India: West Bengal Electricity Distribution Grid Modernization Project

1. Project Information

Project ID:	P000454	Instrument ID:	L0454A
Member:	India		Southern Asia
wiember:	India	Region:	
Sector:	Energy	Sub-sector:	Electricity transmission and distribution
	⊠Loan:135.00 US Dollar		
Instrument type:	million	Lead Co-financier (s):	World Bank
	□Guarantee		
ES category:	В	Borrowing Entity:	Ministry of Finance, India
Implementing Entity:	Government of India		
Project Team Leader:	Pratyush Mishra		
Responsible DG:	Rajat Misra		
Responsible	INF1		
Department:	INFI		
	Ting Wang, Alternate Counsel;		
	Christopher Damandl, Project (Counsel;	
Project Team	Aditi Khosla, Alternate Counsel	;	
Members:	Guoping Yu, OSD - Procuremen	it Specialist;	
	Shodi Nazarov, OSD - Financial	Management Specialist;	
	Parthapriya Ghosh, OSD - Envir	onment & Social Develop	oment Specialist
	Jun, 2022		
Completed Site Visits	First combined implementation	n support mission along w	vith the World Bank
by AIIB:	Mar, 2023		
Planned Site Visits by	World Bank mission		
AIIB:	Sep, 2024 Implementation Support Mission	on planned in O3/O4 202	4
Current Red Flags	Implementation support wissie	511 pianinea in Q5/ Q+ 202	-
Assigned:	0		
Current Monitoring			
Regime:	Regular Monitoring		
Previous Red Flags			
Assigned:	0		
Previous Red Flags			
Assigned Date:	2023/08		
Assigned Date:			

2. Project Summary and Objectives

The objective of the project is to improve the operational efficiency and reliability of electricity supply in selected areas of West Bengal.

The project aims to modernize West Bengal's electricity distribution system by providing financial and technical support for investments in:

- (i)High voltage distribution system, aerial bunched cabling, 33/11 kilovolt gas insulated substations and underground cables;
- (ii)Smart consumer meters, deployment of distribution automation technologies and improving the existing commercial and enterprise information technology solutions; and
- (iii)Technical assistance for institutional development and capacity building of West Bengal State Electricity

Distribution Company Limited.

3. Key Dates

Approval:	Jan. 25, 2022	Signing:	Jan. 28, 2022
Effective:	Mar. 15, 2022	Restructured (if any):	
Orig. Closing:	Nov. 30, 2026	Rev. Closing (if any):	

4. Disbursement Summary (USD million)

Contract Awarded:		Cancellation (if any):	0.00
Disbursed:	54.51	Latest disbursement (amount/date):	8.52/May. 09, 2024
Undisbursed:	80.49	Disbursement Ratio (%)1:	40.38

5. Project Implementation Update

The project is making steady progress towards its project development objective of enhancing the operational efficiency and reliability of electricity supply managed by WBSEDCL. Thus far, it has achieved construction of over 1870 kilometers of new electricity distribution lines, the addition of more than 238,300 kVA of distribution transformation capacity, retrofitting of over 11,500 kilometers of distribution lines, and the relocation of over 1490 kilometers of distribution lines underground. The aggregate technical and commercial (AT&C) losses in the districts covered under the high voltage distribution system (HVDS) investments of the project are also on downward trend. Furthermore, under the project, WBSEDCL is actively integrating smart grid technologies such as smart meters (implementation underway with installation expected to start soon) and SCADA-based substation automation (procurement currently underway) into its operations.

Components	Physical Progress	Environmental & Social Compliance	Procurement						
High Voltage	Contracts for these	Impact on trees and crops: In most	All 14 packages, in the						
Distribution System	works have been	of the districts/ packages no tree	districts of Howrah, Purba						
(HVDS) works in	awarded over a period	cutting, and trimming are required.	Medinipur, Bankura,						
the districts of	of nearly a year	The agricultural land & crops are not	Purulia, Alipurduar,						
Howrah, East	(between March 2021	likely to be affected. So far, no	Coochbehar, Uttar Dinajpur,						
Medinipur,	February 2022). Physical	major issues have been observed	Dakshin Dinajpur, Malda,						
Bankura, Purulia,	progress till September	during execution of work.	Nadia, Murshidabad,						
Nadia,	2022 varies at each	Noise and dust: There are no major	Jalpaiguri and plain and hilly						
Murshidabad,	location depending on	issues related to particulate matter	areas of Darjeeling &						
Malda, North	the date of contract	(PM10 and PM2.5) and fugitive dust	Kalimpong have been						
Dinajpur, South	award, with earlier	pollution has been observed.	awarded.						
Dinajpur, Cooch	contracts having higher	Emission of gaseous pollutant like							
Behar, Alipurduar,	physical progress.	SOX, NOX, and CO will not occur.							
plain areas of	Physical work has been	Sprinkling of water has been done							
Darjeeling &	completed in 7 out of 14	during the excavation work when							

