

# Project Administration Manual

Project Number: 53192-001 and 53192-003  
Loan Number: L4024 and L4028  
November 2020

India: Bengaluru Smart Energy Efficient Power  
Distribution Project

## ABBREVIATIONS

ADB	–	Asian Development Bank
BESCOM	–	Bengaluru Electricity Supply Company Limited
CAAA	–	Controller of Aid Accounts, and Audit
EHS	–	environment, health and safety
EMP	–	environmental management plan
FMA	–	financial management assessment
GRM	–	grievance redress mechanism
IEE	–	initial environment examination
JICA	–	Japan International Cooperation Agency
PAM	–	project administration manual
RMU	–	ring main unit
SOE	–	statement of expenditure

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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 the 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 State of Karnataka, the executing agency, and Bengaluru Electricity Supply Company, the implementing agency, 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 the implementation including compliance by the executing agency and the implementing agency of their obligations and responsibilities for project implementation in accordance with ADB's policies and procedures.

At Loan Negotiations, the borrower and ADB have agreed to the PAM and it ensured consistency with the Loan Agreement. Such agreement is 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, changes in the 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.

## I. PROJECT DESCRIPTION

### A. Background and Rationale

1. The project will (i) convert 7,200 kilometers (km) of overhead distribution lines into underground cables with about 2,800 km of optical fiber cables; and (ii) install 1,700 automated ring main units adapted with a distribution automation system in 6 divisions<sup>1</sup> in urban Bengaluru City, the state of Karnataka. The project will also strengthen institutional capacity of BESCOM<sup>2</sup> in operation and maintenance, environment and social safeguards, financial management, and corporate gender and social inclusion.

### B. Impact, Outcome, and Output

2. The project is aligned with the following impact: a livable Bengaluru urban areas developed. The project will have the following outcome: energy efficiency, reliability, and safety of power supply system in Bengaluru urban areas improved. The design and monitoring framework is in section IX.

3. **Output 1: Smart, and climate and disaster resilient power distribution system established in six divisions in urban areas of Bengaluru.** The project will (i) convert 7,200 km of overhead distribution lines into underground cables with about 2,800 km of optical fiber cables; and (ii) install 1,700 automated ring main units adapted with a distribution automation system (Table 1).

**Table 1: Installation of Underground Cable, Optical Fiber Cable and Ring Main Unit by Division**

Name of Division	Installation of 11 kV underground cable (km)	Installation of 1.1 kV underground and aerial bunched cable (km)	Installation of 11 kV DAS RMU (unit)	Installation of OFC (km)
Indira Nagar	493	1,655	333	901
Jaya Nagar	358	1,090	265	361
Shivaji Nagar	311	391	162	306
Kora Mangala	301	340	386	392
HSR Division	650	855	349	653
White Field	280	517	143	370
<b>Total</b>	<b>2,393</b>	<b>4,848</b>	<b>1,638</b>	<b>2,983</b>

DAS = distribution automation system, km = kilometers, kv = kilo volt, OFC = optical fiber cable, RMU = ring main unit.

Source: Bengaluru Electricity Supply Company Limited.

4. **Output 2: Institutional capacity of implementing agency improved.** The proposed project will strengthen the capacity of Bengaluru Electricity Supply Company Limited (BESCOM) in: (i) operation and maintenance of smart power distribution system, (ii) environment and social

<sup>1</sup> Jaya Nagara, Shivaji Nagar, Indira Nagar, Kora Mangala, HSR Division, and White Field.

<sup>2</sup> BESCOM project refers to Bengaluru City Area (Bengaluru Metropolitan Area Zone).

safeguards, (iii) financial management, and (iv) corporate gender and social inclusion under the approved transaction technical assistance.<sup>3</sup>

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<sup>3</sup> ADB. 2019. *Technical Assistance for Preparing the Bengaluru Smart Energy Efficient Power Distribution Project*. Manila.



## II. IMPLEMENTATION PLANS

### A. Project Readiness Activities

**Table 2: Project Readiness Activities**

Year	2020														
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Indicative Activities													Responsibility		
Establish Project Implementation Arrangement													BESCOM		
Advance Contracting Actions													BESCOM		
Confirmatio of budget inclusion by the government															
Loan Negotiations													ADB, GOI, BESCOM		
ADB Board Approval														ADB	
Submission of government legal opinion															
Loan Signing														ADB, GOI	
Loan Effectiveness															ADB

ADB = Asian Development Bank, BESCOM = Bengaluru Electricity Supply Company Ltd., GOI = Government of India  
 Source: Asian Development Bank estimates.

## B. Overall Project Implementation Plan

**Table 3: Implementation Schedule**

Activities	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
<b>A. DMF</b>																						
<b>Output 1: Smart, and climate and disaster resilient power distribution system established in 6 districts in urban areas of Bengaluru</b>																						
Activity 1.1: Network design completed	■																					
Activity 1.2: Construction contract awarded for conversion of overhead distribution lines to underground cables and adoption of DAS	■																					
Activity 1.3: 11 kV overhead distribution lines converted into underground cables		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Activity 1.4: Low voltage overhead lines converted into underground cables		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Activity 1.5: DAS adopted with automated RMUs		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Activity 1.6: Environment safeguard monitored		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
<b>Output 2: 2. Knowledge of BESCOM on distribution network management system and business practices, and environmental safeguard monitoring improved</b>																						
Activity 2.1: Consulting contract awarded for capacity building	■																					
Activity 2.2: Capacity building trainings conducted		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Activity 2.3: Financial management action plan implemented	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Activity 2.4: Corporate gender equality and social inclusion survey conducted	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Activity 2.5: Corporate gender equality and social inclusion strategy developed	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
<b>B. Management Activities</b>																						
Procurement plan key activities to procure contract packages	■																					
Consultant selection procedures	■																					
Environment management plan key activities		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Gender key activities		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Communication strategy key activities		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Annual and/or midterm review			■				■					■					■					■
Project completion report																						■

DMF = design and monitoring framework, mth = month, Q = quarter.

Source: Bengaluru Electricity Supply Company Limited and Asian Development Bank estimates.

