Bheramara substation by 2013 by PGCB</p>	<p>PGCB annual report</p> <p>PGCB annual report</p> <p>With additional financing</p> <p>Unchanged</p>	<p>Land acquisition and approvals for construction of substation and transmission lines are timely.</p> <p>Risks</p> <p>Limited implementation capacity of the BPDB</p> <p>Increase in the prices of raw materials exceeds contingency and inflation forecasts.</p> <p>With additional financing</p> <p>Unchanged</p>
<p>Nonphysical Investment</p> <p>Current Project</p> <p>1. Built capacity and improved information sharing on power exchange and planning, development,</p>	<p>Current project</p> <p>1. Number of BPDB, PGCB, BERC, and Power Division personnel attending cross-</p>	<p>Current project</p> <p>Workshop attendance and participant feedback</p>	<p>Current project Assumption</p> <p>Information sharing and capacity building in other Asian examples are relevant to the development of interconnection</p>

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
operation, maintenance, and regulation of the interconnection.	border power trading workshop		agreements between the two countries.
With additional financing	With additional financing	With additional financing	With additional financing
Unchanged	1. At least 10 BPDB, PGCB, BERC and Power Division personnel attending cross-border power trading workshop in 2013	Unchanged	Unchanged
Current project	Current project	Current project	Current project Risk
2. Concluded transmission interconnection, operation, and power exchange agreements between the two countries.	2. Long-term agreements for power transfer signed between Bangladesh and India	Signed transmission interconnection, operation, and power exchange agreements between Bangladesh and India	Consultants with adequate experience in similar cross-border transfers are not available in the proposed time frame.
With additional financing	With additional financing	With additional financing	With additional financing
Unchanged	2. Long-term agreements for power transfer signed between Bangladesh and India starting 2012	Unchanged	Risk Removed

Activities with Milestones (Overall Project)	Inputs
<p>1. (a) 400/230 kV Substation</p> <p>1.1 Procurement of major equipment: Issue bidding documents by March 2010 (unchanged, completed)</p> <p>1.2 Award contracts by March 2011 (changed, completed)</p> <p>1.3 Start construction of substation by April 2011 (changed, completed)</p> <p>1.4 Commission substation by Q3 of 2013 (changed)</p> <p>1.5 Issue provisional completion certificate by Q4 of 2013 (added)</p> <p>1.6 Issue final completion certificate by Q2 of 2014 (added)</p> <p>(b) Transmission Lines</p> <p>1.7 Issue bidding documents by March 2010 (unchanged, completed)</p> <p>1.8 Award contracts by November 2010 (changed, completed)</p> <p>1.9 Start construction of transmission lines by December 2010 (changed, completed)</p> <p>1.10 Commission transmission lines by Q2 of 2013 (changed)</p> <p>1.11 Issue provisional completion certificate milestone by Q2 of 2013 (added)</p> <p>1.12 Issue final completion certificate by Q1 of 2014 (added)</p> <p>2. Consulting Services (S-CDTA to review agreements)^b</p> <p>2.1 Start consultant selection in April 2012 (changed, completed)</p> <p>2.2 Mobilize consultant from May 2012 (changed, completed)</p> <p>2.3 Complete services by December 2013 (changed)</p> <p>3. Capacity building and information sharing</p> <p>3.1 Prepare power market report in 2012</p> <p>3.2 Conduct workshop on cross-border power trading by Q3 2013</p>	<p>Loan</p> <p>ADB:</p> <p>\$100.0 million from ADF (current)</p> <p>\$12.0 million from ADF (additional)</p> <p>\$112.0 million from ADF (overall)</p> <p>Government of Bangladesh:</p> <p>\$58.6 million (current)</p> <p>\$28.4 million (additional)</p> <p>\$87.0 million (overall)</p>

ADB = Asian Development Bank, ADF = Asian Development Fund, BERC = Bangladesh Energy Regulatory Commission, BPDB = Bangladesh Power Development Board, GWh = gigawatt-hour, HVDC = high-voltage direct current, km = kilometer, kV = kilovolt, kWh = kilowatt-hour, LILO = loop in loop out, MW = megawatt, PGCB = Power Grid Company of Bangladesh, Q = quarter, S-CDTA = small-scale capacity development technical assistance.

^a Based on the final right of way adopted for the transmission lines.

^b ADB. 2010. Technical Assistance to Bangladesh for *Bangladesh-India Electrical Grid Interconnection Project*. Manila.

Sources: Power Grid Company of Bangladesh and revised development project proposal.

