

Bangladesh : Power System Upgrade and Expansion (Chattogram Area) Project

1. Project Information

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|-----------------------------------|--|------------------------|---|
| Project ID: | P000088 | Instrument ID: | L0088A |
| Member: | Bangladesh | Region: | Southern Asia |
| Sector: | Energy | Sub-sector: | Electricity transmission and distribution |
| Instrument type: | <input checked="" type="checkbox"/> Loan:120.00 US Dollar million <input type="checkbox"/> Guarantee | Lead Co-financier (s): | |
| ES category: | B | Borrowing Entity: | Ministry of Finance, Bangladesh |
| Implementing Entity: | Power Grid Company of Bangladesh Limited (PGCB) | | |
| Project Team Leader: | Raqib Ahmed Chowdhury | | |
| Responsible DG: | Rajat Misra | | |
| Responsible Department: | INF1 | | |
| Project Team Members: | Liu Yang, Project Counsel; Shonell Robinson, OSD - Financial Management Specialist; Sheikh Naveed Ahmed, OSD - Social Development Specialist; Pedro Ferraz, OSD - Environment Specialist; Yunlong Liu, OSD - Procurement Specialist | | |
| Completed Site Visits by AIIB: | Nov, 2018 The team visited the project sites in Chattagram during project preparation stage Dec, 2020 Review meeting conducted virtually Sep, 2021 Review meeting conducted virtually Apr, 2022 Multiple virtual implementation monitoring meetings conducted with PIE Aug, 2022 Site Visit with ES specialists | | |
| Planned Site Visits by AIIB: | Jun, 2023 Physical meeting with PIE | | |
| Current Red Flags Assigned: | 1 | | |
| Current Monitoring Regime: | Regular Monitoring | | |
| Previous Red Flags Assigned: | 1 | | |
| Previous Red Flags Assigned Date: | 2022/06 | | |

2. Project Summary and Objectives

The objective of the project is to upgrade and strengthen power transmission systems in the Chittagong area to ensure an adequate and reliable power supply. Project activities include:

- Constructing double circuit transmission lines: (a) for 400 kilovolts covering a distance of approx. 27 kilometers from Anowara to Anandabazar; and (b) for 230 kilovolts covering in total a distance of approx. 26 kilometers, consisting of the following two underground segments: (i) approx. 10-kilometer long transmission line from Khulshi

to Anandabazar, and Anandabazar to Rampur; and (ii) approx. 16-kilometer long transmission line from Madunaghat to Khulshi.

- Constructing two 230 kilovolts gas-insulated switchgear (GIS) substations: (a) a GIS substation at Anandabazar with transformers of 2x350/450 megavolt ampere; and (b) a GIS substation at Khulshi with transformers of 2x350/450 megavolt ampere and 3x80/120 megavolt ampere.

- Constructing two GIS bay extensions of 230 kilovolts at Madunaghat substation and two GIS bay extensions of 230 kilovolts at Khulshi substation.

After completion of the project, the grid network capacity of Chattogram area will be enhanced. The growing demand of this area will be fulfilled with the reliable power supply to industrial, commercial, and residential load points. This will improve voltage stability of 132kV level in the transmission side along with 33kV in distribution side.

3. Key Dates

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|----------------|---------------|------------------------|-------------------------------|
| Approval: | Mar. 26, 2019 | Signing: | Nov. 08, 2019 |
| Effective: | Aug. 03, 2020 | Restructured (if any): | |
| Orig. Closing: | Jun. 30, 2023 | Rev. Closing (if any): | Jun. 30, 2025; Jun. 30, 2025; |

4. Disbursement Summary (USD million)

| | | | |
|-------------------|--------|---|--------------------|
| Contract Awarded: | | Cancellation (if any): | 0.00 |
| Disbursed: | 5.51 | Most recent disbursement (amount/date): | 0.33/Aug. 03, 2022 |
| Undisbursed: | 114.49 | Disbursement Ratio (%) ¹ : | 4.59 |

5. Project Implementation Update

There are three procurement packages, and the bidding process for all the packages has been completed. Contract agreements for Packages 1 and 3 have been signed and disbursements have started since Q1 2022.

Notification of Award for package 2 has been issued in Q4-2022 and is pending for contract agreement signing.

| Components | Physical Progress | Environmental & Social Compliance | Procurement |
|--|-------------------|---|---|
| Component 1: Procurement of material & equipment and necessary installation work | 1% | The consultant has been onboarded by PGCB (PIE) for ESMP Implementation | The bidding process has been completed. The contract agreement for this package (Package 1) has been signed in Q4 2021. |

¹ Disbursement Ratio is defined as the volume (e.g. the dollar amount) of total disbursed amount as a percentage of the net committed volume.