### III. PROJECT MANAGEMENT ARRANGEMENTS

#### A. Project Implementation Organizations: Roles and Responsibilities for Sovereign and Nonsovereign loans

**Table 4: Roles and Responsibilities**

Project Implementation Organizations	Management Roles and Responsibilities
Executing agency: Department of Energy, Karnataka	Overall responsibility for ensuring the project execution on behalf of the State of Karnataka
Department of Finance, Karnataka	Providing ADB loan disbursements in timely manner to the implementing agency  Providing periodic equity injections to BESCO to meet its counterpart fund requirement and to restore financial viability of BESCO
Implementing agency: BESCO board of directors	<ul style="list-style-type: none"> <li>• overall responsibility for implementation of the project</li> <li>• periodic review of the project activities to ensure timely implementation of the project in a timely manner</li> <li>• ensuring compliance with loan covenants including social and environmental safeguards, financial, economic and others</li> <li>• timely approval of bid documents, bid evaluation reports and contract award</li> </ul>
BESCO management and project management office	<p>The implementing agency has multiple levels of management who are responsible for the timely implementation of the project. The key personnel for purposes of this project are as follows:</p> <ul style="list-style-type: none"> <li>• Managing Director               <ul style="list-style-type: none"> <li>○ coordinating the communication with the Government of India and the Government of Karnataka with respect to the project</li> <li>○ ensuring adoption of the corrective action plan as part of BESCO's corporate environmental and social management system (ESMS)</li> <li>○ ensuring timely approval of bid documents and bid evaluation reports by BESCO board</li> <li>○ periodic monitoring of the project implementation activities in coordination with Director (Technical), and Director (Finance)</li> <li>○ ensuring coordination between technical department responsible for project implementation and finance department to ensure timely availability of counterpart funds</li> <li>○ the project implementation and management unit consist of the following management levels</li> </ul> </li> <li>• Director (Finance)               <ul style="list-style-type: none"> <li>○ ensuring availability of counterpart funds for the smooth implementation of the project</li> <li>○ managing the advance account including on timely submission of withdrawal applications-based projected project expenses for replenishment of advance account</li> <li>○ keeping records of payment made through advance account for liquidation of advance account and auditing purposes</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>○ keeping records of project-related expenses incurred through counterpart funds</li> <li>○ engaging project auditors to audit all the expenses incurred with respect to the project</li> <li>○ final approval and payment of bills/invoice of the contractor</li> <li>○ financial reporting of the project to the Joint Managing Director/Project Steering Committee/Funding Agency</li> <li>○ creating separate budgets for environment monitoring, grievance redress and fund remedial measures required in accordance with the EMP</li> </ul> <ul style="list-style-type: none"> <li>● Director (Technical) <ul style="list-style-type: none"> <li>○ approval of design drawings, inspection of equipment at factory location etc. in coordination with the procurement team and QS&amp;S team</li> <li>○ Overall Supervision and guidance by Director-Technical.</li> </ul> </li> </ul> <ul style="list-style-type: none"> <li>● Chief General Manager (Project) <ul style="list-style-type: none"> <li>○ preparation of working estimate of the project scheme, technical specification, commercial terms, floating and administering of tender, tender negotiation and award of contract and issuance of implementation approvals in coordination with the procurement team responsible for the respective voltage levelheaded by a superintending engineer</li> <li>○ timely submission of bid documents and bid evaluation reports to Board Level Tender Committee (BLTC) and board of directors of BESCO</li> <li>○ timely administering of the tender, issue of contract award and implementation approvals thereof etc.</li> <li>○ bi-monthly monitoring of the implementation of the project components, environmental management plan, environment monitoring plan along with the respective chief engineers including physical visits to the project sites to address any project implementation issues</li> <li>○ review grievance redress per IEE during construction and operations</li> <li>○ periodic reporting to the Board of Directors Joint Managing Director and ADB on project implementation status</li> </ul> </li> </ul> <ul style="list-style-type: none"> <li>● Superintending Engineer, Project Monitoring Unit <ul style="list-style-type: none"> <li>○ day-to-day monitoring of project implementation including environmental and social safeguards in coordination with the project monitoring unit, resolving project implementation issues and reporting to the Chief General Manager (Project) on overall project implementation status</li> <li>○ support HQ in preparing the working estimate of the project scheme for running the tender</li> <li>○ upon award of tender, overall responsibility of implementing the projects</li> <li>○ handover of project site to the contractor, inspection of equipment at the factory location, issuing of dispatch instructions, day-to-day monitoring of the project activities, resolving any project site specific issues, fortnightly reporting of project implementation status to Chief General Manager (Project)</li> </ul> </li> </ul>
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	<ul style="list-style-type: none"> <li>○ Monitoring of preparation of all vendor bills with breakdown of all material received in line with the vendor invoice and LOA, verification of the bills with the LOA of the tender including calculating liquidated damages (if any), and final approval of the bills and forwarding for payment to the finance department after getting duly certified about quality and quantity by PMU and PMC</li> <li>○ ensure the EMP included in the IEE and the corrective action plans, if any, are implemented</li> <li>○ supervise contractors and their compliance with the EMP</li> <li>○ ensure contractors engage an accredited third-party laboratory to test environment parameters</li> <li>○ prepare, review, approve and submit semiannual EMR during construction and annual EMR during operations to ADB; upon completion of project construction, in coordination with the Protection and Communication Wing (P&amp;C) carry out the testing and commissioning of equipment for handover to the operations department</li> <li>○ handle overall project drawings, manual, project billing to the system operations department for project capitalization and system operation</li> <li>○ monitor compliance with social safeguards, conduct meaningful consultations, grievance redress in accordance with the IEE during construction and operations</li> <li>○ monitor reporting of environment supervision officer and health and safety officer for each contract package</li> </ul> <ul style="list-style-type: none"> <li>● General Manager (Customer Relations) <ul style="list-style-type: none"> <li>○ handle social and environment complaints from project-affected communities under the GRM and report to superintending engineer, project management unit</li> </ul> </li> <li>● General Manager (Quality, Safety and Standard) <ul style="list-style-type: none"> <li>○ handle quality and safety issues (including environment safeguards occupational and community health and safety requirements) and report to Superintending Engineer, Project Management Unit</li> </ul> </li> <li>● General Manager (Finance and Resources) and Deputy General Manager (Cash Management) <ul style="list-style-type: none"> <li>○ verification of all bills containing invoices and LOA including detailed breakup of components</li> <li>○ forwarding of the bills for payment to the finance department upon final approval of the Director (Finance)</li> <li>○ addressing specific queries on the bills, record keeping and maintaining of the project account</li> </ul> </li> </ul>
ADB	<ul style="list-style-type: none"> <li>● provide overall project administration</li> <li>● provide orientation to the Government of Karnataka and BESCOM including the project management office</li> <li>● review draft bidding documents and approve bid evaluation report</li> <li>● disburse ADB loan proceeds</li> <li>● conduct safeguards supervision and monitoring on an as needed basis</li> </ul>

ADB = Asian Development Bank, BESCOM = Bengaluru Electricity Supply Company Limited, BLTC = Board Level Tender Committee, EMP = environment management plan, EMR = environment monitoring report, GRM = grievance redress mechanism, IEE = initial environment examination, LOA = letter of award.

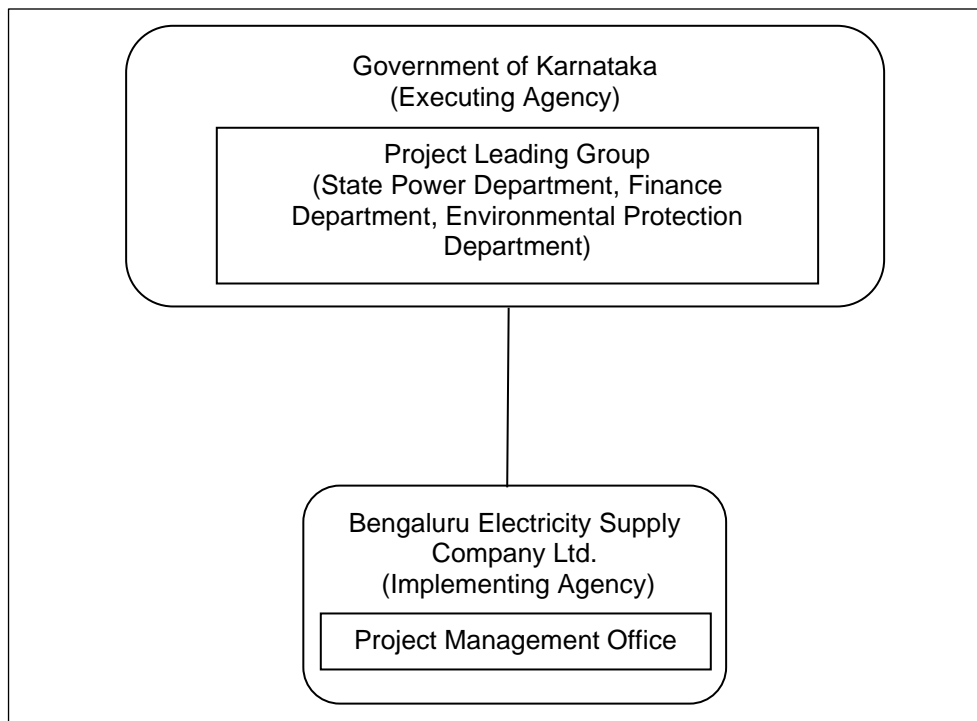
Source: Asian Development Bank estimates.

## B. Key Persons Involved in Implementation

Institutions	Contact Details
<p><b>Executing agency</b> Bengaluru Electricity Supply Company</p>	<p>Sri. M.B. Rajesh Gowda Managing Director Bengaluru Electricity Supply Company Ltd. Telephone No. :+91 80 22354929 Email address: <a href="mailto:md@bescom.co.in">md@bescom.co.in</a> Office Address: K.R. Circle, Bengaluru, Karnataka, India, 560 001</p>
<p><b>Asian Development Bank</b> South Asia Department Energy Division</p>	<p>Mr. Priyantha Wijayatunga Director, Energy Division South Asia Department, Asian Development Bank Telephone No.: +63 2 8632 6131 Fax No. +63 2 8636 2338 Email address: <a href="mailto:pwijayatunga@adb.org">pwijayatunga@adb.org</a> Office Address: Room 5260, Asian Development Bank, 6 ADB Avenue, Mandaluyong City, 1550 Metro Manila, Philippines</p> <p>Mr. Teruhisa Oi Principal Energy Specialist, Energy Division South Asia Department, Asian Development Bank Telephone No.+63 2 8632 5706 Fax No. +63 2 8636 2338 Email address: <a href="mailto:teruhisaoui@adb.org">teruhisaoui@adb.org</a> Office Address: Room 5304, Asian Development Bank, 6 ADB Avenue, Mandaluyong City, 1550 Metro Manila, Philippines</p>

### C. Project Organization Structure

**Figure 1: Project Organization Structure**



Source: Project preparatory technical assistance.

#### IV. COSTS AND FINANCING

5. The project investment cost is estimated at \$277.3 million, including physical and price contingencies and financial charges during construction.

6. **For sovereign loan.** The government has requested a regular loan of \$100.0 million from ADB's ordinary capital resources to help finance the project. (Confidential information redacted.)

7. **For non-sovereign loan.** BESCO has requested \$90.0 million equivalent in Indian rupees by way of a senior secured non-sovereign loan to help finance the project. (Confidential information redacted.)

8. (Confidential information redacted.)

9. The summary financing plan is in Table 8.

##### A. Cost Estimates Preparation and Revisions

10. **Preparation.** The cost estimates were prepared by BESCO based on the feasibility study in accordance with ADB's Guide on Preparing and Presenting Cost Estimates for Projects and Programs Financed by ADB.<sup>4</sup>

11. **Revisions.** During the implementation of the loan, the cost estimates model may be updated when there are major changes in the cost development.

##### B. Cost Categories

12. Cost categories are as follows:

**Table 5: Cost Categories**

Category	Description
Equipment and installation	Cost includes electrical cables, optical fiber communication cables, ring main units, and installation

##### C. Assumptions

13. The following key assumptions underpin the cost estimates and financing plan:

- (i) Exchange rate: INR74.86 = \$1.00 (as of 14 August 2020)
- (ii) Price contingencies based on expected cumulative inflation over the implementation period are as follows:

**Table 6: Escalation Rates for Price Contingency Calculation**

Item	2020	2021	2022	2023	2024	Average
Foreign rate of price inflation (%)	1.50	1.60	1.60	1.60	1.60	1.58
Domestic rate of price inflation (%)	5.00	5.00	5.00	5.00	5.00	5.00

Source: Asian Development Bank estimates.

