Early Warning System

ADB-60126-001

Grid-Integrated Battery Energy Storage System for Stability and Resilience Project

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Quick Facts

Countries	Pakistan
Financial Institutions	Asian Development Bank (ADB)
Status	Proposed
Bank Risk Rating	U
Borrower	Government of Pakistan
Sectors	Energy, Infrastructure
Investment Type(s)	Loan
Investment Amount (USD)	$ 250.00 million
Loan Amount (USD)	$ 250.00 million

Project Description

According to the ADB, the project will finance the design, supply, installation, commissioning, operation and maintenance of utility-scale BESS facilities. Integration of BESS into the transmission SCADA Phase III system, currently under implementation under the ADB-funded Second Power Transmission Enhancement Investment Program (MFF II), will enable optimized dispatch and provision of ancillary services.

Preliminary findings of the ongoing feasibility study indicate that installing two BESS along the North-South transmission corridor would be the most effective approach to address key grid bottlenecks and increase the transmission capacity of renewable energy along the corridor. Each installation is expected to have an approximate power rating of 500 megawatts (MW) and an energy storage capacity of about 1,000 megawatt-hours (MWh), corresponding to a 2-hour storage duration, resulting in a total capacity of approximately 1,000 MW / 2,000 MWh. At this scale, the proposed BESS would represent one of the largest grid-scale battery storage deployments supported by ADB to date and the first transmission-level storage system of this scale in the Central and West Asia region.

The project will also strengthen the institutional and operational capacity of NGC for storage operation, asset management, cybersecurity, and performance monitoring. The project will also support operational protocols for storage dispatch, ancillary services provision, and coordination with the planned Independent System and Market Operator (ISMO) framework. Through this investment, battery storage will become an integral component of Pakistan's transmission system and energy market, enhancing grid flexibility, reliability, and resilience.

Investment Description

- Asian Development Bank (ADB)

Private Actors Description

The executing agency will be the National Grid Company of Pakistan Limited. As stated by Devex, National Grid Company of Pakistan Limited, formerly known as National Transmission & Dispatch Company (NTDC), was incorporated on 6th November, 1998 and commenced commercial operation on 24th December, 1998. It was organized to take over all the propertise, rights and assets obligations and liabilities of 220 KV and 500KV Grid Stations and Transmission Lines/Network owned by Pakistan Water and Power Development Authority (WAPDA). NTDC operates and maintains fourteen 500 KV and thirty eight 220 KV Grid Stations, 5110.48 km of 500 KV transmission line and 9686.32 km of 220 KV transmission line in Pakistan.

Private Actor 1	Private Actor 1 Role	Private Actor 1 Sector	Relation	Private Actor 2	Private Actor 2 Role	Private Actor 2 Sector
-	-	-	-	National Grid Company of Pakistan Limited	Contractor	Energy

Contact Information

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ACCESS TO INFORMATION

You can submit an information request for project information at: https://www.adb.org/forms/request-information-form

ADB has a two-stage appeals process for requesters who believe that ADB has denied their request for information in violation of its Access to Information Policy. You can learn more about filing an appeal at: https://www.adb.org/site/disclosure/appeals

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The Accountability Mechanism is an independent complaint mechanism and fact-finding body for people who believe they are likely to be, or have been, adversely affected by an Asian Development Bank-financed project. If you submit a complaint to the Accountability Mechanism, they may investigate to assess whether the Asian Development Bank is following its own policies and procedures for preventing harm to people or the environment. You can learn more about the Accountability Mechanism and how to file a complaint at: http://www.adb.org/site/accountability-mechanism/main.