FRAMEWORK FINANCING AGREEMENT
(PAK: Power Distribution Enhancement Investment Program 2)

Parties

This Framework Financing Agreement ("FFA") dated 13 February 2015 is between the Islamic Republic of Pakistan ("Pakistan") and Asian Development Bank ("ADB").

MFF Investment

Pakistan is committed to, and will implement, the advance metering infrastructure investment plans of the distribution companies identified in Schedule 1 hereto (together, "DISCO AMI Investment Plan"), which is an integral part of the Investment Program. Both the DISCO AMI Investment Plan and the Investment Program are described in Schedule 1 hereto.

The total cost of the DISCO AMI Investment Plan over the period 2015 to 2024 is expected to be $1.248 billion equivalent. The total cost of the Investment Program over the period 2015 to 2024 is expected to be $4.922 billion equivalent.

Multitranche Financing Facility

The Multitranche Financing Facility (the "Facility") is intended to finance projects under the Investment Program, provided that such projects comply with the criteria set out in Schedule 4 hereto and the understandings set out in this FFA are complied with.

The projects may include:

(i) Advance metering infrastructure ("AMI") and billing system. (a) Procurement and installation of smart meters and associated equipment at common delivery points, 11-kilovolt feeders, distribution transformers, and for customers at the 132/66/11/0.4-kilovolt level; (b) development of communication infrastructure; (c) establishment of data management system; and (d) upgrading of billing system and customer information system.

(ii) Capacity development. Training of the personnel of the distribution companies identified in Schedule 1 hereto ("DISCOs") to manage and operate the AMI system. Restructuring of the information technology, metering and testing departments of the DISCOs.

(iii) Monitoring and policy development. Consultants will be hired to monitor the physical progress of the project, and for updating operation manuals.

This FFA does not constitute a legal obligation on the part of ADB to commit any financing. At its sole discretion, exercised reasonably, ADB has the right to deny any financing request made by Pakistan, cancel the uncommitted portion of the Facility, and withdraw Pakistan's right to request any financing tranche under the Facility. Financing tranches may be made available by ADB provided matters continue to be in accordance with the general understandings and expectations on which the Facility is based and which are laid out in this FFA.

This FFA does not constitute a legal obligation on the part of Pakistan to request any financing. Pakistan has the right not to request any financing under the Facility. Pakistan also has the right at any time to cancel any uncommitted portion of the Facility.

Pakistan and ADB may exercise their respective rights to cancel the Facility or any uncommitted portion thereof, and ADB may exercise its right to refuse a financing request, by giving written notice to such effect to the other party. The written notice will provide an explanation for the cancellation or refusal and, in the case of a cancellation, specify the date on which the cancellation shall take effect. ADB may cancel the Facility or reject a financing request when there is a material noncompliance with ADB policies or FFA undertakings or when there are undue delays in the submission of the financing requests or the implementation of the Investment Program.

Financing Plan

The financing plan for the DISCO AMI Investment Plan is summarized below.

Financing Source	Total ($ million)	Share (%) of Total
DISCOs	258	5
Asian Development Bank	990	20
Sub Total DISCO AMI Investment Plan	1,248	25
DISCOs	2,674	54
Other Foreign Borrowings	1,000	20
Total Investment Program	4,922	100

Financing Terms

ADB will provide loans to finance projects under the Investment Program as and when the latter are ready for financing, provided that Pakistan is in compliance with the understandings hereunder and the projects are in line with those same understandings. Each loan will constitute a tranche.

Each tranche may be financed under terms different from the financing terms of the previous or subsequent tranches. The choice of financing terms will depend on the project, capital market conditions, and ADB's financing policies, all as prevailing on the date of the signing of the legal agreement for such tranche.

Tranches may be provided in sequence or simultaneously and some may overlap in time with each other.

There is no maximum or minimum size for a tranche.

Commitment charges or guarantee fees are not payable on the Facility. They are payable only on the financing actually committed by ADB as a loan or guarantee. ADB rules on commitment charges and guarantee fees which are in effect when the legal agreements are signed for a tranche will apply with respect to such tranche.

Amount

The maximum financing amount available under the Facility is $990 million. It will be provided in individual tranches from ADB's Ordinary Capital Resources[1] and Special Funds Resources,[2] i.e., Asian Development Fund resources, in the form of loans. Financing from Asian Development Fund resources will be subject to availability and allocation in accordance with the applicable policies and procedures of ADB prevailing from time to time.

The Facility combines Ordinary Capital Resources and Asian Development Fund resources up to the aggregate MFF amount. The provision of any Asian Development Fund resources will be balanced by a corresponding reduction in available Ordinary Capital Resources financing (and vice versa), with total financing provided under the Facility not to exceed the aggregate Facility total of $990 million.

Availability Period

The last date on which any disbursement under any tranche may be made will be [30 June 2024]. The last financing tranche is expected to be executed no later than 31 December 2021.