<sup>4</sup> ADB. 2014. [Preparing and Presenting Cost Estimates for Projects and Programs Financed by the Asian Development Bank](#). Manila.



**D. Summary Cost Estimates and Financing Plan**

(Confidential information redacted.)

14. The government is the borrower of the loan and will, through the Government of Karnataka, onlend the loan to BESCOM on the same terms and conditions as those of the ADB loan. BESCOM will assume the foreign exchange and interest rate variation risk of the ADB loan, including contingencies. The government and the Government of Karnataka have assured ADB that counterpart funding will be provided in a timely manner, including any additional counterpart funding required for any shortfall of funds or cost overruns. The indicative flow of funds and the relending arrangements are specified in the project administration manual (PAM). BESCOM will execute an onlending agreement with the Government of Karnataka.

15. (Confidential information redacted.)

**E. Detailed Cost Estimates by Expenditure Category**

(Confidential information redacted.)

**F. Allocation and Withdrawal of Loan Proceeds**

**Table 7: Allocation and Withdrawal of Loan Proceeds**

<b>Item</b>	<b>Total Amount Allocated for ADB Financing (\$)</b>		<b>Percentage and basis for Withdrawal from the Loan Account</b>
	<b>Category</b>	<b>Subcategory</b>	
Equipment and Installation	100,000,000		100% of total expenditure claimed
<b>Total</b>	<b>100,000,000</b>		

ADB = Asian Development Bank.

Source: Asian Development Bank estimates.

**G. Detailed Cost Estimate by Financiers (\$ million)<sup>a</sup>**

(Confidential information redacted.)

**H. Detailed Cost Estimate by Outputs/Components (\$ million)<sup>a</sup>**

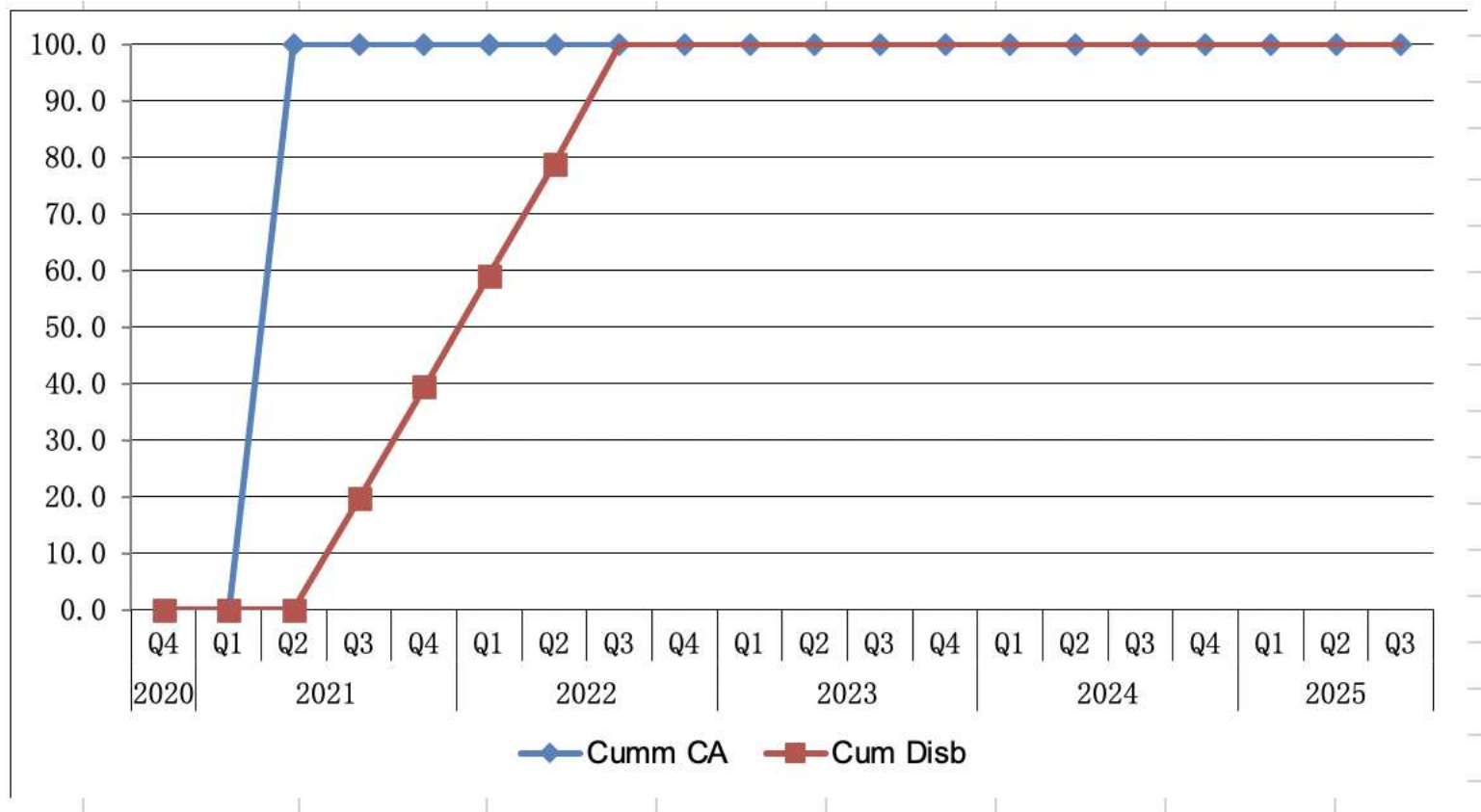
(Confidential information redacted.)

**I. Detailed Cost Estimate by Year (\$ million)<sup>a</sup>**

(Confidential information redacted.)

J. Contract Awards and Disbursement S-Curve

Figure 2: Contract Awards and Disbursement S-Curves

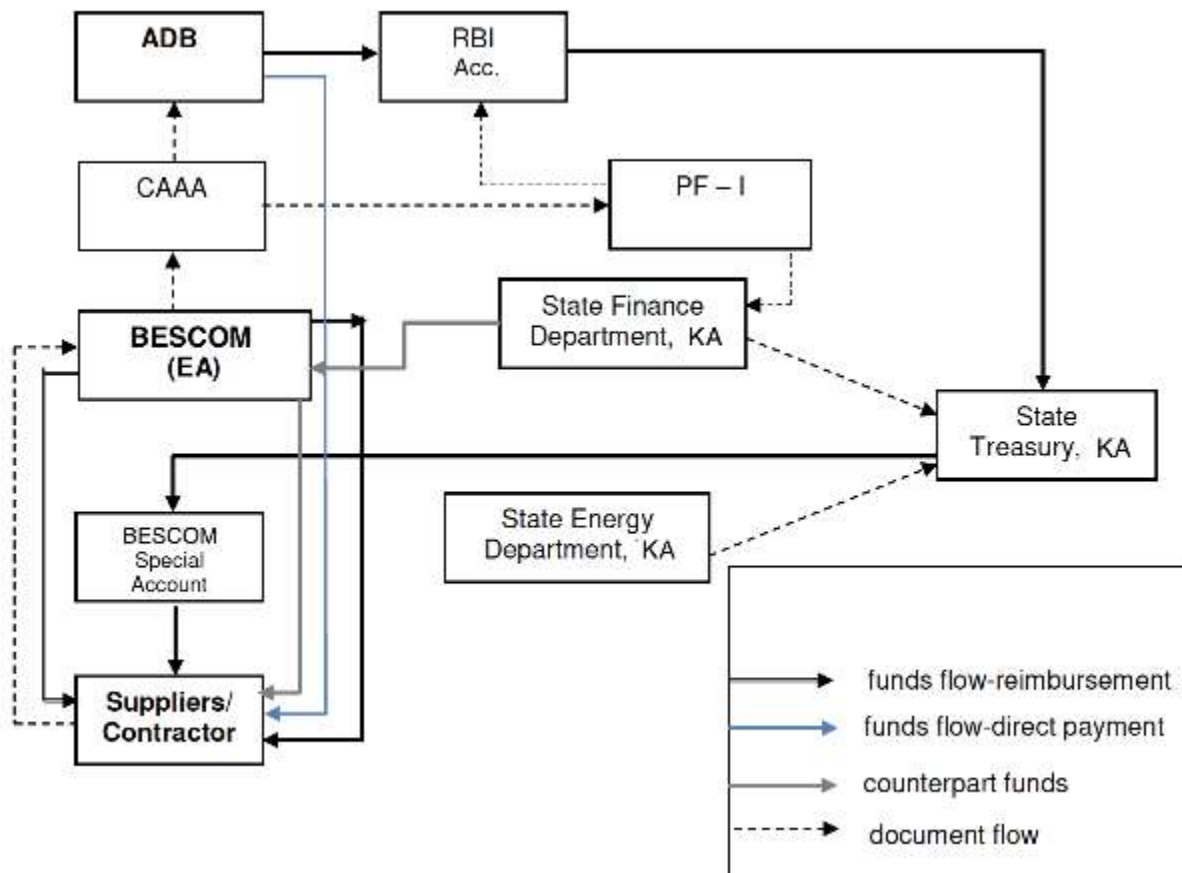


Year	Quarter	Contract Awards		Disbursement	
		Quarterly	Annual	Quarterly	Annual
2020	Q4	0.0	0.0	0.0	0.0
2021	Q1	0.0	100.0	0.0	39.4
	Q2	100.0		0.0	
	Q3	0.0		19.7	
	Q4	0.0		19.7	
2022	Q1	0.0	0.0	19.7	60.6
	Q2	0.0		19.7	
	Q3	0.0		21.2	
	Q4	0.0		0.0	
2023	Q1	0.0	0.0	0.0	0.0
	Q2	0.0		0.0	
	Q3	0.0		0.0	
	Q4	0.0		0.0	
2024	Q1	0.0	0.0	0.0	0.0
	Q2	0.0		0.0	
	Q3	0.0		0.0	
	Q4	0.0		0.0	
2025	Q1	0.0	0.0	0.0	0.0
	Q2	0.0		0.0	
	Q3	0.0		0.0	



K. Fund Flow Diagram

Figure 3: Fund Flow Diagram



ADB = Asian Development Bank, CAAA = controller of aid accounts and audit, EA = executing agency, KA = Karnataka, PF-I = Plan Finance Division of the Department of Expenditure, RBI Advance Acc. = Reserve Bank of India Advance Account.

