

**FRAMEWORK FINANCING AGREEMENT  
(PAK: Power Transmission Enhancement Investment Program)**

This Framework Financing Agreement (the “Agreement”), dated 3 November 2006 is made between the Islamic Republic of Pakistan (Pakistan) and the National Transmission Dispatch Company (NTDC) on the one part, and the Asian Development Bank (ADB) on the other part.

**Background**

Pakistan has requested the ADB to provide financial assistance for a power transmission enhancement program (the “Investment Program”) described in Schedule 1 hereto. The ADB’s financial support is to be extended through a multitranche financing facility (the “Facility”) to support the rehabilitation, augmentation and expansion of transmission substations, transmission lines of 220kv and above, installation of SVC equipment and any associated facilities related to the operations of the power transmission system (each of them a “Subproject”) and an investment program support component (the “Investment Program Support Component”), as described in Schedule 1 hereto. The design and monitoring framework for the Facility is attached in Schedule 2.

**Investment Program**

**Context**

Pakistan’s transmission system faces three major challenges: (i) the heavy power flow through the 500kV system, (ii) a shortage of supply capacity for the 220kV system, and (iii) high transmission losses, caused by high reactive power requirements (quality concern). The mismatch between the location of demand and the source of supply on the existing power system is creating a considerable need for primary network investments.

Because of aging, overloading and lack of sufficient maintenance, the transmission system is unreliable, and at times runs becomes instable with a risk of collapse. Current peak energy and capacity shortfalls are to some extent the consequence of shortages and bottlenecks in the national network, and could restrict the economic growth by almost 0.8% of GDP in FY 2008. Transmission and distribution losses in the Pakistan power system amounted to 25% in 2005.

The system needs immediate rehabilitation, augmentation, and expansion to provide services to meet its consumer demands and security requirements. Substantial investments are required to strengthen the transmission system to (i) evacuate the power generated by the additional power plants; and (ii) supply electricity for the growing demand.

The proposed Investment Program is part of the long term investment program for energy security and part of the power transmission development program of Pakistan. The Investment Program will enhance the overall power transmission system efficiency in the country by improving the reliability, quality, and stability of the

transmission system.

The Investment Program will finance selected Subprojects in power transmission, including transmission lines of 500kv and 220kv, 500kv and 220kv substations, and any associated facilities related to the operations of the power transmission system. It will also finance a Investment Program Support Component which will focus on Subproject implementation and preparatory activities.

The Investment Program is structured in at least four tranches with a batch of Subprojects and their implementation support. Tranche-1 covers the construction of 19 Subprojects: (i) 26 transformers at existing 500 kv and 220 kv substations and new 220 kv sub stations, (iii) 50 km of transmission line; (iv) a Static Var Compensator at Lahore 500 kv sub station; and (ii) and an Investment Program Support Component. For these 19 Subprojects, detailed feasibility assessments have been completed and advance preparation activities are substantially completed. All these Subprojects meet the agreed selection criteria and have been reviewed and found acceptable by ADB. Tranche-2 will tentatively comprise around 22 Subprojects identified by NTDC. The detailed engineering designs and feasibility assessments are in progress. These Subprojects are expected to be ready for submission to ADB by mid-2007. The other tranche will comprise the remaining Subprojects to be financed by the Investment Program.

**This Framework  
Financing  
Agreement**

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 parties. 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 takes effect.

**Financing Plan**

The financing plan for the Investment Plan is summarized below. Details are set out in Schedule 1 hereto.

Total Program	Subprojects (OCR)		Investment Program Support (ADF)	
	Amount	Share	Amount	Share
ADB	790	20.4%	10	80%
Other Financiers	1,958	49.7%	0	0%
NTDC	1,166	29.7%	2.5	20%
	<b>3,914</b>	<b>100%</b>	<b>12.5</b>	<b>100%</b>

Source: Asian Development Bank estimates.

## Private Sector Participation

Pakistan is acutely aware of the need for private sector participation to meet the power sector's overall financing requirements.