Terms and Conditions

Pakistan will cause the proceeds of each tranche to be applied to the financing of expenditures of the Investment Program in

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[1] Provisions of the Ordinary Operations Loan Regulations Applicable to London interbank offer rate (LIBOR)-Based Loans Made from ADB's Ordinary Capital Resources, dated 1 July 2001, would apply to each Loan, subject to modifications, if any, that may be included under any Loan Agreement.

[2] Provisions of the Special Operations Loan Regulations applicable to Loans Made by ADB from its Special Funds Resources, dated 1 January 2006, would apply to each Loan, subject to modifications, if any, that may be included under any Loan Agreement.

accordance with conditions set forth in this FFA and the legal agreements for each tranche.

Execution The Executing Agency will be the Ministry of Water and Power ("MOWP"). The Implementing Agencies will be the DISCOs identified in Schedule 1 to this Agreement, i.e., IESCO, LESCO MEPCO, FESCO, HESCO, SEPCO, QESCO, PESCO and GEPCO. The Executing Agency and the Implementing Agencies will implement the Investment Program in accordance with the principles set forth in Schedule 1, as supplemented by the legal agreements for each tranche.

Periodic Financing Requests Pakistan may request, and ADB may agree, to provide loans under the Facility to finance the Investment Program and its related projects upon the submission of a Periodic Financing Request ("PFR"). Each PFR should be submitted by Pakistan. Pakistan will make available to the relevant DISCO or DISCOs, via relending agreements, the proceeds of the tranche in accordance with the related PFR and the legal agreements for the tranche.

ADB will review the PFR and, if found satisfactory, prepare the related legal agreements.

The projects for which financing is requested under the PFR will be subject to the selection criteria set out in Schedule 4 hereto, satisfactory due diligence, and preparation of relevant safeguard and fiduciary frameworks and other documents. The Facility will be implemented in accordance with the general framework set out in Schedule 3 to this FFA and the Facility Administration Manual agreed between Pakistan and ADB.

Until notice is otherwise given by Pakistan, Secretary or Joint Secretary of the Economic Affairs Division will be Pakistan's authorized representative for the purpose of executing PFRs.

General Implementation Framework The Facility will be implemented in accordance with the general framework set out in Schedule 3 hereto.

Procedures Tranches to be provided under the Facility will be subject to the following procedures and undertakings:

(a) Pakistan will have notified ADB of a forthcoming PFR in advance of the submission of the PFR.

(b) Pakistan will have submitted a PFR in the format agreed with ADB.

(c) ADB may, in its sole discretion, decline to authorize the negotiation and execution of any legal agreement for a tranche.

(d) If ADB confirms acceptance of the PFR, the legal agreements will be negotiated and executed by the parties.

PFR information The PFR will be substantially in the form attached hereto and will contain the following details:

(i) Loan amount;
(ii) Description of projects to be financed;
(iii) Cost estimates and financing plan;
(iv) Implementation arrangements specific to the projects;
(v) Confirmation of the continuing validity of and adherence to the understandings in this FFA;
(vi) Confirmation of compliance with the provisions under previous Loan Agreements and Project Agreements, as appropriate; and
(vii) Other information as may be required under the Facility Administration Manual, or reasonably requested by ADB.

Safeguards Attached as Schedule 5 are references to the Safeguard Frameworks that will be complied with during the implementation of the Facility.

ADB's Safeguard Policies in effect as of the date of the signing of the legal agreements for a tranche will be applied with respect to the projects financed under such financing tranche.

Procurement All goods and services to be financed under the Facility will be procured in accordance with ADB's *Procurement Guidelines* (2013, as amended from time to time).

Consulting Services All consulting services to be financed under the Facility will be procured in accordance with ADB's *Guidelines on the Use of Consultants* (2013, as amended from time to time).

Advance contracting; Retroactive financing

Under each tranche, ADB may, subject to its policies and procedures, allow on request (a) advance contracting of goods, services and consultants; and (b) retroactive financing of eligible expenditures for goods, services and consultants up to 20% of the proposed individual loan incurred prior to loan effectiveness but not earlier than 12 months before the date of the signing of the related legal agreement. Pakistan, the Executing Agency and the Implementing Agencies acknowledge that any approval of advance contracting and/or retroactive financing will not constitute a commitment by ADB to finance the related project.

Disbursements Disbursements will be made in accordance with ADB's *Loan Disbursement Handbook* (2012, as amended from time to time).