Source: Asian Development Bank estimates.

## V. FINANCIAL MANAGEMENT

### A. Financial Management Assessment

16. (Confidential information redacted.)

17. (Confidential information redacted.)

18. Progress of implementation of the financial management action plan will be monitored through quarterly progress reports prepared by BESCO to ADB, and adequate implementation support will be provided by ADB.

### B. Disbursement Arrangements

#### 1. Disbursement Arrangements for ADB

19. The following disbursement arrangements are for sovereign loan and separate arrangements will be made for nonsovereign loan. The loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2017, as amended from time to time),<sup>5</sup> and detailed arrangements agreed upon between the government and ADB. Online training for project staff on disbursement policies and procedures is available.<sup>6</sup> Project staff are encouraged to avail of this training to help ensure efficient disbursement and fiduciary control. BESCO will be responsible for: (i) preparing disbursement projections, (ii) requesting budgetary allocations for counterpart funds, (iii) collecting supporting documents, and (iv) preparing withdrawal applications. ADB's reimbursement procedure will be used for disbursement of loan proceeds. Direct payment and commitment procedure will be used for disbursement of foreign currency payments per current arrangement for India projects.

20. **Advance fund procedure.** This is subject to approval by the borrower (Department of Economic Affairs, Government of India). The Controller of Aid Accounts and Audit (CAAA) will establish and maintain an advance account for the ADB loan with the Reserve Bank of India in US dollars. The CAAA is accountable and responsible for the proper use of advances to the account. BESCO will establish a commercial bank account, into which the Indian rupee equivalent of the advance received by CAAA will be transferred. The advance account is to be used exclusively for ADB's share of eligible expenditures. As the currency of the advance account is US dollar, CAAA would use the spot rates for conversion of expenditure incurred in currencies other than the US dollar (principally the Indian rupee) and submit liquidation requests to ADB.

21. The total outstanding advance to the advance account should not exceed the estimate of ADB's share of expenditures to be paid through the advance account for the forthcoming 6 months. The BESCO may request for initial and additional advances to the advance account based on an estimate of expenditure sheet<sup>7</sup> setting out the estimated expenditures to be financed through the account for the forthcoming 6 months. Supporting documents should be submitted to ADB or retained by BESCO in accordance with ADB's *Loan Disbursement Handbook* (2017, as amended from time to time) when liquidating or replenishing the advance account.

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<sup>5</sup> The handbook is available electronically from the ADB website. <https://www.adb.org/documents/loan-disbursement-handbook>.

<sup>6</sup> Disbursement eLearning. [http://wpqr4.adb.org/disbursement\\_elearning](http://wpqr4.adb.org/disbursement_elearning).

<sup>7</sup> Estimate of Expenditure sheet is available in Appendix 8A of ADB's *Loan Disbursement Handbook* (2017, as amended from time to time).

22. **Statement of expenditure procedure.**<sup>8</sup> The statement of expenditure (SOE) procedure maybe used for reimbursement of eligible expenditures or liquidation of advances to the advance account(s). There will be an SOE ceiling of \$100,000 per claim. Supporting documents and records for the expenditures claimed under the SOE should be maintained and made readily available for review by ADB's disbursement and review missions, upon ADB's request for submission of supporting documents on a sampling basis, and for independent audit.

23. 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 government, together with the authenticated specimen signatures of each authorized person. The minimum value per withdrawal application is \$200,000 equivalent unless otherwise accepted by ADB. Individual payments below such amount should be paid: (i) by the executing agency and/or implementing agency and subsequently claimed to ADB through reimbursement; or (ii) through the advance fund procedure, unless otherwise accepted by ADB. The borrower should ensure sufficient category and contract balances before requesting disbursements. Use of ADB's Client Portal for Disbursements (CPD)<sup>9</sup> system is encouraged for submission of withdrawal applications to ADB.

## 2. Disbursement Arrangements for Counterpart Fund

24. Disbursement for counterpart funds will be carried out in accordance with guidelines and practices of the state government. The quantity and timing of counterpart funding will be determined and advised by the executing agency, who will then initiate defined processes to ensure that counterpart funding is reflected in the approved state government budget and the annual capital expenditure budget of the executing agency. This will be undertaken on an annual basis.

### C. Accounting

25. Government of Karnataka will maintain, or cause to be maintained, separate books and records by funding source for all expenditures incurred on the project using accrual-based accounting following the equivalent national accounting standards. The government will prepare consolidated project financial statements in accordance with the Government of India's accounting laws and regulations, which are consistent with international accounting principles and practices.

### D. Auditing and Public Disclosure

26. **Audited project financial statement.** BESCOM will cause the detailed project financial statements covering ADB's sovereign, and counterpart financing to be audited in accordance with International Standards on Auditing, by an independent auditor acceptable to ADB. The audited project financial statements together with the auditor's opinion will be presented in the English language to ADB within 6 months from the end of the fiscal year by BESCOM.

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<sup>8</sup> SOE forms are available in Appendix 7B and 7D of ADB's *Loan Disbursement Handbook* (2017, as amended from time to time).

<sup>9</sup> The CPD facilitates online submission of withdrawal application to ADB, resulting in faster disbursement. The forms to be completed by the borrower are available online at <https://www.adb.org/documents/client-portal-disbursements-guide>.

27. **Audited entity financial statement.** The audited entity financial statements, together with the auditor's report and management letter, will be submitted in the English language to ADB within 1 month after their approval by the relevant authority.

28. The audit report for the project financial statements will include a management letter and auditor's opinions, which cover: (i) whether the project financial statements present an accurate and fair view or are presented fairly, in all material respects, in accordance with the applicable financial reporting standards; (ii) whether the proceeds of the loan were used only for the purpose(s) of the project; and (iii) whether BESCOM was in compliance with the financial covenants including financial ratio contained in the legal agreements (where applicable).

29. 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.

30. The government, Government of Karnataka, and BESCOM have been made aware of ADB's approach to delayed submission, and the requirements for satisfactory and acceptable quality of the audited project financial statements.<sup>10</sup> ADB reserves the right to require a change in the auditor (in a manner consistent with the constitution of the borrower), 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.

31. Public disclosure of the audited project financial statements, including the auditor's opinion on the project financial statements, will be guided by ADB's Access to Information Policy, 2018.<sup>11</sup> After the review, ADB will disclose the audited project financial statements and the opinion of the auditors on the project financial statements no later than 14 days of ADB's confirmation of their acceptability by posting them on ADB's website. The management letter, additional auditor's opinions, and audited entity financial statements will not be disclosed.<sup>12</sup>

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<sup>10</sup> ADB's approach and procedures regarding delayed submission of audited project financial statements:

- (i) When audited project financial statements are not received by the due date, ADB will write to the executing agency advising that: (a) the audit documents are overdue; and (b) if they are not received within the next 6 months, requests for new contract awards and disbursement such as new replenishment of advance accounts, processing of new reimbursement, and issuance of new commitment letters will not be processed.
- (ii) When audited project financial statements are not 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 advance accounts, processing of new reimbursement, and issuance of new commitment letters. ADB will (a) inform the executing agency of ADB's actions, and (b) advise that the loan may be suspended if the audit documents are not received within the next 6 months.
- (iii) When audited project financial statements are not received within 12 months after the due date, ADB may suspend the loan.

<sup>11</sup> ADB. 2018. [Access to Information Policy](#). Manila

<sup>12</sup> This type of information would generally fall under public communications policy exceptions to disclosure. ADB. 2011. [Public Communications Policy](#). Manila. Paragraph 97(iv) and/or 97(v).

## VI. PROCUREMENT AND CONSULTING SERVICES

### A. Advance Contracting and Retroactive Financing

32. **Advance contracting and retroactive financing.** All advance contracting and retroactive financing will be undertaken in conformity with ADB Procurement Policy (2017, as amended from time to time) and ADB's Regulations (2017, as amended from time to time). The issuance of invitations to bid under advance contracting and retroactive financing will be subject to ADB approval. The borrower, and BESCOM have been advised that approval of advance contracting and retroactive financing does not commit ADB to finance the project.

33. **Advance contracting.** BESCOM has requested advance contracting and retroactive financing. This will include the procurement of four contract packages of works (Table 19). The issuance of invitations to bid, the draft pre-qualification and bidding documents under advance procurement action will be subject to ADB's approval.

