

DESIGN AND MONITORING FRAMEWORK FOR PROJECT 2

<p>Impacts the Project is aligned with:</p> <p>Enhanced quality and expanded service delivery of electricity in Assam. (Electricity for All, Twelfth Five Year Plan)^a</p>

Project Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting	Risks
<p>Outcome</p> <p>Increased efficiency and capacity of the power distribution system in Assam.</p>	<p>By 2020:</p> <p>a. Distribution loss reduced in project areas to 18% (2015 baseline: 21%)</p> <p>b. 152,000 tons of carbon dioxide emissions per annum avoided from 2018</p>	<p>a–b</p> <p>APDCL annual reports</p> <p>AERC annual reports</p>	<p>Power generation capacity does not increase sufficiently to match expanded distribution system</p>
<p>Outputs</p> <p>1. Distribution system expanded and upgraded.</p>	<p>By 2020:</p> <p>1a. One 33/11 kV substation with associated lines built; (2014 baseline: 308)</p> <p>1b. 144 km of 33 kV and 11 kV lines built; (2014 baseline: 55,500 km of 11 kV and 6,500 km of 33 kV)</p> <p>1c. 17 terminal bays (33 kV) constructed; (baseline: N/A)</p> <p>1d. 1955 km of 33 kV and 11 kV lines, 1555 km of low voltage lines rehabilitated; (baseline: N/A)</p> <p>1e. 204 distribution transformers replaced; (baseline: N/A)</p> <p>1f. 14 km of overhead lines replaced by underground cable; (baseline: 0)</p>	<p>1a–1f</p> <p>GOA certification</p> <p>APDCL annual reports</p> <p>Quarterly progress reports from PMU and PIU</p> <p>ADB review mission report</p>	<p>Unexpected increase in prices of equipment and raw materials, and construction delays impact the work</p>
<p>2. Institutional capacity of APDCL strengthened.</p>	<p>2a. One meter testing laboratory operational by June 2018; (2014 baseline: 3)</p> <p>2b. Centralized uniform billing to 1.2 million customers operational by June 2019. (2014</p>	<p>2a–2c</p> <p>GOA certification</p> <p>APDCL annual reports</p> <p>Quarterly progress reports from PMU and PIU</p> <p>ADB review mission</p>	

	baseline: 650,000 customers)	report.	
	2c. Two area load-dispatch centers operational.		
Key Activities with Milestones			
1. Distribution system expanded and upgraded			
1.1 Issue bid documents (April-May 2015) and award contracts (November-December 2015).			
1.2 Construct a new 33/11 kV substation, 33 and 11 kV lines, and 33 kV terminal bays (June 2019).			
1.3 Re-conductor existing 33 kV, 11kV and low voltage lines (June 2019).			
1.4 Replace distribution transformers (June 2019).			
1.5 Install underground cable (June 2019).			
1.6 Commission (June 2019–July 2019).			
2. Institutional capacity of APDCL strengthened			
2.1 Issue bid documents (June–September 2015) and award contracts (December 2015).			
2.2 Build meter testing laboratory (June 2018).			
2.3 Install communication hardware (June 2019).			
2.4 Operate two area load dispatch centers (June 2019).			
2.5 Mobilize Consultants for Supplemental Environmental Assessment for Lower Kopili Hydropower project (July 2016).			
2.6 Mobilize Project Management, Supervision and Implementation Support Consultants (January 2016).			
Inputs			
ADB:		\$48,000,000	
Government:		\$12,000,000	
Assumptions for Partner Financing			
Not applicable			

ADB = Asian Development Bank, AERC = Assam Electricity Regulatory Commission, APDCL = Assam Power Distribution Company Ltd., GOA = Government of Assam, km = kilometer, kV= kilovolt, LV = low voltage, PIU = project implementation unit, PMU = project management unit.

Source: Asian Development Bank.

^aGovernment of India, Planning Commission. 2013. *Twelfth Five Year Plan, 2012–2017*. New Delhi.