In line with the overall power sector policies, the power transmission parameters promotes private sector participation by making available power evacuation facilities from any IPP being developed after obtaining approval from the Pakistan. A robust transmission system is the anchor for private sector investments in power generation facilities as well as power distribution companies. Through substantial investments in the transmission system, the Pakistan, establishes an environment conducive of private sector investments, and simultaneously remove concerns about the ability to evacuate power from IPPs, and ensures continuous supply of power to the DISCOs. The Investment Program and the policies of Private Power and Infrastructure Board (PPIB) specify the PPP parameters imbedded in the operations of NTDC, e.g. (i) design of power evacuation facilities from approved IPPs, (ii) clear definition of power transmission financing mechanisms for IPPs, and (iii) assure timely construction of transmission lines for evacuation of electricity from IPPs. Through the implementation of the Investment Program, ADB will help Pakistan to promote PPP in power sector development especially in (i) further improvements in the enabling conditions for power evacuation from IPPs, and (ii) provide financial security of funding of the power transmission facilities dedicated to the evacuation of electricity from IPPs.

## Track Record

ADB has been involved in the power sector development in Pakistan for a long time through various loans and technical assistance.

## Financing Terms

ADB's financial support will be extended through a multitranche financing facility (the Facility).

The Facility will be provided in tranches to support the Investment Program Support Component and Subprojects, as and when they are ready for financing, provided that Pakistan is in compliance with its representations and warranties to ADB, and the Investment Program Support Component proposed for financing are in line with the understandings hereunder.

Each tranche may be financed under terms different from the financing terms of previous or subsequent tranches. The choice of financing terms will depend on the Subproject, capital market conditions, and

ADB's financing policies, that are prevailing at the time the tranche is formalized in a legal document.

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

Commitment charges are not payable on the Facility. They are payable only on financing actually committed by ADB as a loan. ADB rules on commitment charges, which are in effect when a tranche is provided, will apply with respect to such tranche.

### ***Amount***

The maximum financing amount available under the Facility is eight hundred million dollars (\$800 million).

It will be provided, through individual loans, for an amount of up to seven hundred ninety million dollars (\$790 million) from ADB's Ordinary Capital resources (OCR) to finance the Subprojects; and for an amount of up to the equivalent of ten million dollars (\$10 million) from ADB's Special Funds resources to finance the Investment Program Support Component. Pakistan shall make the proceeds of the Loans available to NTDC upon terms and conditions satisfactory to ADB. The foreign exchange risk shall be borne by Pakistan.

### ***Availability Period***

The last date, on which any disbursement under any loan may be made, will be 31 December 2016. The last periodic financing request (PFR) is expected to be submitted no later than 31 December 2014. However, such availability period will lapse 12 months from the date of approval of the Facility by ADB Board of Directors, unless by such time the first Loan Agreement under the Facility is signed and made effective.

### ***Terms and Conditions***

Each loan will be used to finance an Investment Program Support Component or a set of Subprojects that meet agreed eligibility criteria described in Schedule 4 to this Agreement, as amended or supplemented in the related legal agreement(s). The Investment Program Support Component and the Subprojects shall adhere at all times to a set of agreed terms and conditions in the areas of safeguards, technical, commercial, legal, financial, social and economic profiles. The execution of the Subprojects and Investment Program Support Component financed by individual loans will also follow agreed procurement, disbursement, administrative, governance, fiduciary oversight and financial management arrangements. These terms and conditions are set in the Schedules attached to this Agreement. The specific details applicable to individual loans will be documented in the related legal agreements. Pakistan will cause the proceeds of each loan to be applied to the financing of expenditures of the Investment Plan in accordance with terms and conditions set forth in this

Agreement and the legal agreement for each loan.

**Execution**

The Executing Agency (EA) as well as the Implementing Agency (IA) for the Investment Program is the National Transmission and Despatch Company (NTDC). NTDC will implement the Subprojects in accordance with the criteria and procedures set forth in Schedule 4 to this Agreement, as supplemented in the legal agreement for each loan.

**Periodic Financing Requests**

Pakistan may request, and ADB may agree, to provide loans under the Facility to finance the Investment Plan and related Subprojects upon the submission of a PFR. Each PFR should be submitted by Pakistan. Pakistan will make available to NTDC the proceeds of the loans in accordance with the related PFR, and the related legal agreements for the loans.

Each individual loan will be for an amount of no less than \$150 million dollars (\$150,000,000), or its equivalent. ADB will review the PFR(s) and, if found satisfactory, prepare the related legal agreement(s).

PFRs for financing the Subprojects and Investment Program Support Component will be subject to the selection criteria set out in Schedule 4 hereto, satisfactory due diligence and preparation of relevant safeguard frameworks, fiduciary requirements, and other relevant documents. Pakistan and ADB will agree on a Facility Administration Manual and a schedule to initiate these activities, as soon as possible after the date of this Agreement, but prior to the effective date of the legal agreements for the first loan.