34. **Retroactive financing.** Except as otherwise agreed with ADB, the eligible expenses incurred for works will be eligible for retroactive financing, provided these are incurred before the effectiveness of the related loan agreement, but not earlier than 12 months preceding the signing of the related loan agreement, and as long as they do not exceed an amount of 20% of the loan. The relevant sections of ADB's Anticorruption Policy (1998, as amended to date) will be included in all documents and contracts.<sup>13</sup>

### B. Procurement of Goods, and Consulting Services

35. All procurement of goods and works will be undertaken in accordance with ADB's Procurement Policy (2017, as amended from time to time) and Procurement Regulations (2017, as amended from time to time). The relevant sections of ADB's Anticorruption Policy (1998, as amended to date) will be included in all documents and contracts.<sup>14</sup> All turnkey contract packages will be procured through open competitive bidding with prior review by ADB. An 18-month procurement plan indicating review procedures of contract packages to be procured under the loan is provided in section C. There are no consulting service contract packages to be procured using the loan.

36. **Achievement of Value for Money (VFM) through Strategic Procurement Planning.** VFM in procurement will be achieved through strategic contract packaging and use of borrower's e-Government Procurement system.

### C. Procurement Plan

**Table 8: Basic Data**

<b>Project Name:</b> Bengaluru Smart Energy Efficient Power Distribution Project	
<b>Project Number:</b> 53192-001/003	<b>Approval Number:</b> L4024/4028
<b>Country:</b> India	<b>Executing Agency:</b> Government of Karnataka
<b>Project Procurement Risk:</b> Medium	<b>Implementing Agency:</b> Bangalore Electricity Supply Company Limited
<b>Project Financing Amount:</b> \$187,300,000 <b>ADB Financing:</b> \$100,000,000 <b>Cofinancing (ADB Administered):</b>	<b>Project Closing Date:</b> 31 December 2025

<sup>13</sup> Available at: <https://www.adb.org/sites/default/files/institutional-document/32026/anticorruption.pdf>.

<sup>14</sup> Available at: <https://www.adb.org/Documents/Policies/Anticorruption-Integrity/Policies-Strategies.pdf>.

<b>Non-ADB Financing:</b> \$87,300,000			
<b>Date of First Procurement Plan:</b> 12 July 2019		<b>Date of this Procurement Plan:</b> 12 July 2019	
<b>Procurement Plan Duration (in months):</b> 18		<b>Advance Contracting:</b> Yes	<b>e-GP:</b> Yes <a href="http://www.eproc.karnataka.gov.in">www.eproc.karnataka.gov.in</a>

ADB = Asian Development Bank , BECOM = Bengaluru Electricity Supply Company Limited, eGP = e-Government Procurement, TBD = to be determined.

## 1. Methods, Thresholds, Review and 18-Month Procurement Plan

### a. Procurement and Consulting Methods and Thresholds

37. Except as ADB may otherwise agree, the following methods shall apply to procurement of goods, works, nonconsulting services, and consulting services.

**Table 9: Procurement of Goods, Works and Nonconsulting Services**

Method	Comments	ADB Prior or Post Review
Open Competitive Bidding	With International Advertisement (1S2E)	Prior

1S2E = one-stage, two-envelope.

Source: Asian Development Bank estimates.

**Table 10: Procurement of Consulting Service**

Consulting Services	
Method	Comments
N/A	N/A

N/A = not applicable

Source: Asian Development Bank estimates.

### b. Works Contracts Estimated to Cost \$1 Million or More

38. Table 21 lists works contracts for which the procurement activity is either ongoing or expected to commence within the next 18 months.

**Table 11: List of Works Contracts**

Goods and Works							
Package Number	General Description	Estimated Value (in US\$)	Procurement Method	Review	Bidding Procedure	Advertisement Date (quarter/year)	Comments
Package 1	Conversion of overhead line to underground cable system	100,000,000	OCB	Prior	1S2E	Q2 / 2020	Non-Consulting Services: No  Advertising: International  No. Of Contracts: 4  Prequalificati

Goods and Works							
Package Number	General Description	Estimated Value (in US\$)	Procurement Method	Review	Bidding Procedure	Advertisement Date (quarter/year)	Comments
							on of Bidders: No  Domestic Preference Applicable: No  Advance Contracting: Yes  Bidding Document: Large Works  High Risk Contract: No  e-GP: Yes  e-GP Type: e-Bidding
	Lot 1: Installation of underground cable and optic fibre cable: Koramangala (S-4, S-7 and S-17 subdivisions) Lot 2: Installation of underground cable and optic fibre cable: H.S.R Division-1 (S-8 and S-11 subdivisions) Lot 3: Installation of underground cable and optic fibre cable: White Field (E4 subdivision) Lot 4: Installation of underground	27,000,000  26,000,000  24,000,000  23,000,000					





## 2. List of Awarded and On-going, and Completed Contracts

42. Tables 25 through 26 list the awarded and ongoing contracts.

**Table 15: List of Awarded and On-going and Works Contracts**

Pack. No.	General Description	Estimated Value (\$ million)	Contract Value	Procurement Method	Advertisement Date (quarter/year) <sup>a</sup>	Date of ADB Approval of Contract Award <sup>b</sup>
	Conversion of 11kV OH line to UG cable system and conversion of LT line into UG/AB cable system and laying of OFC along with UG cable in E6 and E10 subdivision  (to be financed by ADB non-sovereign loan)	23.9	30.7	DP, eGP used ( <a href="http://www.eproc.kar.nataka.gov.in">www.eproc.kar.nataka.gov.in</a> )	Q1 2019	Date: N/A  M/s. Larson & Toubro Limited, Chennai
	Conversion of 11kV OH line to UG cable system and conversion of LT line into UG/AB cable system and laying of optic OFC along with UG cable in E1 and E5 subdivision  (to be financed by ADB nonsovereign loan)	20.6	26.4	DP, eGP used ( <a href="http://www.eproc.kar.nataka.gov.in">www.eproc.kar.nataka.gov.in</a> )	Q1 2019	Date: N/A  M/s. Asian Fab Tech Limited, Bangalore
	Conversion of 11kV OH line to UG cable system & conversion of LT line into UG/AB cable system and laying of OFC along with UG cable in E11 subdivision  (to be financed by ADB nonsovereign loan)	25.1	32.2	DP, eGP used ( <a href="http://www.eproc.kar.nataka.gov.in">www.eproc.kar.nataka.gov.in</a> )	Q1 2019	Date: N/A  M/s. NCC Limited, Hyderabad

AB = aerial bunched, ADB = Asian Development Bank, DP = domestic procedures, eGP = e-Government Procurement, kV= kilovolt, LT = low tension, N/A = not applicable, NCC = Nagarjuna Construction Company Limited, OFC = optical fiber cable, OH = overhead, Q = quarter, UG = underground.

<sup>a</sup> Date of ADB approval of contract award is the date of no-objection letter to Government of Karnataka and BESCOM.

<sup>b</sup> Indicate the contractor's name and the contract signing date.

**Table 16: List of Completed Works Contracts**

Pack. No.	General Description	Estimated Value (\$ million)	Contract Value	Procurement Method	Advertisement Date (quarter/year)	Date of ADB Approval of Contract Award <sup>a</sup>	Date of Completion <sup>b</sup>	Comments

<sup>a</sup> Date of ADB approval of contract award is the date of no-objection letter to Government of Karnataka and BESCOM.

<sup>b</sup> Indicate the contractor's name and the contract signing date.

### 3. Non-ADB Financing

43. Table 27 lists goods, works, and consulting services contracts over the life of the project, financed by Non-ADB sources.

**Table 17: List of Goods and Works over the Life of the Project financed by Non-ADB Sources**

General Description	Estimated Value (Cumulative) (\$ million)	Estimated Number of Contracts	Procurement Method
Conversion of 11kV OH line to UG cable system & conversion of LT line into UG/AB cable system and laying of OFC	43	1	DP
<b>Total</b>	<b>43</b>		

AB = aerial bunched, DP = domestic procedures, kV = kilovolt, OFC = optical fiber cable, OH = overhead, LT = low tension, UG = underground.

Source: Asian Development Bank estimates.

## VII. SAFEGUARDS

44. Corporate audit of BESCO's existing environmental and social management system (ESMS) and current safeguards performance was undertaken, and a corrective action plan agreed for completion prior to first disbursement of the nonsovereign loan to address gaps identified, as per ADB's Safeguard Policy Statement (2009) general corporate finance requirements for the nonsovereign element.

### A. Environment (category B)

45. An initial environment examination (IEE) was prepared as per ADB's Safeguard Policy Statement (2009) covering all the project components to be financed by the sovereign and non-sovereign elements. The safeguard documents were disclosed by ADB on its website on 09 October 2020. BESCO disclosed the IEE on its website on 07 October 2020 and printed copies will also be made available by BESCO at its local offices in Bengaluru affected divisions along with notices in Kannada and other appropriate local languages at construction sites. If there are any unanticipated impacts (including project scope or design changes) during project implementation these will be reported by BESCO and the IEE updated and cleared by ADB as required. Any updates to the IEE during project implementation will need to be cleared by ADB and disclosed according to the same procedure.

