

RISK ASSESSMENT AND RISK MANAGEMENT PLAN

Risk Description	Rating	Mitigation Measures	Responsibility
Technical			
Lack of technical capacity to ensure quality of civil works and sustainable operation of transmission lines and substations	L	The project will use standard technology with which EDC is familiar. Consultants will support EDC in the procurement of EPC contractors and in project implementation.	EDC, PIC
Lack of technical capacity to ensure quality design and sustainable operation of the BESS	S	Consultants will support EDC in procuring EPC contractors and supervising installation. The EPC contract will include 3 years of O&M and provisions for training to EDC staff.	EDC, PIC, EPC
Delays in construction because of difficult weather conditions (rainy season, flooding)	M	EPC contractors' construction schedule shall include the possibility of delays because of weather conditions. The project implementation time frame takes into account the possible occurrence of construction delays.	EDC, PIC, ADB
Unforeseen global events such as the COVID-19 pandemic delay the construction of transmission lines, substations, BESS, and associated facilities	S	The 5-year project implementation time frame takes into account potential construction delays.	EDC, ADB
Economic and Financial			
Insufficient cash generation by EDC to fund its operations and infrastructure investment needs	L	Financial projections for EDC show that falling power purchase costs offset rising debt service costs (e.g., start of repayments on large loans, such as from China EXIM Bank) and that EDC is expected to meet its financial covenants in full.	EDC, MEF, MME
Completion and/or cost overrun because of contractors' inexperience or inability to fulfill contract	L	Cost estimates have been verified as part of project due diligence, and provisions for contingencies (physical and price) are in place. PIC supports EDC in supervising project and contract implementation.	EDC, MEF, PIC
Pilot BESS is not financially viable.	S	The BESS is a grant-financed pilot. The average annual net revenues from the BESS are sufficient to cover annual operating expenditures, ensuring the system's sustainability throughout its operating life without any direct financial cost to EDC.	EDC, PIC, EPC
Governance (comprising financial management, procurement, anticorruption measures, and institutional capacity)			
Country-specific—weak PFM systems may lead to contract payment errors and irregularities.	S	Capacity will be further improved through training, with assistance from ADB. ^a Review missions will perform random checks on expenditures.	MEF, ADB
Entity-specific—shortage of skills in financial management, accounting, financial reporting, and internal audit may lead to	L	EDC staff are familiar with ADB requirements from previous projects. Capacity will be further improved through training, with assistance from ADB. The accounting department is currently fully staffed. Spot and random checks on expenditures by review missions.	EDC, ADB

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contract payment errors and irregularities.			
Implementing entity—malpractice and abuse of PFM rules by employees	L	Stronger internal audit controls in place, including auditing of individual projects, and training to all internal audit staff provided	EDC
Funds flow—government may be unable to meet funding obligations because of budget constraints	L	Project financing plan was agreed with the government and restricted to a few project components to ensure availability of counterpart financing	MEF, EDC
Staffing—EDC has limited staff capability in financial management, accounting, budgeting, internal controls, and financial reporting.	M	EDC staff are familiar with ADB requirements from previous projects and have been trained in ADB project accounting and reporting requirements. More training will be conducted during project implementation.	EDC, PIC, ADB
Accounting policies and procedures—manual project accounting procedures introduce operational risk.	L	Data is transferred from MS Excel files to EDC's accounting software. Internal and external audits ensure consistency and accuracy of data entries. Only authorized project managers and finance officers are permitted to enter data.	EDC
Internal audit—weak capacity in the internal audit department	L	The internal audit department was made fully operational at the end of 2018. Individual projects are audited. Training provided on ADB requirements to all internal audit staff.	EDC
External audit—delay in the submission of externally audited project accounts because of limited capacity; annual audit may not meet ADB requirements.	M	Under current projects, externally audited project accounts have been submitted within 6–7 months (covenant of 6 months). EDC will apply CPSAS for reporting from 2020 accounts.	EDC
Reporting and monitoring—unreliable reports because of errors and limited staff capability for ADB financial reporting requirements	L	EDC staff are familiar with ADB requirements. Project accounts are subject to internal and external audit. More training will be conducted during project implementation.	EDC
Information systems—accounting data not adequately safeguarded	L	Regular backups to secured locations are undertaken. Access to financial management software and systems is limited to authorized project manager and financial officers.	EDC
Inadequate procurement capacity may lead to the award of contracts to unqualified bidders.	M	Strong oversight by ADB and the services of a project startup consultant will support bid document preparation, prior reviews, and bid evaluation and documentation.	EDC, project startup consultant, ADB
Unforeseen changes in projected electricity demand undermine the project's financial and economic viability.	S	Even under a scenario of demand contraction in 2020 and slower-than-anticipated growth-at an average 10.8% per year, compared with initially projected 17.6% per year - the project remains viable.	EDC

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Safeguards			
Construction delayed or not realized because involuntary resettlement concerns are not addressed in time.	M	The project will have minor involuntary resettlement impacts. Publicly owned land free of encumbrances is proposed for siting substations. EDC's final site selection will take into account landowners' willingness to sell without resorting to compulsory acquisition. Transmission line alignment will be finalized based on the least-impact route. The LARP will be finalized immediately once the final detailed design is available to ensure continuity and to avoid delays in construction.	ADB, EDC
Construction delayed or not realized because impacts on indigenous peoples are not addressed in time.	L	The impact screening conducted for the subprojects shows that the proposed project will neither directly nor indirectly affect indigenous peoples.	ADB, EDC
Delays in construction because of late update, approval, and/or implementation of the borrower's social and/or environmental safeguard documents	M	EDC has designated staff who understand ADB SPS requirements and are experienced in implementing ADB-financed projects. The PIC will support EDC in updating and implementing documents, and in submitting progress reports, to proactively manage risks of delays, should they occur.	EDC, PIC, ADB
Construction start delayed because MOE has not approved domestic EIAs for project components.	M	EDC will recruit a MOE-registered firm under agreed terms of reference to undertake domestic EIAs, and obtain approvals prior to the start of civil works. A project startup consultant will support EDC in this process.	EDC, MOE
Climate change impacts undermine the sustainability of transmission lines, substations, and BESS.	S	Climate adaptation measures are incorporated in the design of transmission lines, substations, and BESS, and will be reflected in bidding documents and contracts.	EDC, EPC contractors, ADB
Overall	M		

ADB = Asian Development Bank; BESS = battery energy storage system; COVID-19 = coronavirus disease; CPSAS = Cambodian Public Sector Accounting Standards; EDC = Electricité du Cambodge; EIA = environmental impact assessment; EPC = engineering, procurement, and construction; LARP = land acquisition and resettlement plan; MEF = Ministry of Economy and Finance; MME = Ministry of Mines and Energy; MOE = Ministry of Environment; O&M = operation and maintenance; PIC = project implementation consultant; PFM = public financial management; SPS = Safeguard Policy Statement.

Note: S = substantial, M = moderate, L = low.

^a ADB. 2019. *Technical Assistance for Strengthening Project Readiness, Procurement and Financial Management in Southeast Asia*. Manila.

Source: Asian Development Bank.