Monitoring, Evaluation, and Reporting Arrangements	The DISCOs will be responsible for establishing an Investment Program Performance Monitoring System acceptable to ADB within 12 months of the effectiveness of the first Loan Agreement under the Facility, including (i) procedures on data collection and reporting, (ii) performance indicators relating to the Facility and project specific outcome and outputs, and (iii) corresponding baselines and progress on target achievement. Schedule 2 hereto sets out the Design and Monitoring Framework for the Facility against which implementation effectiveness will be evaluated. The DISCOs will prepare and submit to ADB quarterly progress reports for the individual tranches under the Facility. The reports will include a description of physical progress, problems, and difficulties encountered and a summary of financial accounts that will consist of loan expenditures during the period, year to day, and total to date, and include a report on the progress of the implementation of mitigation measures as specified in the contracts and environmental management plans (if any) and measures to ensure environmentally responsible procurement. A tranche completion report will be submitted within 3 months following the completion of each tranche. A Facility completion report will be submitted within 3 months following the completion of the Facility.
Undertakings	Attached as Schedule 6 are the undertakings provided by Pakistan.

ISLAMIC REPUBLIC OF PAKISTAN	ASIAN DEVELOPMENT BANK
By ____________	By ____________
Name:	Name: HDIVAN TAREEN
Title: PERVAIZ AHMED JUNEJO SENIOR JOINT SECRETARY	Title: ENERGY SPECIALIST

SCHEDULE 1

MFF CONSTITUENTS

I. Power sector and its importance to growth and development.

1. Reliable and sufficient supply of electricity is the backbone for Pakistan's economic growth. However, for the last 10 years, Pakistan has been suffering from electricity shortage with 33% of the population without access to electricity, and load shedding of around 25% of the system demand. While there was about 30% standby electricity in 2003–2004, the country now suffers from a severe power crisis resulting in routine load shedding of up to 12 hours in urban areas, and 18–20 hours in rural areas. This is considered to be the worst of four such electricity crises in Pakistan since 1974, which has been adversely impacting the country's economy, reflected by the estimated annual loss of 4-7% in country's gross domestic product (GDP), and 2% reduction in real GDP growth. The power shortfall is also deemed to be the major cause of a decline in large-scale manufacturing, which grew by just 1.2% in 2012 and 2.8% in 2013. Domestic private investment dropped from 14% of GDP in 2007-2008 to an estimated 10.9% of GDP in 2012-2013. Pakistan's economic growth slowed down in 2013, resulting in a 5-year average of 3%, which is well below the 7% annual growth rate necessary for sufficient employment creation to absorb the new entrants into the labor force. The power shortage is dampening business confidence which is already affected by the country's security situation.

2. **Power distribution sector.** The supply-demand gap cannot all be attributed to increased demand and less generation, but system inefficiencies are also considered to be a major factor in creating this supply-demand gap. DISCOs are contributing the most to the inefficiency in delivering generated power. DISCOs' system efficiency and financial viability are critical to efficient operations and consequently, the sector's growth. Ideally, the DISCOs' customer tariff should be covering power distribution, transmission and generation cost-of-service, but due to losses higher than allowed by regulator, low revenue collection, and inefficient operating systems, the DISCOs are unable to fully recover the real cost of service. These not only hamper the performance of DISCOs but also delay payments to power generation providers, which constrain cash flow to the sector. Operating even existing generation capacity in full sometimes becomes challenging with such cash constraints. In the long run, this is not sustainable keeping in view Pakistan's financial situation. Government also plans to privatize DISCOs and generation companies.

II. Road map and strategic context.

3. **Strategic direction**. The government approved the "National Power Policy 2013" (the Policy) to alleviate the chronic energy crisis through short, medium and long-term measures. The government has taken some measures to reduce electricity shortage by adding generation capacity and removing some of the bottlenecks in transmission and distribution systems. The government acknowledges the need to develop a long-term investment plan to resolve the power crisis, and to bring financial sustainability to the sector. While the Policy focuses on the most crippling effect of the crisis by reducing the supply-demand gap, it also envisages reforms required to make the power sector sustainable and financially viable. The Policy is based on the principles of efficiency, competition and sustainability and has the following five pillars:

(i) Reducing the demand-supply gap.

(ii) Reducing power costs to affordable level.
(iii) Developing sector wide efficiency.
(iv) Establishing financial viability.
(v) Good governance.

For the power distribution sector in particular, the goal of the Policy is to improve the operational and financial efficiency of the distribution system. One of the key strategies is to deploy smart meters and real-time monitoring across all DISCOs as contemplated by the investment program to be supported by the MFF.

4. Investment plans for generation and transmission, and business plans for distribution system improvements have been prepared. The investment requirements are significant and beyond the capacity of country's development budget, requiring to seek financial assistance from international financing institutions (IFIs). While Asian Development Bank (ADB), the World Bank and other bilateral lenders have been requested to fund some of these projects, the government itself is also utilizing its development funds to resolving the energy crises.

5. **Assessment of strengths, weaknesses and risks.** The government's strategy presents the right approach to address the current power crises. However, the key lies in effective implementation of the road map. If the strategies set out in the Policy can be achieved, the sector can be turned around to a vibrant and productive environment capable of meeting the challenges in a developing economy. ADB's assessment of some of the key issues affecting the power sector, and the corresponding strategies under the Policy, is set out below.