46. Construction works involve the removal of obsolete overhead cables and poles, the laying of replacement cables underground, or replacement with aerial bunched cables, along with optical fiber cables, plus the installation of ring main units (RMUs). Bearing in mind construction works will take place along existing rights-of-way in the Bengaluru urban area, and as the installation technology used is primarily trenchless, the environmental and social impacts of the project will be limited. Existing overhead line corridors are used for the project purposes, and there are no ecologically protected areas or critical habitat present along them, as the project area is on urban streets in the highly modified, dense urban area of Bengaluru City; internationally or nationally important cultural heritage assets are also not present in the overhead line corridors. The replacement cables will be connected to existing pole and plinth mounted transformers but the project does not involve any new or changes to old transformers.<sup>15</sup> RMUs will be installed in a designated space of a few square meters of state-owned land, in a state-owned building or on the encumbrance-free street. During construction, the main impacts include: (i) increased noise, dust, erosion, solid waste and wastewater generation, resulting in increased pollution risk and temporary disruption and disturbance; (ii) increased traffic congestion and restrictions on vehicle and pedestrian movements, temporarily disrupting and increasing accident risks for road and sidewalk users; (iii) accidental risk of damage to above or below ground property and utilities; (iv) occupational health and safety risks for construction workers, including risks related to work with electricity, working in the street with running traffic, and COVID-19 given works are within a dense urban area; and (v) community health and safety risks, including public injury due to works being undertaken in the street. During operation, the main risks involve: (i) leakage of sulfur hexafluoride (SF<sub>6</sub>), a potent greenhouse gas, from newly installed RMUs; and (ii) occupational health and safety for BESCO staff during maintenance activities. On the other hand, the pre-project risk to community health and safety will be significantly reduced by undergrounding the distribution lines. Above-listed impacts are generally minor, site-specific, most of them temporary

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<sup>15</sup> BESCO will need to ensure it complies with the Government of India Regulation of Use, Handling and Disposal of Polychlorinated Biphenyls which permits the use of existing polychlorinated biphenyl (PCB) containing equipment only up until 31 December 2025 on the proviso it is within its certified lifetime and properly maintained without possibility of leakage or release of PCBs into the environment. BESCO has a legal responsibility to prepare an inventory of and replace any transformers which contain PCBs.

during construction, and can be effectively mitigated. In this respect, mitigation measures will be required prior to the start of construction, during construction, and throughout operation and maintenance phases, as detailed in the environmental management plan (EMP) prepared following national requirements and international good practice including the International Finance Corporation (IFC) Environmental, Health, and Safety (EHS) Guidelines,<sup>16</sup> for which a budget of \$0.7 million has been set aside. The IEE is based on cable routings following existing overhead line corridors; actual alignments will be mapped and confirmed by the contractor during project implementation. The IEE will be reviewed once working drawings/maps of cable routes and RMU locations have been completed, to confirm above is still valid before proceeding with works. If any unanticipated impacts are identified, the IEE will be updated accordingly. Sovereign contract packages are still to be awarded and will incorporate the final EMP prior to award; if a draft is included in bidding documents, it must be updated to final before any contract award. Nonsovereign and counterpart-financed contract packages were awarded in July 2019 and construction has commenced. An EMP was included in the contract documentation at the time requiring compliance with national laws and regulations as well as the financier's (ADB) requirements, but this was prior to the IEE being prepared. Environmental audit of the ongoing works (as existing facilities under construction) has been undertaken and BESCO and their contractors will address gaps identified between their current performance and the requirements of the final EMP as corrective action for immediate implementation.

47. Meaningful consultations through focus group discussions were held between April to October 2019 with a total of 103 affected or beneficiary persons (30% female) across divisions affected by the project. In addition, 718 household surveys were carried out between April–June 2019. Since only a sample of affected persons were involved for the purposes of IEE preparation, meaningful consultations need to continue to be undertaken with all affected persons before the commencement of works as set out in the IEE/EMP and continue throughout implementation. Consultations shall be documented in detail, including all comments and questions raised by participants, supported with pictures in the environmental and social monitoring reports to be submitted to ADB. Dissemination of project information must also continue throughout the project, through various social media, television, and newspapers as well as through advance warning notices placed on-site prior to the start of works.

48. BESCO has an existing grievance redress mechanism (GRM) which will be used as the entry point for grievances related to the project, but supplemented by grievance redress committees at division level to be set up before loan effectiveness. Training will be provided under the project for all members involved in the implementation of the GRM. A detailed grievance database is to be kept, as detailed in the IEE, and all grievance-related information such as complainant's details, complaint content and status, minutes of the meetings and agreements reached will be documented and summarized in the environmental and social monitoring reports submitted to ADB. If a grievance is not solved through the GRM, the complainant can seek legal redress in the appropriate courts and the affected persons will also be informed of ADB's Accountability Mechanism by BESCO.

49. BESCO will allocate adequate budget, institutional support, and staff resources to implement, supervise and monitor the EMP as per the roles/responsibilities set out therein. Before the commencement of works, BESCO will appoint under the direction of the Director (Technical) a nominated Deputy General Manager who will act as Environment and Social

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<sup>16</sup> International Finance Corporation. 2007. General Environmental, Health, and Safety Guidelines; and International Finance Corporation. 2007. Environmental, Health, and Safety Guidelines on Electric Power Transmission and Distribution.

Safeguards Manager with overall responsibility for ensuring EMP implementation, and suitably qualified and experienced junior EHS officers, at least one for each contract package.<sup>17</sup> As set out in the EMP, these officers will be dedicated, full-time safeguard staff and form the environmental and social cell (ESC) supporting EMP implementation and be responsible for regular on-site supervision and monitoring of the project as well as acting as BESCOM's community liaison/grievance focal for the contract package. These officers will have 2–3 years' experience of environment, health, and safety supervision on similar types of project and hold an environment and/or health and safety bachelor's degree and/or post-graduate qualification. Ideally officers with a mix of environment, health and safety experience will be appointed so that they may assist one another. To supplement the engineering project management consultant, BESCOM will also appoint: (i) an environmental project management consultant to support the ESC with its day-to-day supervision, and (ii) an independent consultant to undertake periodic monitoring in accordance with the EMP and prepare the periodic environmental and social monitoring reports for submission to ADB.

50. Implementation of the EMP during the construction phase is the responsibility of the contractors and they will be required to implement relevant provisions in full. Contractors will have primary responsibility for environmental and social management, and the health and safety of workers and the local community at all project construction sites under their control. The contractor will be required to nominate for each contract package it is engaged for: (i) one environment officer; (ii) one health and safety officer; (iii) one community liaison/labor officer; and (iv) for each site one environment, health and safety site supervisor based full-time on site who may also have engineering responsibilities, but who will be fully responsible for ensuring day-to-day implementation of the EMP as per the roles/responsibilities set out in detail within the EMP.

51. Capacity development training activities will be provided as part of the project through the existing transactional technical assistance consultant (approximately \$30,000 budget allowance) to help address gaps identified by the corporate and project audits and to ensure compliance with Safeguard Policy Statement (2009) and the EMP requirements; as per the training plan set forth in the EMP. BESCOM and the contractors will ensure that the requisite staff support and attend all trainings provided.

52. **Prohibited investment activities.** Pursuant to ADB's Safeguard Policy Statement (2009),<sup>18</sup> ADB funds may not be applied to the activities described on the ADB Prohibited Investment Activities List set forth at Appendix 5 of the Safeguard Policy Statement.

## **B. Involuntary Resettlement and Indigenous Peoples**

53. **Involuntary resettlement (category C).** The project will follow the right of way (RoW) of the existing roads and all feeders, transformers and lines are located within the ROW. A horizontal boring methodology will be adopted, not open trench, to ensure that any informal ROW users will be avoided and adequate access is secured. Due diligence was conducted, and the result confirmed that there would not be any households or business entities which would be economically or physically displaced as a result of involuntary resettlement.

54. If there is any change in scope that may result in affecting people by temporary or

<sup>17</sup> There are four sovereign-funded contract packages, three nonsovereign-funded contract packages and one BESCOM-funded contract package, therefore eight junior EHS officers will need to be appointed to form the ESC for project implementation.

<sup>18</sup> Available at <https://www.adb.org/sites/default/files/institutional-document/32056/safeguard-policy-statement-june2009.pdf>

permanent land acquisition or access, structure demolition, and involuntary resettlement, BESCO is required to inform ADB of the situation in advance and prepare and submit a resettlement plan to ADB for review and approval prior to displacement occurring, in accordance with ADB's Safeguard Policy Statement (2009).<sup>19</sup>

55. **Indigenous peoples (category C).** The proposed project will be implemented in a large urban area where the majority of people are Kannadigas and the lifestyle and socioeconomic status of individuals of the ethnic majority and minorities are similar. All physical activities of the proposed project will be undertaken within RoW of the existing roads. Thus, it is not expected to have any impacts on ethnic minorities and their territories. Due diligence was undertaken and it was confirmed that no negative or positive impacts would be expected on scheduled tribes or indigenous peoples. If there is any change in scope that may result in affecting Indigenous People, BESCO is required to inform ADB of the situation in advance and prepare and submit an Indigenous Peoples Plan to ADB for review and approval prior to indigenous peoples impacts occurring, in accordance with ADB's Safeguard Policy Statement (2009).