Unless otherwise notified by Pakistan in writing, PFR will be signed on behalf of Pakistan by Secretary or Joint Secretary of Economic Affairs Division of the Ministry of Economic Affairs and Statistics of Pakistan.

**General Implementation Framework**

The Facility will be implemented in accordance with the general framework set out in Schedule 3 hereto. Specific implementation details may be set out in the relevant loan and project agreements.

**Procedures**

Each loan 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 at least 15 days 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 approve any PFR, or authorize the negotiation of any legal document for a loan, provided, any decision to so decline is communicated to Pakistan by ADB within 30 days from receipt of the PFR.
- (d) If no such decline is communicated to Pakistan, the legal documents will be negotiated and executed no later than 30 days

from ADB's receipt of the PFR.

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

- (i) Loan(s) amount;
- (ii) Description of Subprojects or Investment Program Support Component to be financed under the loan(s);
- (iii) Cost estimates and financing plan for the overall loan(s), and the Subprojects and the Investment Program Support Component;
- (iv) Implementation arrangements specific to the Subprojects and the Investment Program Support Component;
- (v) Confirmation of the continuing validity of and adherence to the provisions of this Agreement;
- (vi) Confirmation of compliance with the provisions under previous legal agreements, as appropriate; and
- (vii) Other information as may be required under the Facility Administration Memorandum.

**Safeguard Policies** All ADB safeguard policies, as amended or updated from time to time, shall apply to all the Subprojects financed under the Facility. Schedule 5 to this Agreement sets forth the safeguard frameworks required under ADB's safeguard policies and which Pakistan and NTDC will comply with and implement.

**Procurement** All goods and services to be financed under the Facility will be procured in accordance with ADB's *Procurement Guidelines, April 2006*, as amended from time to time.

**Consulting Services** All consulting services to be financed under the Facility shall be procured in accordance with *Guidelines on the Use of Consultants by Asian Development Bank and Its Borrowers, April 2006*, as amended from time to time.

**Advance Contracting and Retroactive Action** For each Subproject and the Investment Program Support Component under the Facility, advance contracting for procurement of goods, works, and consulting services will be allowed, subject to these being eligible in accordance with agreed procedures and ADB *Procurement Guidelines and Guidelines on the Use of Consultants* as above referred.

Expenditures incurred under the Facility towards goods, works, and consulting services eligible under advance contracting may be eligible for retroactive financing, provided that these expenditures are incurred during the 12-month period immediately prior to the signing of the related loan agreement, and do not exceed an amount equivalent to twenty percent (20%) of the individual loan. Any retroactive financing will be subject to approval by ADB on a tranche by tranche basis.

It is understood that approval of advance contracting and retroactive financing does not in any way commit ADB to financing the Subprojects

therein.

**Disbursements**

Disbursements under each loan will be in accordance with ADB's *Loan Disbursement Handbook, 2001* and ADB's *Interim Guidelines for Disbursement Operations, LIBOR-Based Loan Products, 2002*, each as amended from time to time.

**Monitoring,  
Evaluation and  
Reporting  
Arrangements**

Within 3 months of the effective date of the loan agreement for the related Subprojects under the Facility, the IA will establish a Project Performance Monitoring System (PPMS) in a form and substance acceptable to ADB, in accordance with the Investment Program and Subproject performance indicators. The IA will undertake periodic Subproject performance review under each individual Loan, as also for the Investment Plan, in accordance with the PPMS to evaluate the scope, implementation arrangements, progress and achievements of objectives of the related Subprojects and overall Investment Plan. NTDC will prepare and submit to ADB quarterly progress reports for the individual Subprojects 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 date, and total to date, and include a report on progress of the implementation of mitigation measures as specified in the contracts and EMP and measures to ensure environmentally responsible procurement. A Subproject completion report will be submitted within 3 months following completion of each Subproject. A Facility completion report will be submitted within 3 months following completion of the Facility.

**Representations  
and Warranties**

Pakistan represents and warrants that it will undertake the actions and comply with the assurances specified in the Schedules attached to this Agreement, and the legal agreements entered into for each tranche.

ISLAMIC REPUBLIC OF PAKISTAN

By /sgd/ NAJMA SIDDIQI  
Authorized Representative

NATIONAL TRANSMISSION DESPATCH  
COMPANY

By /sgd/ MUHAMMAD SHABBIR  
CHAUDHRY  
Authorized Representative

ASIAN DEVELOPMENT BANK

By /sgd/ PETER FEDON  
Authorized Representative

## SCHEDULE 1

### INVESTMENT PLAN AND ROADMAP

#### A. Objectives of the Investment Plan

1. The Investment Plan aims to achieve the following outcomes: (i) improved efficiency of the power system; (ii) quality power supply through improved system reliability and stability; (iii) greater geographic coverage of power supply; and (iv) availability and access to affordable electricity, by bringing hydroelectric and coal fired thermal energy to load centers.