(i) **Regulatory Reform and Pricing**. The most critical of these is regulatory reform and pricing. The Policy, clearly notes the importance and need for reforms and a real cost-of-service tariff for the distribution companies. A substantial positive factor is that the regulatory framework for sector oversight has been established with the establishment of the National Electric Power Regulatory Authority (NEPRA) as far back as 1997. NEPRA has since gained considerable experience in regulatory work in the sector in tariff formulation, establishing buy-in tariffs for various capacities and types of plants, established the relevant codes of practice for generation, transmission and distribution, established appropriate procedures to deal with consumer interests, and is an active participant on sector review and forward planning. NEPRA has been developing a cost of service based pricing methodology for the DISCOs and is capable of managing power pricing in a competitive environment. However, these determinations are not fully effective and the actual retail prices to consumers are determined by government, the difference of which is then shouldered by the government as tariff differential subsidy.

(ii) **Institutional capacity**. There are both positive and negative aspects in the Pakistan power sector institutions. The main strength is that the sector is already unbundled, a number of publicly owned generation companies, DISCOs and a transmission company have already been established and have been operating for some time as quasi-independent units. Some of the DISCOs are performing up to industry standards while some fall short of the desired performance levels. There are also a number of capable cadres within these organizations. The main weakness is that the sector is still controlled in a hierarchical fashion and the individual companies do not have the independence to act on their own initiatives. This has stifled innovation and progress. The DISCOs although run by independent board of directors, with majority members from private and social sector, have yet to establish themselves as fully independent and financially autonomous.

(iii) **Capital Expenditure**. An expanding distribution network with existing bottlenecks requires substantial capital flows. It is neither feasible nor rational that this level of capital expenditure be secured solely through customer tariff. Ideally, the DISCOs would have benefited from private sector interventions. The Policy envisages privatization of the DISCOs with all its challenges and constraints. The distribution network expansion to un-electrified areas including rural electrification has mostly come from government funds; but such inputs have been relatively small resulting in the current poor access rates in the country.

III. Policy framework and policy reforms.

6. The government's policy framework, "Pakistan Vision 2025," (the Vision) developed by the Ministry of Planning, Development and Reforms, is aligned with the strategic context, and recognizes that sufficient, reliable, clean and cost effective energy—for now and the future—is indispensable to ensure sustainable economic growth and development. It aims to (i) increase new power generation with a more balanced generation mix, (ii) provide uninterrupted electricity to all, (iii) increase electricity access to 90% of the population by 2025, and (iv) improve demand management.

7. The Vision recognizes the need and importance of resolving the energy crises, reforming the public sector entities and effective role of private sector as few of the main drivers for a sustainable economic growth of the Country. The Vision aims at ensuring uninterrupted access to affordable and clean energy for all section of country's population. For achieving this some goals have been identified which mainly aim at: (i) reduction in demand-supply gap; (ii) optimal and affordable energy generation mix; (iii) increase distribution sector efficiency and reduce losses; (iv) energy conservation; and (v) institutional and regulatory reforms.

8. Pakistan Vision 2025, together with the Policy, investment plans for power generation and transmission, and business plans for the distribution sector, will be leading Pakistan into resolving the power crises. ADB, in close coordination with other international financing institutions (IFIs) and donors, is in continuous dialogue with the government on the reforms required to create the right environment for sector stability, and have agreed on a policy matrix with the government under the Sustainable Energy Sector Reform Program which is currently being implemented in phases. The MFF will support the policy dialogue by providing effective tools and inputs to certain reforms agreed in the policy matrix, in particular (i) loss reduction and improved revenue collection in DISCOs; and (ii) improved performance of public sector companies in the power sector. In turn, certain other reforms in the policy matrix will bring improvements to the benefits envisaged under the MFF, in particular tariff regulatory and subsidy reforms. The following table sets out the efforts contemplated to be taken by the government to achieve the mentioned reforms.

Objective	Actions
Loss reduction and improved revenue collection	Average number of days for receivables from the electricity customers will be reduced through the below measures by at least 30% from FY2018 onwards. i) DISCOs will look for opportunities to outsource 11 Kv feeders with high losses and low recoveries to

	private sector. ii) DISCOs will implement loss reduction measures to protect and increase revenue.
Improved performance of DISCOs	DISCOs sign performance contracts by FY2018 to monitor operational and financial performance of each of these utility companies. Customer complaints regarding wrong reading, non-delivery of electricity bills, and faulty electricity meters reduces by [30%] from FY2018 onwards in the DISCOs where tranches of the MFF are in implementation.

