

 Early Warning System

WB-P178914

Emergency Power Restoration Project



Quick Facts

Countries	Malawi
Financial Institutions	World Bank (WB)
Status	Approved
Bank Risk Rating	A
Voting Date	2022-06-17
Borrower	Government of Malawi
Sectors	Construction, Energy, Hydropower, Infrastructure
Investment Type(s)	Grant, Loan
Investment Amount (USD)	\$ 60.00 million
Loan Amount (USD)	\$ 36.00 million
Grant Amount (USD)	\$ 24.00 million
Project Cost (USD)	\$ 60.00 million



Project Description

According to bank documents, the the project objective is to rehabilitate and increase resilience of the Kapichira hydropower dam and spillways, and transmission and distribution infrastructure damaged by Tropical Storm Ana.

The project has the two main components, the first being related to generation, and the second to transmission and distribution:

1. Component 1: Kapichira Dam Rehabilitation and Strengthening (US\$ 44.7 million). This component will finance the return to resilient operation of the 128 MW Kapichira hydropower plant through the rehabilitation and upgrade of the Kapichira dam and spillways. The following phased approach is proposed to be implemented for the protection, rehabilitation, and strengthening of Kapichira dam.
 - i. Immediate actions mobilized by EGENCO include urgently restoring main spillway capacity while also kick-starting actions on the critical path for Kapichira dam rehabilitation such as collecting topographic data and assessing the quality of sand available in the reservoir for construction, commencing sediment management studies, and removal of sediment from the reservoir. These immediate actions are being currently implemented and funded by EGENCO.
 - ii. Phase 1: Energy restoration to be implemented through raising water levels back to operational levels and by developing a temporary cofferdam upstream of the damaged infrastructure (the fuse plug and damaged section of the embankment dam) in order to restore impoundment of the reservoir. This would prevent further damage while protecting works for Phase 2 and SVTP irrigation intake. In order to safeguard the safety of the dam during this phase, reinforcement of the upstream face of the dam and treatment of existing scars downstream will be also implemented. This phase is planned to be implemented under the ongoing SVTP project, benefiting from existing financial and human resources (including existing PIU, owner's engineer and contractors).
 - iii. Phase 2: Build-back better: Based on a revised design that would address key technical and operational features that contributed to the failure, this component will aim at (i) rehabilitating damaged infrastructure (mainly the dam), (ii) upgrading Kapichira scheme to enhance the resilience of the hydropower scheme (especially the main and emergency spillways), and (iii) supporting companion actions on operation and maintenance (O&M) and sediment management. It will be structured around mobilization of an international consultancy firm who, as Owner's Engineer (OE) for EGENCO, will (i) further review damage and previous design of the Kapichira scheme. On this basis and while integrating the new needs for SVTP irrigation intake, the OE will model hydraulic and sediment flows under different build back better scenarios and recommend detailed scope of rehabilitation and upgrade for key infrastructure such as the dam, fuse plug, and main spillway. For the latter, the OE will be required to propose an upgrade to ease operation and maintenance of the gates since they were identified as part of the root causes of the damage. The project will (i) take stock of existing studies and modeling to support the design of a basin-wide sediment management strategy for the operation of the HPP cascade (existing and proposed reservoirs) and irrigation scheme and (ii) together with the OE, develop a specific-costed implementation plan for Kapichira reservoir. The proposed basin-wide sediment management strategy will likely be funded, designed, and delivered under the upcoming Mpatamanga Phase I IDA credit.
2. Component 2: Transmission and Distribution Network Restoration (US\$15.3 million). This component will finance the reconstruction of ESCOM's infrastructure damaged by TS Ana including both transmission (132kV & 66kV) and distribution (33kV, 11kV and 400V lines) networks where a number of power line components have been affected. These include steel towers, wooden poles and structures, transformers, conductors and insulators among others. The damage caused by the tropical storm has been in various degrees including complete line sections, isolated structures and damage to specific equipment and materials in a manner that permanent rehabilitation works shall have to comprise of



Investment Description

- World Bank (WB)



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ACCESS TO INFORMATION

To submit an information request for project information, you will have to create an account to access the Access to Information request form. You can learn more about this process at: <https://www.worldbank.org/en/access-to-information/request-submission>

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Bank Documents

- [Appraisal Environmental and Social Review Summary \(ESRS\) - Emergency Power Restoration Project - P17](#) [Original Source]
- [Environmental and Social Commitment Plan \(ESCP\) - Emergency Power Restoration Project - P178914](#) [Original Source]
- [Environmental and Social Commitment Plan \(ESCP\) Emergency Power Restoration Project \(P178914\)](#) [Original Source]
- [Malawi - Emergency Power Restoration Project](#) [Original Source]
- [Project Information Document - Emergency Power Restoration Project - P178914](#) [Original Source]
- [Stakeholder Engagement Plan \(SEP\) - Emergency Power Restoration Project - P178914](#) [Original Source]