#### B. Roadmap

##### a. Policy Support

2. Pakistan-approved Medium Term Development Framework for 2005-2010 spells out the energy sector strategy, including investment strategy in power generation, transmission and distribution. Based on this, the Pakistan developed the long-term power generation plan that establishes the demand for increased generation capacity, and addresses the size and timing of commissioning of the new plants. Thus the overall power transmission strategy is to ensure that the electricity from the new power generation plants is evacuated to the load centers within Pakistan. Based on the long term generation plan, a power transmission sector roadmap has been developed by Pakistan and is provided bellow. The objective of the roadmap is to present how the National Transmission and Despatch Company can deliver reliable and high quality power supply to the rising number of industrial, commercial, agricultural and domestic customers. The ADB is comfortable with the road map and its related power transmission investment program.

### POWER TRANSMISSION SECTOR ROADMAP

Objectives	Impact	Performance	Measurement	Responsible Party
1. Improve power system efficiency	Power system capable to support and sustain annual economic growth target of Pakistan	Generation capacity constrained by transmission bottlenecks removed by 2013	Amount of power transmitted through the 220/500kV systems	NTDC
		Electricity tariffs continually adjusted to cost recovery levels	Tariff application, determination and notification decision	NEPRA, MOWP and NTDC
		NTDC capable to design and implement required investment projects in accordance with Subproject selection criteria (including social, environmental safeguards)	Approvals of PC-1 and ADB financing  Subproject commissioning licenses	NTDC with assistance from ADB
		Establishment of independent CPPA	MOWP decision, CPPA strategic and business plans	MOWP, NEPRA and NTDC

		<p>Corporate and financial governance achieved</p> <p>Transmission system operated and maintained in accordance with technical requirements</p> <p>NTDC achieves full financial autonomy, meets and maintains financial performance requirements [DSCR 1.2 by 2010, SFR at least 20% by 2008]</p>	<p>NTDC Board composition and management structure, audited financial statements and internal audit reports</p> <p>NTDC technical reports</p> <p>Audited financial statements, availability of counterpart funding</p>	<p>MOWP, NTDC and WAPDA</p> <p>NTDC</p> <p>MOWP and NTDC</p>
2. Provide quality power supply - Improve system reliability and stability	Consumers provided with required electricity at all times	<p>Full compliance with the NTDC license conditions and the grid security code by 2009</p> <p>Overloading of 220/500kV transformers reduced by 50% in 2009, and by 95% in 2011</p> <p>Load shedding caused by forced transmission outages reduced by 80% by 2011, 98% by 2016</p> <p>System capable meet peak demand by 2013</p>	<p>NEPRA reports</p> <p>Energy sector yearbook</p> <p>NTDC technical and monthly reports</p> <p>Energy sector yearbook, NTDC reports</p>	<p>NTDC and NEPRA</p> <p>NTDC</p> <p>NTDC</p> <p>NTDC</p>
3. Expand the geographic coverage of power supply	Rural and urban consumers have access to power from the national grid	<p>Grid connected customers increased to 70% by 2010, 90% by 2015</p> <p>Village electrification program implemented by 2012</p>	<p>Energy sector yearbook, national statistics</p> <p><i>Roshan Pakistan Program</i> reports</p>	<p>NTDC and DISCOs</p> <p>MOWP, NTDC, DISCOs</p>
4. Provide affordable electricity	All electricity consumers have option to use power from the grid	<p>Power from new hydro and thermal generation plants, including IPPs, evacuated to the grid and supplied to the consumers</p> <p>Continued private sector participation in power sector</p> <p>10.5 GWh of additional power supplied annually to the consumers by 2011</p>	<p>NTDC reports, energy sector yearbook</p> <p>PPIB reports, NEPRA licenses</p> <p>Energy sector yearbook, NTDC reports</p>	<p>NTDC, WAPDA and DISCOs</p> <p>MOWP, NEPRA and PPIB</p> <p>NTDC, DISCOs, GENCOs, IPPs</p>

**b. Financial Matters**

3. The unbundling of the power sector has been on going since 1999. To achieve efficiencies and transparency that were intended through unbundling, financial as well as management independence is necessary. NTDC currently has satisfactory accounting capacities and established accredited external audit processes in accordance with international audit standards to handle payments, billings, and collections. Accordingly, these functions can safely be transferred from WAPDA to NTDC. ADB is currently providing technical assistance to further strengthen NTDC capacities.