IV. Investment program.

11. The government's investment strategy towards the sector is to resolve the following main issues through different initiatives: (i) low revenue collection from public and private customers, and high losses in the distribution system (averaging 18.9% at the country level, and between 9.8%–39.6% among the different DISCOs); (ii) recurring circular debt largely resulting from low revenue collection; (iii) increasing demand stress on the transmission and distribution networks; (iv) overreliance on fuel imports and failure to exploit indigenous resources; (v) low availability and efficiency of existing power plants; (vi) declining power generation from cheaper sources (hydro and natural gas); and (vii) sector reforms. While some of the above issues are being addressed through the existing portfolio of ADB,[3] issues (i)–(iii) will be addressed through the proposed investment program which follows the government's strategy for the next 10 years, and builds upon the existing MFF of ADB for power distribution.

12. The investment program, through installation of AMI and billing systems, would enhance the operational efficiency of the DISCOs, including loss reduction to the level the regulator allows to pass-on in the tariff, increasing revenue collection and making efficient use of available power through demand-side management. With its theft control technology, revenue collection enforcement options (remote disconnection against nonpayment) and load management capabilities, the government would strategically resolve issues relating to high network losses and low cost recoveries, as well as manage system stresses and power blackouts. Overall, these would improve system stability and security, and the financial viability of the DISCOs.

13. The Ministry of Water and Power (MOWP) intends to install AMI throughout the country in all major cities, and industrial, and commercial hubs, and requested ADB, in May 2013, to support its initiative. Overall, it is expected to require an investment of $4.9 billion including physical and non-physical (capacity building) investments. As part of the feasibility study for adopting AMI, an investment plan for AMI rollout was developed and approved for the Islamabad Electric Supply Company (IESCO) and Lahore Electric Supply Company (LESCO) under Tranche 1 of the investment program. Both DISCOs will seek regulatory approval of the revised integrated distribution business plan, including AMI-related investments.

V. Financing plan.

14. The overall financing needs for implementation of the AMI throughout the country is $4.9 billion. The investment program is estimated to cost $1.25 billion. The MFF will finance a portion

[3] Loan for the Jamshoro Power Generation Project, approved in 2013; and MFF for the Power Transmission Enhancement Investment Program, approved in 2006.

of the investment program in the amount of $990 million. The MFF is projected to have four tranches from FY2015 to FY2024. The financing plan is in table below. A part of the Special Funds resources loan for the first tranche of the MFF will be used for project implementation consultants and for project preparation consultants for tranches 2 to 4. ADB financing constitutes 79.3% of the cost of the portion of the investment program that will be supported by the MFF.

Table: Financing Plan
($ million)

	Tranche 1	Tranche 2	Tranche 3	Tranche 4	MFF	
Source	**Amount** ($million)	**Amount** ($million)	**Amount** ($million)	**Amount** ($million)	**Amount** ($million)	**Share of Total** (%)
Asian Development Bank	400.0	200.0	270.0	120.0	990.0	79.3
Ordinary capital resources (loan)	380.0	200.0	270.0	120.0	970.0	77.7
Special Funds resources (loan)	20.0	-	-	-	20.0	1.6
Cofinancier	-	-	-	-	-	-
Discos	110.5	50.0	67.5	30.0	258.0	20.7
Total	**510.5**	**250.0**	**337.5**	**150.0**	**1,248.0**	**100.0**

ADF = Asian Development Fund, MFF = multitranche financing facility, OCR = ordinary capital resources.
Source: Asian Development Bank staff estimates.

15. The possibility of securing cofinancing for the investment program will be explored. If any cofinancing is confirmed, all necessary approvals for the incorporation of such cofinancing into the financing plan of the MFF, or the relevant project financed or to be financed by the MFF, as applicable, will be obtained. These approvals will include any waiver of member country procurement eligibility restrictions that might be necessary in connection with the provision of the cofinancing.

SCHEDULE 2

DESIGN AND MONITORING FRAMEWORK FOR THE FACILITY

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
Impact Financial viability of the power distribution sector improved	Sustained profit generation by the DISCOs in the medium term (starting year 2027) Electricity sales increased by 8,800 million kWh in year 2027 (Baseline: 64,986 million kWh in 2013).	DISCOs' audited annual financial statements Distribution of Power Booklet	**Assumptions** The system developed in the targeted regions is replicated in remaining circles or regions of the DISCOs. The government continues to invest in power generation projects to meet the additional demand. Tariff covers full cost of service.
Outcome Electricity revenues increase in the targeted regions	Nationwide distribution network losses reduced from 18.9% in 2013 to 11% in 2024. Revenue collection increased in the targeted DISCOs from 89.6% in 2013 to 95% in 2024. Load shedding (power blackouts) eliminated in the targeted regions of the DISCOs from year 2024 onwards (Baseline for 2013: up to 12 hours in urban areas and 18-20 hours a day in rural areas)	DISCOs' annual report DISCOs' annual report NEPRA's State of Industry Report	**Assumptions** DISCOs' management continues to embrace incentives to reduce distribution losses. All the necessary legal and regulatory frameworks are in place and effectively enforced by the government. DISCOs continue to invest in projects relating to removal of bottlenecks at the distribution and transmission level. DISCOs to ensure an adequate revenue monitoring system is in place, covering all steps in revenue cycle from new customer account setup to revenue recognition.
Outputs 1. Smart Meters and communication equipment installed, and functional.	1.1. About 6 million customers and all substations in the targeted regions of the DISCOs are operating with Smart Meters by 2024. 1.2. Communication infrastructure commissioned in the targeted regions of the DISCOs by 2024.	Targeted distribution centers' customer data Commissioning certificate by DISCOs	**Assumption** Customers understand and accept the introduction of the AMI system. **Risks** Proposed communication technology will not work as required for the AMI. Non-integrated solutions will require homemade interfaces. DISCO resources and capacity