B. Monitoring

23. Overall monitoring of the Project in terms of progress will be undertaken by the Steering Committee, which will review monthly progress reports submitted by PGCB. The Projects Department of PGCB will monitor progress, procurement, quality, contract management, and fiduciary management. In addition, the Projects Department will undertake regular field visits and provide guidance to the Project Director and the Project Consultants. A national social safeguard specialist will monitor the implementation of the resettlement plan, conduct consultations with affected persons and report implementation status of the RP. To ensure compliance with the environmental regulations and requirements laid down in the environment action plan, a national environment specialist will be recruited who will review the status on a regular basis and provide guidance and submit compliance reports.

C. Evaluation

24. ADB will field regular review missions every six months at the minimum to review status of contract awards, disbursements, physical progress, and implementation of the environmental management plan and resettlement plans. Within 6 months of physical completion of the Project, PGCB will submit a project completion report (PCR) to ADB. Subsequently, ADB will field a mission to finalize the PCR.

Table 1: Evaluation Methodology

Evaluation Activity	Purpose	Methodology	Who responsible and involved
Review Mission	Review the progress of the project and provide guidance to facilitate implementation	Site visits and meetings with EA officials, contractors, consultants at least twice a year	ADB/ PGCB
Mid Term Review	Comprehensive review of the project	Not needed as review missions will be conducted regularly and the project implementation is only 3 years	
Project completion report	Evaluate the overall output of the project and its relevance and suitability	Site visit and meetings with EA officials, contractors, consultants	ADB/ PGCB

D. Reporting

25. PGCB will provide ADB with (i) quarterly progress reports in a format consistent with ADB's project performance reporting system; (ii) consolidated annual reports including (a) progress achieved by output as measured through the indicator's performance targets, (b) key implementation issues and solutions; (c) updated procurement plan, and (d) updated implementation plan for next 12 months; and (iii) a project completion report within 6 months of physical completion of the Project. To ensure projects continue to be both viable and

sustainable, project financial statements and the AFSs, together with the associated auditor's report, should be adequately reviewed.

E. Stakeholder Communication Strategy

26. The Stakeholder Communications Strategy is described in the following table. PGCB 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.

Table 2: Stakeholder Communication Strategy

Project information to be communicated	Means of Communication	Responsibility	Audience	Frequency
Report and Recommendation of the President (RRP) with linked documents	ADB website	ADB	ADB, Government of Bangladesh, Development Partners, Civil Society, Individuals	Once
Project information while planning/ designing	Discussions and stakeholder consultations	PGCB	Project beneficiaries	Regular intervals during planning and design
Status of implementation during construction	Boards at site	EA/ Contractors	Project beneficiaries	All the time at construction sites
Project Performance Reports and Project Information Documents	ADB website	ADB	ADB, Government of Bangladesh, Development Partners, Civil Society, Individuals	Every quarter
Monthly progress reports	Website of PGCB, Reports to the Joint Working Groups and Joint Steering Committees	PGCB	ADB, Government of Bangladesh, Development Partners, Civil Society, Individuals	Monthly
Project completion report	ADB website	ADB	ADB, Government of Bangladesh, Development Partners, Civil Society, Individuals	Once

IX. ANTICORRUPTION POLICY

27. ADB reserves the right to investigate, directly or through its agents, any violations of the Anticorruption Policy relating to the Project. All contracts financed by ADB shall include provisions specifying the right of ADB to audit and examine the records and accounts of the executing agency and all Project contractors, suppliers, consultants and other service providers. Individuals/entities on ADB's anticorruption debarment list are ineligible to participate in ADB-financed activity and may not be awarded any contracts under the Project.

28. To support these efforts, relevant provisions are included in the loan and project agreements and the bidding documents for the Project.

X. ACCOUNTABILITY MECHANISM

29. People who are, or may in the future be, adversely affected by the project may submit complaints to ADB's Accountability Mechanism. The Accountability Mechanism provides an independent forum and process whereby people adversely affected by ADB assisted projects can voice, and seek a resolution of their problems, as well as report alleged violations of ADB's operational policies and procedures. Before submitting a complaint to the Accountability Mechanism, affected people should make a good faith effort to solve their problems by working with the concerned ADB operations department. Only after doing that, and if they are still dissatisfied, should they approach the Accountability Mechanism.

XI. RECORD OF PAM CHANGES

To be inserted as and when any changes are necessary and agreed by both sides.

The Borrower, PGCB and ADB agreed to this updated version of the PAM on 20 August 2013 at the time of loan negotiations for the additional financing of the Project.