**c. Governance Matters**

4. As the transition period is concluding, it is expected that NTDC will adopt a corporate governance structure of its board that is in accordance with best international corporate practices. The objective is to establish a position without conflict of interest, in order for the board members to duly exercise their fiduciary duties and their oversight role.

**d. Capacity Building**

5. Assistance will be provided under the Investment Program to strengthen the capacity of NTDC in the Investment Plan preparation and implementation capacities.

**e. Private Sector Participation**

6. Through the implementation of the Investment Program, ADB will help Pakistan to promote PPP in power sector development especially in i) further improvements in the enabling conditions for power evacuation from PPPs, and ii) provide financial security of funding of the power transmission facilities dedicated to the evacuation of electricity from IPPs.

**C. The Investment Requirement in the Power Transmission Sector – The Facility**

7. The total investment requirement for NTDC is estimated at around \$3.9 billion by 2016. It covers 68 transformers, 4,415 km lines, 4 SVCs and 20 new substations. There is urgent need for an amount totaling \$1,253 million by 2011 (41 transformers, 402 km of lines). Investments from 2012 to 2016 will mainly facilitate the evacuation of planned generation plants as per the least cost power generation plan. An overview of the Investment requirement is described in the table below.

**Table 1: Total Investment Requirement**

	Amount (in \$ millions)	Line (Km)	Transformers	SVC	New Substation
2006-2007	87				
2007-2008	197	30	21		
2008-2009	184	10	2		1
2009-2010	329	176	16	1	6
2010-2011	487	186	2	3	2
2011-2012	682	1,366	18		8
2012-2013	508	347	6		3
2013-2014	612				
2014-2015	612				
2015-2016	216	2,300	3		

<b>Total</b>	<b>3,914</b>	<b>4,415</b>	<b>68</b>	<b>4</b>	<b>20</b>
--------------	--------------	--------------	-----------	----------	-----------

Note: Components have been included in the year commissioned and investment amount according to disbursement each year.

8. The maximum financing amount available under the Facility is \$800 million. The Facility is intended to finance part of the Investment Plan from ADB's Ordinary Capital resources and from ADB's Special Funds Resources, through individual loans.

9. The Facility will also finance Investment Program Support Component which will focus on implementation and preparatory activities. Training in modern transmission planning and utility management, as well as information technology/communication facilities, will be provided. The capacity of NTDC in project management, planning, design, implementation and operation and maintenance activities will be strengthened. In addition, the assistance will be provided to strengthen the capacity of NTDC for Subproject preparation.

#### D. The First Tranche

10. The first tranche covers the construction of 19 Subprojects: (i) 26 transformers at existing 500 kv and 220 kv substations and new 220 kv sub stations, (iii) 50 km of transmission line; (iv) a Static Var Compensator at Lahore 500 kv sub station. Load flow studies to technically justify or identify the Subprojects have been carried out by NTDC and verified by the consultant. It will finance also an implementation component and consulting services. Load flow studies to technically justify or identify the Subprojects have been carried out by NTDC and verified by the consultant. Each Subproject is economically viable. A table containing the list of the Subprojects for the first tranche is described below as well as the cost estimates and financing plan. Each Subproject is found to be financially and economically viable with no insurmountable environment or social impact. The first tranche will also finance the Investment Program Support Component.

List of Subprojects Tranche 1

Subproject	Substation	Transmission Line	Length of each Line (km)	Transformer Capacity (MVA)	Expected Year of Commissioning
1. Transformer Extension at Tarbela 500 kV	Tarbela			1x237	2007-08
2. Transformer Extension at Mangla 220 kV	Mangla			1x138	2007-08
3. Transformer Extension at Lahore 500 kV	Lahore			1 × 600	2007-08
4. Line Bay Extension at Mardan and Allied Transmission Line	Mardan	D/C from looping point to Mardan	30	-	2006-07
5. Transformer Extension at Gatti 500 kV	Gatti			1 × 450	2007-08