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
2. Data management system implemented and operational.	2.1. Database and data management system developed and operational in the targeted regions by 2024. 2.2. 700 personnel trained on data collection and data management system by 2024.	Commissioning certificate by DISCOs Executing agency's project training report	are not enough to implement and operate the project. Deployment process will be underestimated, and not be well supported by information technology. Existing business processes are no longer applicable with new AMI technology. Weak procurement capacity of DISCO staff to follow ADB's ICB 1S2E bidding procedure.
3. New billing and CIS system implemented and operational.	3.1. Billing system and CIS implemented and operational in the targeted regions by 2022. 3.2. 3000 personnel trained on Billing System and CIS by 2022	Commissioning certificate by DISCOs	
4. Operation manuals updated and monitoring procedure improved.	4.1. Manual for theft detection updated by 2017. 4.2. Operational procedures for M&T Unit updated, testing laboratories upgraded and staff capacity on AMI developed in various DISCOs by 2022.	DISCOs' project progress reports DISCOs' project progress reports	

Activities with Milestones	Inputs
1. Bidding Process for Tranche 1 completed by December 2015. 2. Installation works started by January 2016. 3. Tranche 1 implementation completed by December 2018. 4. Tranche 2 implementation completed by December 2019. 5. Tranche 3 implementation completed by December 2022. 6. Tranche 4 implementation completed by December 2023.	MFF ADB: OCR $970.0 million ADF $20.0 million DISCOs: $258.0 million Tranche 1 ADB: OCR $380.0 million ADF $20.0 million DISCOs: $110.5 million

ADB = Asian Development Bank, ADF = Asian Development Fund, AMI = advanced metering infrastructure, CIS = Customers Information System, DISCOs = distribution companies, EA = Executing Agency, kWh = kilowatt-hour, M&I = monitoring and inspection, MFF = multitranche financing facility, NEPRA = National Electric Power Regulatory Authority OCR = ordinary capital resources.
Source: Asian Development Bank estimates.

SCHEDULE 3

IMPLEMENTATION FRAMEWORK

Executing Agency.

1. Ministry of Water and Power (MOWP) will be the executing agency of the investment program and will be responsible for overall supervision and monitoring of the implementation of the investment plan. An oversight committee under the chairmanship of Secretary MOWP will be established to ensure that the implementation is carried out in accordance with the road map and FFA undertakings. Joint Secretary (Distribution), Joint Secretary (EAD) and Chief Executive Officer of the concerned DISCO will be members of the oversight committee. MOWP will also be responsible for preparation and submission of planning commission document 2 (PC 2) for the support component to Ministry of Planning, Reforms and Development for seeking Governments approval.

Implementing Agencies.

2. Each DISCO will be the implementing agency in its own geographic area of jurisdiction. Under ADB's ongoing MFF for power distribution, project management units (PMUs) were established in each DISCO, and they are fully operational. These PMUs are well familiar with ADB policies and guidelines, and have reasonable experience working with international donor agencies. The same PMUs will be responsible for implementing the projects, and monitoring the investment program in accordance with agreed arrangements. For effective implementation and monitoring, a dedicated team (project implementation unit) within the PMU will be established with AMI specific staff resources. The PMUs will be provided with implementation consultant support from the ADF loan.

SCHEDULE 4

SELECTION CRITERIA AND APPROVAL PROCESS FOR PROJECTS

A. Subproject Selection Criteria

1. The following criteria will be used to identify the projects under each tranche:

(i) technical justification,
(ii) financial and economic viability, and
(iii) regions with high commercial viability selected for implementation.

In addition, each project to be financed under a tranche must satisfy the environmental criteria for selecting future projects to be financed under the Facility as set out in the environmental assessment and review framework dated January 2015.

