

RISK ASSESSMENT AND RISK MANAGEMENT PLAN

Risk Description	Rating	Mitigation Measures	Responsibility
Technical			
Dam break study showing high potential impact	H	The design incorporates features to prevent a catastrophic failure from occurring. The government will ensure that a dam emergency action plan, including a warning system in the downstream valley and a shared system of information for dams on Kunhar River, is in place and effective before the hydropower plant is commissioned. The system should include instrumentation with modeling for automatic weather stations in catchment, stream gauges, and coordinated reservoir operations.	PEDO, PMU
Complexities in the detailed design and PEDO's weak technical capacity	H	The recommendations and requirements for the design are defined in the feasibility study and bill of quantities section of the bidding document, including supplemental geological and geotechnical investigations, physical modeling, and three-dimensional modeling. A review of the detailed design by an independent panel of experts is recommended before PEDO's approval of the design.	PEDO, PMU
Major earthquake or floods during project construction	M	The executing agency will ensure that the contractor follows international safety standards and methods during construction to handle such disasters, including preparing an emergency action plan for the site as well as communities downstream of the dam site and conducting staff awareness training.	PEDO, PMU
Governance, financial management, procurement, anticorruption, capacity, and institutional			
Delayed implementation of automated information system and reporting	H	Accounting staff will be trained to improve their reporting capacity. ERP and an MIS will be developed to improve PEDO's accounting infrastructure.	PEDO, PMU, and Information Technology Department of PEDO
Delayed disclosure of accounting policies, procedures, and systems that are compliant with the IFRS	M	Financial management staff will be engaged in the PMU to assist in maintaining and timely disclosure of an accrual-based accounting system that is compliant with the IFRS.	PEDO's Finance and Accounting Division
PEDO's financial sustainability	M	Covenants will be included in the loan agreement to ensure cost recovery tariff and access to a sustainable payment discipline.	ADB
Financial management analysis showing weaknesses in accounting systems	H	An accounting system that is compliant with the IFRS will be established and maintained for the project to minimize risk. The international consultant will carry out a system diagnostics to identify weaknesses and design a mitigation plan, including upgrading the accounting system and introducing ERP and an integrated MIS.	PEDO's Finance and Accounting Division

Risk Description	Rating	Mitigation Measures	Responsibility
Inadequate capacity of PEDO staff	S	International consultants will support the PMU and provide training on ADB procedures to be provided.	PEDO, PMU
Weak reporting and monitoring mechanism	H	<p>A reporting system that can generate financial reports automatically will be established and maintained for the project.</p> <p>Implementation consultants will be recruited to assist the PMU in supervising the project implementation, recording the project costs, and preparing withdrawal applications and progress reports.</p>	PEDO, PMU
Weak information systems	H	<p>Information systems and processes will be enhanced to meet the demands of the organization, ensure operational stability, and allow for full consolidation of management information as well as financial data.</p> <p>Adoption of ERP and an MIS will improve the information system and reporting transparency and consistency.</p>	PEDO, PMU, and Information Technology Department of PEDO
Land acquisition, resettlement, and site complexity issues reducing contractors' interest in bidding	M	A social and environment management unit will be established within the PMU to oversee the updating and implementation of the LARP, with support from the project implementation consultant, in coordination with the provincial revenue department.	PEDO, PMU
Security issues in Khyber Pakhtunkhwa affecting suppliers and/or providers' willingness to supply needed technologies	M	A road show will be conducted during the bidding process to brief contractors on the security issues and to provide comfort for effective participation.	PEDO, PMU

ADB = Asian Development Bank, ERP = enterprise resource planning H = high, IFRS = International Financial Reporting Standards, LARP = land acquisition resettlement plan, M = moderate, MIS = management information system, PEDO = Pakhtunkhwa Energy Development Organization, PMU = project management unit, S = substantial. Source: Asian Development Bank.