6. Transformer Extension at Multan 500/220 kV (220 kV Transformer Extensions)	Multan			3x160	2007-08
7. Transformer Extension at Bannu 220 kV	Bannu			1x160	2007-08
8. Transformer Extension at Yousafwala 220 kV	Yousafwala			1x160	2007-08
9. Transformer Extension at Bahawalpur 220 kV	Bahawalpur			1x160	2007-08
10. Transformer Extension at Ludewala 220 kV	Ludewala			1 x 160	2007-08
11. Transformer Extension at Hyderabad 220 kV	Hala Road			1 x 160	2007-08
12. Augmentation at Islamabad 220 kV	Islamabad University			2 x 250	2007-08
13. Transformer Extension at Peshawar 500 kV	Peshawar			1 x 450	2007-08
14. Transformer Extension at Muzaffargarh 500 kV	Muzaffargarh			1 x 600	2007-08
15. New 220 kV Bandala Grid Station with Transmission Line	Bandala (Near Shahkot)	Gatti – K.S.K D/C In/Out at Bandala	10	3 x 160	2008-09
16. Static Var Compensator	Lahore				2008-09
17. Transformer Extension at Gakhar 220 kV	Gakhar			1X160	2007-08
18. Augmentation at New Kot Lakhpat 220 kV	Lahore			3X250	2007-08
19. New 220 kV WAPDA Town Grid Station with Transmission line	Lahore	Lahore-NKLPT to be In and Out	10	3x160	2008-2009

11. The total cost of the 19 Subprojects is estimated at \$282 million. Pakistan and NTDC requested ADB to finance up to 80% of the total cost, amounting to \$226 million. The detailed cost estimates is set out below.

Tranche 1 (in \$ Millions)

	Subprojects (OCR)		Investment Program Support (ADF)	
	Amount	Share	Amount	Share
ADB	226	80%	10	80%
NTDC	56	20%	2.5	20%
<b>Total</b>	<b>282</b>	<b>100%</b>	<b>12.5</b>	<b>100%</b>

Source: Asian Development Bank estimates.

## SCHEDULE 2

### DESIGN AND MONITORING FRAMEWORK FOR THE FACILITY

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
<p><b>Impact</b> Sustained economic growth and social development</p>	<p>GDP grows by 6-7% annually in 2007-2015</p> <p>Village and rural electrification programs implemented by 2012</p>	<p>Annual national statistics report</p> <p>Energy sector yearbook</p> <p><i>Roshan Pakistan Program</i> progress report</p>	<p><b>Assumptions</b> Macroeconomic growth remains stable</p> <p>Federal and provincial governments remain committed to power sector reforms</p> <p>Planned generation projects commissioned</p>
<p><b>Outcome</b> Reliable power supplied and service coverage expanded</p>	<p>Full compliance with grid code and transmission license by 2009</p> <p>10.5 GWh of additional power supplied through the grid annually by 2011.</p> <p>Electricity outages reduced by 30% in 2011.</p> <p>Grid connected customers increased to 70% in 2011.</p>	<p>NEPRA reports</p> <p>Amount of power evacuated and transmitted through the 220/500kV systems</p> <p>WAPDA/NTDC grid systems monthly report</p> <p>DISCOs monthly reports</p>	<p><b>Assumptions</b> Continued progress on policy, regulatory and institutional reforms</p> <p>Investment in strengthening DISCOs operations is made on time</p> <p>Power demand continues to grow by 8% annually</p> <p><b>Risks</b> NEPRA yields to political pressures and tariffs set below cost-recovery levels</p>
<p><b>Outputs</b> 220/500kV transmission systems rehabilitated, augmented and expanded – system bottlenecks removed</p> <p>NTDC restructuring completed and operational and financial autonomy achieved by 2007</p>	<p>Subprojects commissioned according to schedules indicated in the investment and expansion plan</p> <p>DISCO tariffs determined and notified by 2006</p>	<p>Pakistan decision on tariff notification</p> <p>WAPDA, NTDC, NEPRA reports</p> <p>Implementation progress reports and loan review missions findings</p> <p>Commissioning licenses</p>	<p><b>Assumption</b> Pakistan notifies tariffs applicable to DISCOs</p> <p>Pakistan approves required investment programs</p> <p>Counterpart funds mobilized on time</p> <p>NTDC takes full ownership of the transmission sector development program</p> <p><b>Risks</b> Unexpected increase in prices of commodities and raw materials, and construction delays</p> <p>Procurement and recruitment of consultants delayed due to Pakistan approvals</p>

