



Pakistan: MFF Power Transmission Enhancement Investment Program II Tranche 3

Project Name	MFF Power Transmission Enhancement Investment Program II Tranche 3	
Project Number	48078-005	
Country / Economy	Pakistan	
Project Status	Active	
Project Type / Modality of Assistance	Grant Loan	
	Grant 0578-PAK: MFF Power Transmission Enhancement Investment Program II Tranche 3	
Source of Funding / Amount	High Level Technology Fund	US\$ 4.00 million
	Loan 3677-PAK: MFF Power Transmission Enhancement Investment Program II Tranche 3	
	Ordinary capital resources	US\$ 280.00 million
Strategic Agendas	Environmentally sustainable growth Inclusive economic growth	
Drivers of Change	Gender Equity and Mainstreaming Governance and capacity development Knowledge solutions Partnerships	
Sector / Subsector	Energy / Electricity transmission and distribution	
Gender	Some gender elements	

Description	<p>Tranche 3 will support the National Transmission & Despatch Company Limited (NTDC) in meeting the electricity demand of 1,150 MW efficiently and reliably at loan centers in Punjab Province by deploying high-level technologies and climate-change-resilient transmission systems. Tranche 3 will support installation of 500 kV substation in Lahore North, 500 kV switching station near Maira, 220 kV substation near Jauharabad, and 194 km of associated new transmission lines in Punjab and reconductoring of 44 km of transmission lines with high-temperature, low-sag (HTLS) conductors near Lahore. Tranche 3 will support the first large-scale grid-connected battery energy storage system (BESS) pilot project in Pakistan, which will provide subsecond frequency regulation. This pilot project will use wind power to help the NTDC comply with frequency requirements in the existing Grid Code, and will supplement the functions of the supervisory-control and data-acquisition system being upgraded under Tranche 2. The BESS pilot project will recommend on the (i) revision of the Grid Code for better frequency compliance; and (ii) development of a commercial ancillary services market. Tranche 3 will promote the deployment of HTLS conductors, which can operate at higher ambient temperatures within the required vertical clearance. Tranche 3 will also support the replacement of porcelain insulators with a fog-resistant type, such as glass or composite insulators, which are expected to perform better in heavily polluted areas.</p>
Project Rationale and Linkage to Country/Regional Strategy	<p>Tranche 3 is aligned with the following impacts: (i) improved transmission infrastructure, and (ii) improved energy market transparency and efficiency. Tranche 3 will have the following outcome: improved coverage, reliability, transparency, and quality of the power transmission service in Pakistan. The outputs are transmission system capacity augmented and expanded, and grid-connected large-scale battery energy storage system (BESS) installed.</p>
Impact	<p>Energy market transparency and efficiency improved. Transmission infrastructure improved.</p>

Project Outcome

Description of Outcome	<p>Coverage, reliability, transparency, and quality of the power transmission service in Pakistan improved.</p>
Progress Toward Outcome	<p>ADB financing was approved on 28 Jun 2018 while loan, grant and project agreements were signed on 13 Dec 2018. The ADB loan/grant took effect on 25 Feb 2019 with project closing date of 31 Dec 2023. Procurement activities are ongoing. As of 31 March 2020, the total contract award and disbursements stands at \$27.925 million and \$5.375 million.</p>

Implementation Progress

Description of Project Outputs	<p>Transmission system capacity augmented and expanded. Grid connected large scale battery energy storage system (BESS) installed.</p>
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Status of Implementation Progress (Outputs, Activities, and Issues)

Procurement of EPC contractor is ongoing.
Recruitment of consultants is ongoing for BESS project.

Geographical Location

Nation-wide

Safeguard Categories

Environment B

Involuntary Resettlement A

Indigenous Peoples C

Summary of Environmental and Social Aspects

Environmental Aspects

The environmental assessment and review framework of MFF II was reviewed and updated. NTDC has prepared IEEs for five subprojects in accordance with ADB's Safeguard Policy Statement (2009) and the environmental assessment and review framework. Among key anticipated negative environmental impacts of the project are soil erosion, noise and fugitive dust generation, tree cutting, and community and occupational health and safety hazards during construction, as well as electromagnetic field generation during operation. Adequate mitigation measures are incorporated in the project design and will be implemented through the environmental management plans. Those include capacity building for contractors before and during construction, and throughout operation. The project complies with public disclosure and consultation requirements. The NTDC conducted public consultations on the subprojects from July 2016 to April 2018. ADB disclosed draft IEEs and updated IEEs on the ADB website on 23 April 2018 and 18 May 2018. The IEEs will be disclosed locally during public hearings in accordance with national legislation. The NTDC will establish a project grievance redress mechanism before project implementation.