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.

Kalimpong and Jalpaiguri.	packages	necessary to minimize dust pollution. Construction is being done in the daytime only. So far, no major issues have been observed during execution of work. Safety: The work has been executed so far with compliance of standard safety norms & protocol and provision as per IE rules. PPE/ Safety equipment provided to the workers and utilised during execution. So far, no major issues have been observed during execution of work.	
Conversion of Overhead Cables to Underground in Rajarhat, Baguiati & Kestopur, Baruipur, Kharagpur, Asansol and Chandannagar	Contracts have been awarded over a period more than a year (April 2021 to June 2022, except for one package awarded in Jan 2024). Physical progress (excluding the package awarded in Jan 2024) ranges between 50.12% (Chandan Nagar) and 90.12% (Rajarhat).	As above	Procurement of all 8 packages is completed.
15 GIS Substations in Howrah, East Medinipur, Bankura, Nadia, Murshidabad, Malda, North Dinajpur, South Dinajpur, Alipurduar, and Jalpaiguri	Contracts have been awarded between April 2022 and March 2023. Physical work has been completed in Alupurduar, 96.5% physical progress at Howrah. Progress at other locations ranges from 31% in Murshidabad and 51% in Bankura	As above	All 10 packages have been awarded.
Implementation of Advanced Metering Infrastructure (AMI) in the form of smart meters	N/A	As Above	Tenders have been awarded in July 2023
Deployment of Supervisory Control and Data Acquisition System (SCADA)/Distributi on Management System (DMS)/ Outage Management System (OMS) in Alipurduar,	N/A	As Above	Bids for the package have been invited.

Project Implementation Monitoring Report (#3)

Reporting Period From 2023/09 To 2024/04

Financial Managemen	t:	
Newtown, Baruipur		
Burdwan,		
Jalpaiguri, Raiganj, Balurghat, Burdwan,		
Jalpaiguri, Raiganj,		
Coochbehar,		

The Project expenditure is pre-financed by the GoWB/WBSEDCL, and then reimbursement is sought from IBRD/AIIB. Accounting and financial reporting are up to date, but WBSEDCL was advised to discontinue manual parallel records and use the SAP/ERP system. Internal audit of the Project has been carried out by a private audit firm up to September 2022. The external audit of project financial statements has been completed up to FY2022/23 and primary audit opinion is unqualified. WBSEDCL has proposed to appoint its statutory auditors as the Project auditors for FY2023/24, and the audited Project financial statements for FY2023/24 are due by December 31, 2024.

6. Status of the Grievance Redress Mechanism (GRM)

A 3-tiered Grievance Mechanism already exists in the WBSEDCL. To strengthen it to effectively address grievances related to ESMP implementation under the project, two additional bodies are namely a Project Steering Committee at the corporate level and District Grievance Redressal Committees at the district level for subprojects have been established.

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

Progress towards results indicators is satisfactory

Remarks:



			Cumula	tive Target \	/alues																			
Project Objective	Indicator level	Unit of Measure	Baseline		2020		2021		2022		2023		2024		2025		2026		End Targ	get		Frequency	Responsibility	Comments
Indicators	ievei	Wedsure	Year	Value	Target	Actual	Year	Target	Actual															
Reduction in Aggregate Technical and Commercial (AT&C) losses in select districts - Bankura district	Project	Percent	2020	37.94	-	-	,	-	-	-	-				-		20		2026	20		Annual	WBSEDCL	
Reduction in Aggregate Technical and Commercial (AT&C) losses in select districts - Nadia district	Project	Percent	2020	26.22	-	-	-	-	-	-	-		-		-		18		2026	18		Annual	WBSEDCL	
Reduction in Aggregate Technical and Commercial (AT&C) losses in select districts - East Medinapur district	Project	Percent	2020	23.13	-	-	-	-	-	-	-		-		-		17.50		2026	17.50		Annual	WBSEDCL	
Reduction in Aggregate Technical & Commercial (AT&C) loss in select districts - Alipurduar district	Project	Percent	2020	20.41	-	-	-	-	-	-	-		-		-		16		2026	16		Annual	WBSEDCL	
Reduction in Aggregate Technical and Commercial (AT&C) losses in select districts - Dakshin Dinajpur district	Project	Percent	2020	42.75	-	-	-	-	-	-	-		-		-		20		2026	20		Annual	WBSEDCL	
Reduction in SAIDI (System Average Interruption Duration Index) in select towns - Asansol town	Project	Hours	2020	187.43	-	-	1	-	-	-	-		1		-		95		2026	95		Annual	WBSEDCL	
Reduction in SAIDI (System Average Interruption Duration Index) in select towns	Project	Hours	2020	249.78	-	-	-	-	-	-	-		-		-		125		2026	125		Annual	WBSEDCL	



- Kharagpur town																	
Reduction in SAIFI (System Average Interruption Frequency Index) in select towns - Asansol town	Project	Number	2020	117.28					-		•	85	2026	85	Annual	WBSEDCL	
Reduction in SAIFI (System Average Interruption Frequency Index) in select towns - Kharagpur town	Project	Number	2020	114.92	-		in the second se	in the second se	-		,	80	2026	80	Annual	WBSEDCL	

			Cumula	tive Target	Values																			
Project Intermediate Indicators	Indicator level	Unit of Measure	Baseline	2	2020		2021		2022		2023		2024		2025		2026		End Tar	get		Frequency	Responsibility	Comments
			Year	Value	Target	Actual	Target	Actual	Year	Target	Actual													
Distribution Lines constructed	Project	Km	2020	0	-	-	-	-	-	-	-		-		-		1,900		2026	1,900		Annual	WBSEDCL	
Increase in Distribution Transformation Capacity	Project	KVA	2020	0	-	-	-	-	-	-	-		-		-		85,300		2026	85,300		Annual	WBSEDCL	
Distribution lines retrofitted to reduce energy use	Project	Km	2020	0	-	-	-	-	-	-	-		-		-		12,100		2026	12,100		Annual	WBSEDCL	
Distribution lines moved under the ground to reduce exposure to storm and tree damage	Project	Km	2020	0	-	=	=	-	-	-	=		-		=		1,700		2026	1,700		Annual	WBSEDCL	
Consumers put on advanced metering infrastructure (AMI) meters (for efficient and reduced energy consumption)	Project	Number	2020	0	-	-	-	-	-	-	-		-		-		200,000		2026	200,000		Annual	WBSEDCL	



Project Implementation Monitoring Report (#3)

Reporting Period From 2023/09 To 2024/04

Sub-stations integrated with SCADA system	Project	Number	2020	0	-	-	-	-	-		-	-	-	50	2026	50	Annual	WBSEDCL	
Person Days of Training Provided to WBSEDCL officials - Total	Project	Number	2020	0	-	-	-	-	-	-	-	÷	-	5,000	2026	5,000	Annual	WBSEDCL	
Person-days of ICT/OT technical trainings/capacity building activities (females) in WBSEDCL	Project	Number	2020	0	=	=	=	-	-	-	-	-	=	1,000	2026	1,000	Annual	WBSEDCL	
Grievances received that are addressed within two months of receipt	Project	Percentage	2020	0	-	-	-	-	-	-	-	-	-	90	2026	90	Annual	WBSEDCL	
Percentage increase in total technical/ICT staff (females) in WBSEDCL	Project	Percentage	2020	0	-	=	=	-	=	-	-	÷	=	7.5	2026	7.5	Annual	WBSEDCL	
Person-days of internship/ training for students in ICT/OT/ technical areas (females) provided by WBSEDCL	Project	Number	2020	0	-	-	-	-	-	-	-	-	-	10,000	2026	10,000	Annual	WBSEDCL	