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
<b>Activities with Milestones</b> <ol style="list-style-type: none"> <li>1. Bidding for civil works and procurement of equipment for Tranche 1 Subprojects completed by February 2007</li> <li>2. Construction of Tranche 1 Subprojects begin by March 2007</li> <li>3. Detailed feasibility studies (including resettlement plan, bidding documents) for Tranche 2 Subprojects completed by June 2007</li> <li>4. Recruitment of project implementation and preparation consultants completed by June 2006</li> <li>5. PFR for Tranche 2 submitted and approved by August 2007</li> <li>6. Procurement of equipment under Tranche 1 completed by September 2007</li> <li>7. Installation of equipment for Tranche 1 Subprojects completed by December 2007</li> <li>8. Tranche 2 implementation begin by September 2007</li> </ol>			<b>Inputs</b> MFF: \$800 million Subprojects:\$790 million Investment Program Support Component:\$10 million  NTDC: 1,166 million Other: \$ 1,948 million

ADB = Asian Development Bank, DISCO = distribution company, GDP = gross domestic product, GWh = gigawatt-hour, kV = kilovolt, MFF = multitranches financing facility, NEPRA = National Electric Power Regulatory Authority, NTDC = National Transmission and Despatch Company, PC-1 = Planning Commission-1, PFR = Periodic Financing Request, WAPDA = Water and Power Development Authority.

## **SCHEDULE 3**

### **IMPLEMENTATION FRAMEWORK**

1. Implementation Arrangements. Unless modified or amended in related loan or project agreements, the Investment Program will be implemented as below: NTDC will be the executing agency (EA) and the implementing agency (IA). A project management unit (PMU) headed by a PMU Manager will be established. The PMU manager will report all Subproject related matters to the general manager, planning of NTDC. The IA will appraise all Subprojects and will be responsible for processing and implementing the Subprojects. The appraisal, processing, and implementation will cover the development and completion of technical reports, feasibility studies, preliminary design reports, environmental assessment reports, resettlement and indigenous people's development plans, and detailed design reports to ensure their compliance with Pakistan and ADB requirements.
2. Pakistan will cause NTDC to ensure the availability and timely release of counterpart funding for the timely implementation of Subprojects. For this purpose, Pakistan will cause NTDC to ensure that (i) the annual development program incorporates revised estimates of the funding requirements for the related Subprojects under the Facility, and (ii) the funds are released to the assigned accounts.
3. NTDC will provide, as necessary, respective counterpart staff, land facilities, and counterpart funding for related Subproject in accordance with the financing plan, the cost of making land available for the Subproject and assistance, and implementation and monitoring under the EARF (including cost of mitigating unforeseen environmental impacts, beyond the estimates), utility relocation, general management expenses, in a timely manner through approved annual budget allocations.

#### **Performance Monitoring and Reporting**

4. NTDC shall ensure that within 3 months of the Effective Date of the loan agreement, a Project Performance Monitoring System (PPMS) shall have been established by NTDC in a form and with a composition acceptable to ADB in accordance with the Investment Program and Subproject performance indicators. NTDC shall undertake periodic Subproject performance review under each individual tranche of the Loan, and also for the Investment Program, in accordance with the PPMS to evaluate the scope, implementation arrangements, progress and achievements of objectives of the related Subproject and overall Investment Program.
5. NTDC will prepare the quarterly progress reports on Subprojects' implementation and submit the same to ADB. Such reports shall include report on progress made during the period of review, changes if any on implementation schedule, problems or difficulties encountered and remedial actions taken, and work to be undertaken in coming quarter. The reports, that shall be submitted to ADB within 30 days from close of each quarter, shall also include a summary financial account for each Subproject, consisting of expenditures to date, and reports on environmental monitoring, benefit monitoring undertaken pursuant to the preceding paragraph of this Schedule.

## **Review**

6. (a) ADB, Pakistan, and NTDC shall meet regularly as required to discuss the progress of the individual tranche and any changes to implementation arrangements or remedial measures required to be undertaken towards achieving the objectives of the Subprojects and Investment Program.

(b) A Mid-term review of each Subproject will be undertaken by ADB, Pakistan and NTDC. The mid-term review will include review of issues and any problems or weaknesses in implementation arrangements, and agree on any changes needed to achieve the objectives of the Investment Program.

(c) A similar mid-term review of the Investment Program by ADB, Pakistan, and NTDC will be undertaken in the third year from date of approval of the Facility by ADB.

(d) NTDC will ensure submission to ADB of a Subproject completion report within 3 months of physical completion of the related Subproject, and Facility completion report within 3 months of physical completion of the Investment Program. These reports shall cover a detailed evaluation of Subprojects and the Facility respectively, covering the design, costs, contractors' and consultants' performance, social, environmental and economic impact, economic rate of return, and other details for each Subproject and the Facility as may be requested by ADB.