2. Each tranche will be tested for financial and economic viability, and assessed for environmental or social impact.

B. Periodic Financing Request Preparation and Submission Process..

3. MOWP will be responsible for preparing and submitting, through the Economic Affairs Division, Periodic Financing Requests (PFRs) to ADB. Prior to accepting a PFR, ADB will conduct due diligence to ensure that the Government fully complies with the terms and conditions of the Framework Financing Agreement.

SCHEDULE 5

SOCIAL DIMENSIONS AND SAFEGUARD REQUIREMENTS

1. Pakistan will ensure that all the requirements prescribed in this Schedule, and the following environmental and social safeguard frameworks and plans that have been prepared with respect to the Facility and the first tranche and of which ADB has been provided full copies, and which are deemed incorporated herein by reference, are complied with during the processing and implementation of the projects under the Facility.

(i) environmental assessment and review framework, dated January 2015,
(ii) resettlement framework dated January 2015

2. The frameworks cover the Facility-specific information and requirements in accordance with ADB's safeguard policies: (i) the general anticipated impacts of the components or projects likely to be financed under the MFF on the environment and involuntary resettlement; (ii) the safeguard criteria that are to be used in selecting components or projects; (iii) the requirements and procedure that will be followed for screening and categorization, impact assessments, development of management plans, public consultation and information disclosure (including the 120-day disclosure rule, if required), and monitoring and reporting; and (iv) the institutional arrangements (including budget and capacity requirements) and the client's and ADB's responsibilities and authorities for the preparation, review and clearance of safeguard documents.

3. Prior to the preparation of each PFR, the applicability and relevance of each safeguard framework for environmental assessment and involuntary resettlement will be reviewed by the Project Management Unit at each DISCO and updated to ensure relevance and consistency with applicable country legal frameworks and ADB's safeguard policies, as amended from time to time.

4. In all cases, for each new PFR preparation, the client will review ongoing projects to check on the status of compliance with the environmental and social safeguard plans and frameworks, and submit the review reports to ADB, together with other required safeguard documents relevant to the projects included in the tranche being processed. In any case if major noncompliance is discovered in the course of the review of ongoing projects, a corrective action plan will be prepared and submitted to ADB.

SCHEDULE 6

Undertakings

Pakistan shall do the following and/or cause MOWP and the DISCOs to do the following:

Road Map, Policy Framework and Investment Program

1. Pakistan shall remain committed to, and shall cause MOWP to remain committed to, the implementation of the Investment Program over the period 2015 to 2024 as envisaged in the road map described in Schedule 1.

2. In the event of any change in the road map, policy framework, Investment Program, or financing plan described in Schedule 1, Pakistan and ADB will assess the potential impact of the change on the Facility and consider a change in scope, amendment, or continuation of the Facility as appropriate.

3. Pakistan shall ensure and cause MOWP and the DISCOs to ensure that ADB is kept informed of the Government's policies and programs related to the power sector, particularly those that relate to the power distribution sector, tariff rationalization, or any policy or program that could materially affect the financial viability of the DISCOs or any tranche under the Facility.

4. Pakistan shall remain committed to, and shall cause MOWP and the DISCOs to fully and timely implement, the capacity development measures contemplated by the Investment Program and planned to be financed under the Facility.

Power Distribution Sector

5. Pakistan shall cause the DISCOs to submit tariff petitions as required to maintain the DISCOs' financial viability. Pakistan shall ensure that, following any tariff determination by the National Electric Power Regulatory Authority, the Government notifies the tariff determination promptly and, in any case, by the dates prescribed by applicable law. Pakistan shall ensure that any and all tariffs formulated for the DISCOs are adequate to cover the operating costs, maintenance, depreciation and financing costs of the DISCOs and allow an acceptable return on their equity.

6. Pakistan shall ensure that the DISCOs preserve their legal, operational, and financial autonomy and, further, that the Board of Directors of each DISCO operates effectively and fully discharges its fiduciary responsibilities in accordance with the Memorandum and Articles of Association of the DISCO.

7. Pakistan shall ensure that the receivables of each DISCO from Government entities on account of electricity consumption are fully settled within the average electricity receivables payment period of the DISCO. Pakistan shall ensure that any Government entity failing to pay its receivables in full is disconnected from electricity service in the same manner as any similarly defaulting private customer after compliance by the DISCO with all notice periods prescribed by applicable law and the DISCO's own commercial procedures. (Government entities which are exempt from disconnection by law or judicial order, or pursuant to the list of exempt Government entities of each DISCO, shall not be covered by this undertaking.) Pakistan shall ensure that any shortfall in payment from the Government

entities which purchase electricity from the DISCOs will be promptly financed by the Government.

8. Pakistan shall ensure that adequate budget allocations, or similar alternative arrangements, are made for the payment of subsidies to the DISCOs so that the DISCOs do not incur any additional financial burden that will hinder the effective implementation of the Investment Program. Pakistan shall ensure that all such subsidies are paid by the Government to the DISCOs promptly. Pakistan shall ensure that all outstanding financial obligations of the Government to the DISCOs deriving from tariff determinations and notifications are fully settled during the life of the Facility.