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| including design, erection, testing, and commissioning for Anowara to Anandabazar (New Mooring) 400 kV double circuit overhead line portion: approx. 19.932 km | | | |
| Component 2: Procurement of material & equipment and necessary installation work including design, erection, testing, and commissioning for Anowara to Anandabazar (New Mooring) 400 kV double circuit underground cable portion: approx. 5.253 km; Khulshi to Anandabazar, and Anandabazar to Rampur 230 kV double circuit underground cable line: approx. 26 km; and Madunaghat to Khulshi 230 kV double circuit underground cable line: approx. 16km. | 0% | The consultant has been onboarded by PGCB (PIE) for ESMP Implementation | The bid evaluation process of the relevant procurement package (Package 2) has been completed and the Notification of Award has been issued to the eligible bidder. The contract agreement is expected to be signed within Q1-2023. |
| Component 3: Procurement of material & equipment and necessary installation works including design, erection, testing, and commissioning for 230/132 kV GIS Substation: Anandabazar (New Mooring) with 2x350/450 MVA 230/132 kV transformer; 230/132/33 kV GIS Substation: Khulshi with 2x350/450 | 1% | The consultant has been onboarded by PGCB (PIE) for ESMP Implementation | The bidding process has been completed. The contract agreement for this package (package 3) has been signed in Q1 2022. |

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| MVA 230/132 kV and 3x80/120 MVA 132/33 kV transformer; Two nos. 230 kV GIS bay extension at Madunaghat Substation, two nos. 230kV GIS bay extension at Khulshi Substation. | | | |
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Financial Management:

It is expected to receive the project's first audit report in 2023.

6. Status of the Grievance Redress Mechanism (GRM)

At the PGCB entity level, GRM is in place. Also, a project-level Grievance Redress Committee has been formed.

7. Results Monitoring (please refer to the full RMF, which can be found on the last page of this PIMR)

Project Outcome Indicators:

1. Capacity of power transmission added
2. Additional electricity transmitted annually
3. Daily load shedding in Chittagong

Project Output Indicators:

1. 400 kV transmission lines constructed
2. 230 kV transmission lines constructed
3. 230 kV GIS substations constructed
4. 230 kV line bays constructed

Remarks:

| Project Objective Indicators | Indicator level | Unit of Measure | Cumulative Target Values | | | | | | | | | | | | | | | | | | | | Frequency | Responsibility | Comments | | |
|---|-----------------|-----------------|--------------------------|-----------------|--------|--------|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------------|--------|-----------|----------------|----------------|--------|--|
| | | | Baseline | | 2017 | | 2018 | | 2019 | | 2020 | | 2021 | | 2022 | | 2023 | | 2024 | | End Target | | | | | | |
| | | | Year | Value | Target | Actual | Target | Actual | Target | Actual | Target | Actual | Target | Actual | Target | Actual | Target | Actual | Target | Actual | Year | Target | | | | Actual | |
| Capacity of power transmission added | Project | MVA | 2018 | 0 (Baseline) | | | 0 (Baseline) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1400 | | End of Project | PIE | |
| Additional electricity transmitted annually | Project | GWh | 2018 | 0 (Baseline) | | | 0 (Baseline) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2500 | | End of Project | PIE | |
| Daily Load Shedding in Chattogram | Project | % | 2018 | 11.5 (Baseline) | | | 11.5 (Baseline) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 6 | | End of Project | PIE | |

| Project Intermediate Indicators | Indicator level | Unit of Measure | Cumulative Target Values | | | | | | | | | | | | | | | | | | | | Frequency | Responsibility | Comments | |
|--------------------------------------|-----------------|-----------------|--------------------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------------|--------|-----------|----------------|----------|--------|
| | | | Baseline | | 2018 | | 2019 | | 2020 | | 2021 | | 2022 | | 2023 | | 2024 | | 2025 | | End Target | | | | | |
| | | | Year | Value | Target | Actual | Target | Actual | Target | Actual | Target | Actual | Target | Actual | Target | Actual | Target | Actual | Target | Actual | Year | Target | | | | Actual |
| 400kV transmission line constructed | Project | Km | 2018 | 0 | 0 | 0 | - | 0 | - | 0 | - | 0 | - | 0 | 15 | | 20 | | 27 | | | 27 | | Annually | PIE | |
| 230 kV transmission line constructed | Project | Km | 2018 | 0 | 0 | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | | 12 | | 19 | | | 19 | | Annually | PIE | |
| 230 kV GIS substations constructed | Project | No. | 2018 | 0 | 0 | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | | 1 | | 2 | | | 2 | | Annually | PIE | |
| 230 kV line bays constructed | Project | No. | 2018 | 0 | 0 | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | | 1 | | 2 | | | 2 | | Annually | PIE | |