## VIII. GENDER AND SOCIAL DIMENSIONS

### Summary Poverty Reduction and Social Strategy

56. **Social benefits.** The project will directly benefit around 5.2 million people in the project area, of whom about half are female. Direct benefits will go to students and staff in around 986 schools, and to patients and medical staff in around 562 hospitals. The project will provide reliable electricity services to households including low-income households in the project areas. The project will (i) improve living conditions through adequate and reliable electricity supply services, (ii) improve the resilience of the urban power distribution system from natural hazards, (iii) remove hazards associated with overhead power lines, (iv) help make sidewalks more pedestrian friendly by removing power distribution line poles, (v) improve education and medical services by providing reliable electricity supply services, and (vi) potentially increase incomes through job opportunities created during the construction (290 positions) and operation (50 positions) period.

57. **Gender equality.** The project is classified as some gender elements. The project can help promote gender equality and social inclusion in the following areas: (i) access to affordable electricity to female-headed poor households; (ii) gender-inclusive energy conservation, safety awareness, and customer satisfaction; and (iii) gender mainstreaming assessment of policies and operations at BESCO corporate level. BESCO commits to implement measures to promote gender equality or women's empowerment in its business activities following ADB's Policy on Gender and Development (1998). Key gender actions relate to (i) accessing to affordable electricity to female-headed poor households; (ii) supporting a gender-inclusive energy conservation campaign; (iii) supporting a gender-inclusive safety awareness campaign; (iv) conducting customer satisfaction surveys in a gender-responsive manner, to improve service delivery; and (v) conducting a gender analysis of BESCO corporate structure and prepare a corporate gender and social inclusion strategy for BESCO that establishes gender targets for

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<sup>19</sup> 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.

education, training, and awareness-raising initiatives for the duration of the project. BESCOM will submit periodic reports on implementation of its gender measures to ADB.

**PERFORMANCE MONITORING, EVALUATION, REPORTING  
AND COMMUNICATION**

**DESIGN AND MONITORING FRAMEWORK**

<b>Impact the Project Is Aligned with</b>			
Livable Bengaluru urban area developed (Revised Master Plan 2031 for Bengaluru) <sup>a</sup>			
<b>Results Chain</b>	<b>Performance Indicators</b>	<b>Data Sources and Reporting Mechanisms</b>	<b>Risks and Critical Assumptions</b>
<b>Outcome</b> Energy efficiency, reliability, and safety of power supply system in Bengaluru urban areas improved	By 2026: a. BESCO's technical and commercial losses reduced to at least 9.1% (2020 baseline: 13%) (OP 6.2; OP 6.2.1) b. Average outage duration reduced to 72 hours, and number of supply interruptions per customer reduced to 10.8 times per year (2020 baseline: 112 hours, and 15.3 times) (OP 4.1; 6.2; OP 6.2.1) c. Annual greenhouse gas emissions of 113,653 tons of CO <sub>2</sub> equivalent avoided (2020 baseline: 0) (OP 3.1) d. Number of fatal accidents reduced to 18 per year (2020 baseline: 36)	a.–b. Annual report issued by BESCO  c. Project's annual environmental compliance report  d. BESCO's accident report	A: Uninterrupted power supplied to distribution network through generation and transmission systems
<b>Output</b> 1. Smart, and climate- and disaster-resilient power distribution system established in 6 divisions in urban areas of Bengaluru  2. Institutional capacity of implementing agency improved <sup>b</sup>	By 2025: 1a. 7,200 km of 11 kV and 1.1 kV overhead distribution lines converted to underground cables, with 2,800 km of optical fiber cables (2020 baseline: 0 km) (OP 3.2.5; OP 4.1.2; OP 4.3) 1b. 1,700 automated ring main units installed adapted with a DAS (2020 baseline: 0) (OP 4.1.2) By 2025: 2a. Operation and maintenance manual for underground cables, reflecting international good practices, developed (2020 baseline: 0) (OP 6.2.3) 2b. Environmental and social management system developed	1a.–1b. Loan review missions and project performance reports  2a. Copy of O&M manual developed  2b. Environment and social monitoring	R: Exponential growth in COVID-19 cases prolongs impact on global value chains beyond projections, which could delay the procurement of goods and services, and slow down project implementation



Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
	and adopted by BESCO management, and at least 3 relevant staff trained to implement the system. (2020 baseline: 0) (OP 6.2.3)	reports; training reports	
	By 2022:  2c. Financial management action plan implemented (2020 baseline: NA) (OP 6.1.4; OP 6.2.3)  By 2022:  2d. GESI assessment of corporate policies and practices completed, and findings and recommendations presented to BESCO management (2020 baseline: NA) (OP 2.3.2)  2e. Corporate GESI strategy developed (2020 baseline: NA) (OP 2.3.2)	2c. Quarterly progress reports prepared by BESCO  2d. GESI assessment report  2e. Copy of GESI strategy	
<b>Key Activities with Milestones</b>			
<p><b>1. Smart, and climate- and disaster-resilient power distribution system established in 6 divisions in urban areas of Bengaluru</b></p> <p>1.1 Network design completed (Q3 2019)</p> <p>1.2 Construction contract awarded for conversion of overhead distribution lines to underground cables and adoption of DAS (Q4 2020)</p> <p>1.3 11 kV overhead distribution lines converted to underground cables (Q1 2021–Q4 2025)</p> <p>1.4 Low voltage overhead lines converted to underground cables (Q1 2021–Q4 2025)</p> <p>1.5 Automated ring main units adapted with DAS (Q1 2021–Q4 2025)</p> <p>1.6 Environmental safeguard monitored (Q1 2021–Q4 2025)</p> <p><b>2. Institutional capacity of implementing agency improved</b></p> <p>2.1 Consulting contract awarded for capacity building (Q1 2021)</p> <p>2.2 Capacity building trainings conducted (Q1 2021–Q4 2025)</p> <p>2.3 Financial management action plan implemented (Q1 2021–Q1 2022)</p> <p>2.4 Corporate gender equality and social inclusion survey conducted (Q1 2022)</p> <p>2.5 Corporate gender equality and social inclusion strategy developed (Q1 2022)</p> <p><b>Project Management Activities</b></p> <p>Procurement, environment and social safeguard monitoring, annual and midterm reviews, project completion report.</p>			
<b>Inputs</b> (Confidential information redacted.)			
<b>Assumptions for Partner Financing</b> Not applicable			

A = assumption, ADB = Asian Development Bank, BESCO = Bangalore Electricity Supply Company Limited, CO<sub>2</sub> = carbon dioxide, COVID-19 = coronavirus disease, DAS = distribution automation system, GESI = gender equality and social inclusion, km = kilometer, kV = kilovolt, NA = not applicable, O&M = operation and maintenance, OP = operational priority, Q = quarter, R = risk.

<sup>a</sup> Bengaluru Municipal Government. 2017. [Revised Master Plan 2031 for Bengaluru](#). Bengaluru.

<sup>b</sup> Supported by ADB. [India: Preparing the Bengaluru Smart Energy Efficient Power Distribution Project](#).

**Contribution to Strategy 2030 Operational Priorities**

Expected values and methodological details for all OP indicators to which this operation will contribute results are detailed in Contribution to Strategy 2030 Operational Priorities (accessible from the list of linked documents in Appendix 2 of the report and recommendation of the President).

Source: Asian Development Bank estimates.

## A. Monitoring

58. **Project performance monitoring.** The basis for performance monitoring is the design and monitoring framework, which identifies performance targets for the outcome, and outputs of the project. The performance indicators include (i) installation progress of underground cables, ring main units, and optical fiber cables; (ii) reduction of system loss; (iii) average outage duration; (iv) number of supply interruption by customer; (v) avoided greenhouse gas emission; and (vi) number of fatal accidents. BESCO is responsible for (i) collecting data from the sources identified in the design and monitoring framework, and (ii) preparing the summary of performance indicators through quarterly progress reports. BESCO is also responsible for monitoring and reporting of gender-related actions.

59. **Compliance monitoring.** BESCO will conduct compliance monitoring concerning the use of the loan proceeds, project implementation, and compliance of loan and project covenants. The findings of monitoring should be included in (i) quarterly progress reports on project implementation, including safeguards and financial management action plan; (ii) a report for midterm review; and (iii) a project completion report.

60. **Environment safeguard monitoring.** BESCO is responsible for supervising and monitoring the implementation of the EMP as well as ensuring that the quantitative environmental monitoring requirements as set out in the environmental monitoring plan within the EMP are met, during the pre-construction, construction, and operation and maintenance (O&M) phases of the project. During pre-construction and construction, the contractor will be required to supervise and monitor its own activities and carry out continuous qualitative monitoring as well as quantitative monitoring as specified in the environmental monitoring plan and submit monthly reports to BESCO, detailing EMP implementation, log of any incidents or accidents recorded, as well as any complaints received, status and resolution. The contractors' activities on-site will be supervised day-to-day by BESCO's site supervision staff, who will also report monthly to the project monitoring unit and ESC on their supervision activities. Regular on-site supervision and monitoring of the contractors' EMP implementation, including corrective actions, will also be carried out with at least weekly checks of all ongoing works by the ESC and overall detailed review of safeguards compliance on a monthly basis by the Environment and Social Safeguards Manager. During O&M as the work will be done by BESCO division O&M units, the Environment and Social Safeguards Manager will monitor EMP implementation.