Implementation of Investment Program

9. All projects to be financed under the Facility shall be selected and approved in accordance with the selection criteria and approval process set out in Schedule 4. All documents forming the basis for the screening, selection and processing of projects shall be made available by Pakistan, MOWP and the DISCOs to ADB upon request. Such documents shall be kept available for a minimum period of five years from the date of the relevant project completion report.

10. Pakistan shall cause the DISCOs to (i) operate and maintain the AMI system and equipment and (ii) provide proper technical supervision and adequate funds for this purpose. The funds required for the operation and maintenance of the AMI system and equipment shall be allocated annually and released promptly. Pakistan shall cause the DISCOs to prepare and adopt an operation and maintenance plan for the AMI system and equipment that is in accordance with national technical standards and rules or is otherwise acceptable to ADB.

11. Pakistan shall cause the DISCOs to make available and timely release the counterpart funding for the Investment Program, including the projects to be financed under the Facility, in accordance with the road map, Investment Program and financing plan described in Schedule 1. In case a DISCO is not able to provide or timely release any required counterpart funds, Pakistan shall support such DISCO and make available and timely release the necessary funds for payment against committed contracts.

12. Pakistan shall relend the proceeds of the financing under the Facility to the DISCOs. All relending agreements between Pakistan and the DISCOs shall be upon terms and conditions acceptable to ADB.

13. Pakistan shall ensure that the financing under the Facility remains available to the DISCOs in the event that they are privatized. The terms and conditions upon which the financing shall be made available shall be discussed and agreed between Pakistan and ADB. Any change in the ownership of the DISCOs or sale, transfer, or assignment of the Government's interest or shares in any of the DISCOs shall be formally approved and implemented only after consultation with ADB at least 3 months prior to the change, sale, transfer or assignment.

14. Pakistan shall ensure and cause MOWP and the DISCOs to ensure that the implementation of projects under the Investment Program and Facility is in compliance with (i) all applicable laws, rules and regulations of Pakistan, including any law, rule or regulation which might require the approval of the National Electric Power Regulatory Authority for any change in the commercial procedures of the DISCOs in connection with the implementation

of the Investment Program, and (ii) all undertakings and assurances concerning ADB's Safeguard Policy Statement (2009), gender policy, labor standards, and prohibited investments as set out in Schedule 5 and in the Loan Agreement for each tranche under the Facility.

15. Pakistan shall cause MOWP and the DISCOs to ensure that all projects and project facilities under the Facility are assessed, designed, implemented, constructed, operated, maintained, and monitored in accordance with all applicable laws, rules, and regulations of Pakistan relating to environment, health and safety, and involuntary resettlement, and the environmental assessment and review framework and resettlement framework for the Facility, as may be applicable.

16. Pakistan shall cause MOWP and the DISCOs to ensure that any grievance from any stakeholder relating to the implementation of any project under the Facility or the use of any funds provided under the Facility are addressed effectively and efficiently.

17. Pakistan shall comply with, and shall cause MOWP and the DISCOs to comply with, ADB's Anticorruption Policy (1998, as amended to date); acknowledge that ADB reserves the right to investigate directly, or through its agents, any alleged corrupt, fraudulent, collusive or coercive practice relating to any project financed under the Facility; cooperate with any such investigation; and extend all necessary assistance for the satisfactory completion of such investigation. Pakistan shall ensure and cause MOWP and the DISCOs to ensure that the anticorruption provisions acceptable to ADB are included in all bidding documents and contracts financed by ADB under the Facility, including provisions specifying the right of ADB to audit and examine the records and accounts of the executing and implementing agencies and all contractors, suppliers, consultants, and other service providers as they relate to the projects financed under the Facility. Pakistan shall allow and assist, and shall cause MOWP and the DISCOs to allow and assist, ADB's representatives to carry out random spot checks on the work in progress under the projects financed under the Facility and the utilization of funds under the Facility.

18. Pakistan shall ensure and cause the DISCOs to ensure (i) that their accounts and records are properly maintained to adequately identify the use of proceeds under the Facility in such a manner and with such details as may be specified in each Loan Agreement and Project Agreement under the Facility, and (ii) that their audited financial reports are submitted to ADB within 6 months of the end of fiscal year to which they relate.

19. Any change to the location where AMI is to be installed or to the environmental impacts of the Facility on account of the scope or detailed design of any project financed under the Facility will be subject to the prior approval of ADB in accordance with the project selection criteria and procedures included in this FFA.

20. Pakistan shall cause the DISCOs to ensure that the project management unit and project implementation unit at each DISCO are adequately staffed throughout the entire life of their respective projects. The staff assigned shall be retained in the units for at least three years and any changes to the key staff will need the prior approval of the Board of Directors of the DISCO.