



Sri Lanka: Power System Reliability Strengthening Project

Project Name	Power System Reliability Strengthening Project				
Project Number	51122-002				
Country / Economy	Sri Lanka				
Project Status	Proposed				
Project Type / Modality of Assistance	Loan				
Source of Funding / Amount	<table border="1"><tr><td colspan="2">Loan: Power System Reliability Strengthening Project</td></tr><tr><td>Ordinary capital resources</td><td>US\$ 200.00 million</td></tr></table>	Loan: Power System Reliability Strengthening Project		Ordinary capital resources	US\$ 200.00 million
Loan: Power System Reliability Strengthening Project					
Ordinary capital resources	US\$ 200.00 million				
Strategic Agendas	Environmentally sustainable growth Inclusive economic growth				
Drivers of Change	Gender Equity and Mainstreaming Governance and capacity development Knowledge solutions				
Sector / Subsector	Energy / Electricity transmission and distribution				
Gender	Some gender elements				
Description	The project will focus on system reliability, optimization of existing fault clearance system of the CEB and LECO network and the settings of the main protection systems. The project will ascertain the performance of existing protection system associated with transmission lines, transformers and generators connected to 220 kV and 132 kV networks and improve efficiency and reliability of the medium-voltage network in the distribution. The project processing is delayed due to the ongoing macroeconomic challenges faced by the country and hence power sector projects including this will be reprioritized based on the IMF program.				
Project Rationale and Linkage to Country/Regional Strategy	<p>Sri Lanka's energy sector performance has achieved a national electrification ratio of 99.3% (2016) of the households up from 29% in 1990. However, the demand for electricity continues to grow with increasing economic growth and improving living standards of the population. While trying to meet this increasing demand the sector continues to struggle because of the high cost of electricity emanating from poor generation mix and inadequate level of reliability. This is partly due to underinvestment in the transmission network, medium voltage network, and protection system resulting from high government debt-to-GDP ratio over the years and the poor financial status of Ceylon Electricity Board (CEB) the state-owned public utility whose operations have been constrained by non-implementation of full cost recovery tariff and receivables.</p> <p>In 2015-2016, Sri Lanka suffered three country-wide blackouts within the span of 7 months. All these blackouts were attributed to poor operation of the protection system, lack of operational flexibility and bottlenecks in the transmission system. Economic loss from the three blackouts was estimated at monetarized value at the unit of \$/kWh un-served activity. Indirect social impacts, such as increase in crime rates, were also reported.</p> <p>Strengthening the transmission system, improving the 33/11 kilovolt (kV) medium voltage network, and upgrading the protection system are needed to ensure reliable operation of the power system. These interventions will also help increase absorption of intermittent wind and solar power which in turn will contribute to achieving government targets for clean energy development. Similarly, these will improve the quality of power supply in rural areas, where currently the quality is low.</p> <p>The project is consistent with the national sector investment program that is based on the National Energy Policy and Strategies of Sri Lanka and Vision 2025. The project is also in line with Asian Development Bank's (ADB's) country partnership strategy for Sri Lanka where the energy sector is expected to focus on, among others, expanding nontraditional renewable energy using wind and solar, and improving reliability of power supply. The project is also strongly linked to recently approved ADB programs supporting investments in removing bottlenecks in power transmission and strengthening distribution system, and expanding access to clean electricity and promote renewable energy development.</p> <p>Lessons from previous projects will be considered and incorporated into the project design and implementation arrangements. Specifically, the project will integrate renewable energy, and improve implementation arrangements by strengthening CEB and Lanka Electricity Company (Private) Ltd. (LECO) capacity in complex project supervision and safeguard monitoring.</p>				
Impact	Access to clean, reliable and affordable power supply in Sri Lanka increased by 2030 (Sri Lanka Energy Sector Development Plan for a Knowledge Based Economy 2015-2025)				
Outcome	Power system efficiency and reliability improved				
Outputs	1. Transmission infrastructure expanded nationwide (CEB) 2. Efficiency and reliability of medium voltage network improved (LECO) 3. Protection systems upgraded (CEB)				
Geographical Location	Nation-wide, Anuradhapura, Chunnakam, Hambantota, Homagama, Kalawana, Kandy, Kerawalapitiya, Rajagiriya, Tissamaharama, Vavuniya, Victoria Randenigala and Rantambe Sanctuary				
Safeguard Categories					
Environment	B				
Involuntary Resettlement	B				
Indigenous Peoples	C				
Summary of Environmental and Social Aspects					
Environmental Aspects					
Involuntary Resettlement					
Indigenous Peoples					

Stakeholder Communication, Participation, and Consultation

During Project Design

During Project Implementation

Business Opportunities

Consulting Services	Two separate consulting firms will be selected for (i) undertaking study on power supply reliability and protection development (Part A), and (ii) conducting project preparatory due diligence (Part B). The TRTA will require total of 58 person-months of consulting services (34 international and 24 national) in the areas of (i) Part A: power system modeling and analysis, power system protection, and power system operation with intermittent renewable (wind and solar) integration, transmission and generation planning and operation, and (ii) Part B: power system engineering, transmission and distribution, economics, financial analysis, environmental and social safeguards, procurement and others.
Procurement	13. Advance contracting will be used for procurement in transmission and distribution subprojects to achieve high level of project readiness. Retroactive financing will be considered to expedite project implementation at government's request. Retroactive financing may be allowed for up to 20% of each loan amount for expenditures incurred prior to loan effectiveness, but no earlier than 12 months before the signing of the loan agreement. The government and the EAs were advised that ADB's approval of retroactive financing in principle does not commit ADB to finance any part of the project.

Responsible ADB Officer	Kolantharaj, Jaimes
Responsible ADB Department	South Asia Department
Responsible ADB Division	Energy Division, SARD
Executing Agencies	Ceylon Electricity Board Lanka Electricity Company (Private) Ltd.

Timetable

Concept Clearance	11 Dec 2017
Fact Finding	23 Nov 2020 to 27 Nov 2020
MRM	15 Mar 2024
Approval	-
Last Review Mission	-
Last PDS Update	15 Dec 2022

Project Page	https://www.adb.org/projects/51122-002/main
Request for Information	http://www.adb.org/forms/request-information-form?subject=51122-002
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