61. Once the loan becomes effective, BESCO will submit periodic environmental and social monitoring reports for ADB's review and disclosure on the ADB website, to be submitted semiannually up until the project completion report is issued (or a later date agreed therein) for the sovereign component and then annually until project maturity of the nonsovereign component. Environmental and social monitoring reports must be submitted within 1 month from the end of each reporting period. The reports shall cover both corporate environment and social performance per the corporate ESMS audit report and the project level reporting requirements per the IEE. BESCO will locally disclose the environmental and social monitoring reports through publication on their website, copies of reports available at offices, and notices in Kannada and other appropriate local languages at construction sites. ADB will be responsible for disclosure on the ADB website once the final report has been submitted to and accepted by the safeguards team.

62. Environmental and social monitoring reports shall include an update on the project activities and their status during the period of reporting and document: (i) all planning and

management activities related to environmental safeguards; (ii) progress on EMP implementation (environmental performance) based on BESCOM's supervision activities, including progress on corrective action for BESCOM counterpart-funded and non-sovereign packages and any feedback provided to contractors and action taken; (iii) results of quantitative monitoring required by the EMP; (iv) records of training activities, emergency drills, etc.; (v) details of ongoing consultations with project beneficiaries and affected persons, as and when needed; (vi) project-related environmental grievances and their resolution; (vii) compliance with the EMP and progress towards the desired outcomes; and (viii) the identification of corrective and preventative actions with time-bound, budgeted corrective action plans, as applicable, for any breaches of performance standards or other non-compliances recorded. The environmental and social monitoring reports will also include an update on progress with the corporate ESMS and project audit action plan for the nonsovereign element.

63. During implementation, ADB will undertake periodic site visits and, if required, supervision missions with detailed review by ADB's safeguard specialists/officers or consultants. To facilitate this, BESCOM and their contractors will need to provide ADB with: (i) access to all projects sites, (ii) all environment and social safeguards documentation requested, and (iii) a project site health and safety induction and adequate personal protective equipment (PPE) in accordance with Table 2.7.1 of the IFC EHS Guidelines on Occupational Health and Safety.

## **B. Evaluation**

64. ADB will undertake annual project reviews between 2022 and 2026 to evaluate the progress of project implementation. ADB and BESCOM will undertake a comprehensive midterm review of the project in 2024 covering: (i) physical progress of project implementation; (ii) technical issues; (iii) environmental impacts and safeguards; (iv) social impacts and and safeguards; (v) progress and issues on procurement and disbursement; and (vi) compliance with assurances in the loan and project agreements, and other relevant aspects that may have an impact on the performance of the project and its continuing viability. It will also include potential loan savings, identify areas for reallocation of loan proceeds, and change disbursement percentages, as appropriate.

## **C. Reporting**

65. BESCOM and the Government of Karnataka will provide ADB with:

- (i) quarterly progress reports with fourth quarter reports serving as the annual progress reports including:
  - (a) the use of the loan proceeds;
  - (b) progress achieved by output as measured through the indicator's performance targets (para. 61);
  - (c) key implementation issues and solutions, including environment safeguards;
  - (d) updated procurement plan;
  - (e) updated implementation plan including procurement plan and disbursement projection for the next 12 months; and
  - (f) implementation progress of financial management action plan;
- (ii) semiannual environmental monitoring report up until the completion of construction and annual environmental monitoring report during operation until submission of the project completion report (or a later date agreed therein) for the

- sovereign element but continuing to project maturity for the nonsovereign element;
- (iii) audited BESCO's annual financial statements and project accounts, together with the associated auditor's report, in English;
  - (iv) feedback summary report on use of the e-procurement system after tender process completed or within 6 months of use, whichever comes first;
  - (v) valid Standardization, Testing, and Quality Certification (STQC) or audit certificate for Karnataka eGP system as soon as auditing authority<sup>20</sup> issues the certificate; and
  - (vi) a project completion report within 6 months of physical completion of the project.
- Table 28 summarizes the key reporting requirements during project implementation.

**Table 18: Summary of Key Reporting Requirements  
During Implementation**

Name of Report/Document	Timing of Reporting
1. Quarterly progress reports on project implementation, with the fourth quarter reports serving as the annual reports for the years concerned	Every 3 months until loan completion
2. Environmental and social monitoring reports	Every 6 months starting from loan effectiveness up until the completion of construction and then annually during operation, until submission of the project completion report (or a later date agreed therein) for the sovereign element and project maturity for the nonsovereign element. Environmental and social monitoring reports to be submitted within 1 month from the end of each reporting period.
3. Audited BESCO's annual financial statements	Within 14 days after approval by relevant authority
4. Audited project financial statement	Within 6 months from the end of the fiscal year throughout the implementation period
5. Feedback summary report on use of the e-procurement system	After tender process completed or within 6 months of use, whichever comes first
6. Valid Standardization, Testing, and Quality Certification (STQC) or audit certificate for Karnataka eGP system	As soon as auditing authority <sup>a</sup> issues the certificate
7. Project completion report	Within 3 months after project completion

<sup>a</sup> The auditing authority may be: Standardization, Testing, and Quality Certification Directorate, Ministry of Communications and Information and Technology, Government of India, or any third-party auditing organization.

<sup>20</sup> The auditing authority may be: Standardization, Testing, and Quality Certification Directorate, Ministry of Communications and Information and Technology, Government of India, or any third-party auditing organization.

#### **D. Stakeholder Communication Strategy**

66. Project information will be communicated through public consultation, information disclosure mechanism in ADB's and government's website, meetings, interviews, focus group discussions, and community consultation meetings, in accordance with ADB's requirements of information disclosure policy.

67. During project implementation, the following will be undertaken in accordance with the EMP to ensure ongoing participation of communities:

- (i) provide at least 1 month advance notice to local community through television, newspaper, social media, notices or pamphlets posted in the project area about the schedule of, location plan, and details of planned construction works;
- (ii) undertake community awareness raising programme 1 month prior to construction regarding the scope of the project, procedure of construction activities, identified impacts and mitigation measures. These awareness programmes will help the community to raise any problems, and clarify their distrust related to the project before construction starts. During these awareness raising programmes, the community should be informed about the grievance redress mechanism (GRM) including the place and the responsible person to contact in this regard;
- (iii) coordinate with the concerned local government authority and media to disseminate knowledge about health and safety to households and businesses located near areas of the temporary cable entry and exit pits;
- (iv) continue to undertake consultation with affected persons especially those with properties within 5 meters of temporary cable entry and exit pits to keep them fully informed of the nature of works and latest schedule at least 2 weeks prior to the start of construction; and
- (v) local communities to be consulted by contractor when selecting sites for temporary construction facilities prior to finalization of their location.

68. Any periodic consultations undertaken by BESCO and their contractors during the course of construction will be accompanied by timely disclosure of relevant information that is understandable and readily accessible to all affected groups and individuals, in particular women; will be undertaken in an atmosphere free of intimidation or coercion; will be gender inclusive and responsive, and tailored to the needs of disadvantaged and vulnerable groups; and shall enable the incorporation of all relevant views of affected people and other stakeholders into decision making, such as project design, mitigation measures, the sharing of development benefits and opportunities, and implementation issues. Consultations will be documented and reported in the periodic environmental and social monitoring reports.

69. Public disclosure of all project documents will be undertaken locally by BESCO (on their website, copies of reports available at offices, notices, etc.) and on the ADB website including the project data sheet, design and monitoring framework, IEE and any updates to it, and the Report and Recommendation of the President to the Board of Directors. Disclosure of environmental and social monitoring reports will be undertaken during project implementation.

## IX. ANTI-CORRUPTION POLICY

70. ADB reserves the right to investigate, directly or through its agents, any violations of the Anticorruption Policy (1998, as amended to date) relating to the project.<sup>21</sup> All contracts financed by ADB shall include provisions specifying the right of ADB to audit and examine the records and accounts of the Government of Karnataka and all the 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.<sup>22</sup> Investigation of Government officials if any, will be requested by ADB to be undertaken by the government.

71. To support these efforts, relevant provisions are included in the loan agreement and the bidding documents for the project. ADB's Anticorruption Policy has been explained to and discussed with the Government of Karnataka and BESCO. The government and BESCO have indicated their commitment to promote good governance and establish a corruption-free environment under the project. The government will undertake anticorruption actions, including: (i) conducting periodical inspections on the contractors' activities related to fund withdrawals and settlement; and (ii) ensuring that all contracts financed by ADB in connection with the project include relevant provisions of ADB's Anticorruption Policy in all bidding documents for the project specifying the right of ADB to audit and examine the records and accounts of the BESCO, and all the contractors, suppliers, consultants and other service providers as they relate to the project.

## X. ACCOUNTABILITY MECHANISM

72. 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, the 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.<sup>23</sup>

## XI. RECORD OF PAM CHANGES

73. The project administration manual is a living document and is subject to change after ADB Board approval of the project's report and recommendation of the President. It is concise yet informative, providing checklists of all activities related to project implementation along with the necessary procedures for the project management office's to effectively implement and monitor the project.

**Table 19: Record of PAM Changes**

No.	Changes/Updates	Date	Remarks
1	PAM initial draft agreed	12 August 2020	Agreed during the loan fact-finding mission
2	Final PAM agreed	2 November 2020	Agreed during the loan negotiations

<sup>21</sup> Available at <http://www.adb.org/Documents/Policies/Anticorruption-Integrity/Policies-Strategies.pdf>.

<sup>22</sup> ADB's Integrity Office website is available at <http://www.adb.org/integrity/unit.asp>.

<sup>23</sup> For further information see <http://www.adb.org/site/accountability-mechanism/main>.