The NTDC will acquire about 311 acres of private agriculture land owned by 107 families for the three new substations. Installation of 250 km transmission lines will temporarily impact at least 3,000 acres of cropped area and 3,000 wood trees, owned by 598 families. The farm land is cultivated by landowners without involving any tenants, farm workers, or leaseholders. Thus, only the owners of farm land are affected, and they will be compensated for the affected crops and trees. Transmission lines will be constructed in three phases: (i) excavation and concreting of tower foundations, (ii) erection of towers, and (iii) stringing of conductors. Owners will be compensated for crops that are temporarily affected during construction, in accordance with ADB's Safeguard Policy Statement. No physical displacement of affected persons will occur under any subproject of Tranche 3, although 50 of 63 affected families near Lahore North substation will lose 10% or more of their productive land. The land acquisition and resettlement framework of the MFF prepared under Tranche 1 was reviewed and confirmed to remain valid for Tranche 3. The NTDC prepared and endorsed three draft LARPs for new grid stations, which are consistent with ADB's Safeguard Policy Statement and approved land acquisition and resettlement framework. ADB disclosed the draft LARPs and revised LARPs on 23 April 2018, 24 and 25 May 2018. For the grid station component, the NTDC will update the LARPs following the notification of Section 6 of the Land Acquisition Act, and this will be a condition for contract award. For the transmission line components, the NTDC will update the LARPs based on the approved route after the contractors conduct the check survey. ADB will approve and redisclose all updated or final LARPs. The NTDC will monitor the LARPs internally, while an independent monitoring consultant will prepare the third-party monitoring reports and validate implementation and payment to affected persons. Construction works for the new grid stations will start only after ADB's approval of the third-party independent monitoring report validating disbursement of compensation to affected persons in accordance with approved LARPs and the NTDC's written confirmation of the completion of the compensation process. For transmission lines where compensation payments follow the phased and section-by-section implementation of the works, progress will be reflected in section-wise LARP addendums, internal monitoring reports and confirmed through third-party validation for each section. The NTDC will provide section-by-section written notification to ADB confirming adequate, fair, and timely completion of the compensation, and will ensure that land is restored to its original condition after completion of works. Similar arrangements will apply to all transmission lines in other tranches. ADB and NTDC will disclose all monitoring reports after approval by ADB. An environment and social impacts cell has been established within the PMU and its safeguards management capacity is being strengthened through the FMC

Involuntary
Resettlement

Indigenous
Peoples

None of the subprojects will impact communities of indigenous peoples, groups, or ethnic minorities, or interfere with their territories, livelihoods, customary properties, or natural or cultural resources.

Stakeholder Communication, Participation, and Consultation

During Project
Design

Stakeholder consultation was conducted during project design especially during the IEE preparation.

During Project Implementation Stakeholder consultation and participation will be promoted throughout project implementation.

Business Opportunities

Consulting Services Individual consultants will be recruited in building NTDC and NEPRA capacities, preparation of energy storage system roadmap, recommendation on grid code on frequency compliance, and advice on ancillary market. The selection and recruitment of consultants will follow ADB Guidelines on the Use of Consultants.

Procurement Eleven (11) packages comprising of turnkey and supply contracts will be procured under the project. Procurement will be done through international competitive bidding and will include domestic preference following ADB's Procurement Guidelines.

Responsible ADB Officer Khattak, Ehtesham Zafar

Responsible ADB Department Sectors Group

Responsible ADB Division Energy Sector Office (SG-ENE)

Executing Agencies *National Transmission & Despatch Company Limited*

Timetable

Concept Clearance -
 Fact Finding -
 MRM 26 Apr 2018
 Approval 28 Jun 2018
 Last Review Mission -
 Last PDS Update 01 Apr 2020

Grant 0578-PAK

Milestones

Approval	Signing Date	Effectivity Date	Closing		
			Original	Revised	Actual
28 Jun 2018	13 Dec 2018	25 Feb 2019	31 Dec 2023	31 Dec 2025	-

Financing Plan

Grant Utilization

Total (Amount in US\$ million)	Date	ADB	Others	Net Percentage	
Project Cost	4.00	Cumulative Contract Awards			
ADB	0.00	25 Apr 2024	0.00	3.48	87%
Counterpart	0.00	Cumulative Disbursements			
Cofinancing	4.00	25 Apr 2024	0.00	0.17	4%

Status of Covenants

Category	Sector	Safeguards	Social	Financial	Economic	Others
Rating	Unsatisfactory	Satisfactory	Unsatisfactory	Satisfactory	-	Unsatisfactory

Loan 3677-PAK

Milestones

Approval	Signing Date	Effectivity Date	Closing		
			Original	Revised	Actual
28 Jun 2018	13 Dec 2018	25 Feb 2019	31 Dec 2023	31 Dec 2025	-

Financing Plan

Loan Utilization

	Total (Amount in US\$ million)	Date	ADB	Others	Net Percentage
Project Cost	424.00	Cumulative Contract Awards			
ADB	280.00	25 Apr 2024	238.72	0.00	85%
Counterpart	144.00	Cumulative Disbursements			
Cofinancing	0.00	25 Apr 2024	140.92	0.00	50%

Status of Covenants

Category	Sector	Safeguards	Social	Financial	Economic	Others
Rating	Unsatisfactory	Satisfactory	Unsatisfactory	Satisfactory	-	Unsatisfactory

Project Page <https://www.adb.org/projects/48078-005/main>

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