7. **Policy Dialogue.** Pakistan will ensure that ADB is kept informed about Pakistan policies and programs related to the power sector that will materially affect the financial viability of each Subproject under the Investment Program, and in particular to the power generation policies and program, as well as the power transmission policies and program.

8. **Tariff.** NTDC will submit petition for tariffs revision as required for maintaining its financial viability. Following tariff determination by NEPRA, Pakistan undertakes to notify such tariff determination in a prompt manner. Pakistan will ensure that the tariffs formulated for NTDC will be adequate to cover its operating costs, maintenance, and depreciation, financing costs and allow an acceptable return on its equity.

9. **Governance -** Pakistan acknowledges that ADB, consistent with its commitment to good governance, accountability and transparency, reserves the right to investigate directly, or through its agents, any possible corrupt, fraudulent, collusive or coercive practices relating to the Subprojects. To support these efforts, Pakistan shall ensure that: (a) NTDC in its bidding documents for each Subproject, and in all contracts financed by ADB in connection with each Subproject, includes a provision specifying the right of ADB to audit and examine the records and accounts of and all contractors, suppliers, consultants and other service providers as they relate to each Subproject; (b) NTDC cooperates with any such investigations and extends all necessary assistance, including access to all relevant contracts, accounting and bookkeeping records, as well as engagement of independent experts that may be needed for satisfactory completion of such investigations; and (c) all external costs related to such investigations as described in this Schedule are borne by the applicable Subproject.

10. **Establishment of CPPA.** Pakistan, through MOWP, and NTDC will ensure that CPPA is established as an independent entity from NTDC and that all of the trade debt incurred by NTDC for its single buyer role is transferred to CPPA or otherwise separated from NTDC. Pakistan, through MOWP, will cause CPPA to define its corporate identity, devise a business plan and a strategic development roadmap, so that a single corporate body is accountable for the single buyer business. NTDC will ensure that it submits to NEPRA an application to revise its license to reflect the establishment of CPPA as a separate entity from NTDC.
11. **Financial Performance.** Pakistan will ensure that NTDC maintains a debt service coverage ratio (DSCR) of at least 1.2 from 2010 onward and a self financing ratio (SFR) of at least 20% from 2008 onward.
12. **Financial Autonomy.** Pakistan will ensure that NTDC bills the paying authority, directly and in a timely manner, for the transmission services rendered to its customers. Pakistan will ensure that the paying authority provides prompt payment to NTDC, and in case of any shortfall from the paying authority, Pakistan will finance such shortfall in a timely manner.
13. **Financial Governance.** The NTDC will ensure that its internal controls will be in accordance with the National Accounting Standards, and an independent and autonomous internal audit department will be set up within NTDC.
14. **Gender.** The NTDC will follow the principles of ADB's Policy on Gender and Development, 1998 during each Subproject implementation, including taking all necessary actions to encourage women living in the Subproject area to participate in planning and implementing Subproject activities. The NTDC will monitor the Subproject effects on women during each Subproject implementation, through, where relevant, gender-disaggregated data collected pursuant to the monitoring and evaluation system referred to in the Subproject performance monitoring system.
15. **Sexually transmitted diseases.** With the assistance of the relevant local authorities, the NTDC will cause contractors to distribute information on the risks of sexually transmitted diseases to those employed during each Subproject construction.
16. **Women and child labor.** The NTDC will ensure that (i) there is no differential payment between men and women for work of equal value and (ii) civil works contractors do not employ child labor in the construction and maintenance activities in accordance with the relevant laws and regulations of Pakistan.
17. **Execution of Civil Works Contracts.** NTDC will ensure that, subsequent to award of civil works contract under any Subproject, no section or part thereof under the civil works contract will be handed over to the contractor unless the applicable provisions of the Land Acquisition and Resettlement Plan approved by ADB, including in particular the timely delivery of compensation to affected families, and the EAF/EMP approved by ADB have been complied with. Any changes to the location, land alignment of facilitating roads, or environment impacts on account of detailed designs of related Subprojects will be subject to prior approval by ADB or related agency in accordance with the Subproject selection criteria and procedures included in the FFA.

### **Audit and accounting**

18. Pakistan and NTDC shall ensure that proper accounts and records are maintained and audited in a timely manner to adequately identify the use of loan proceeds in such manner and detail as may be specified under each related legal agreement.

### **Conditions for Loan Effectiveness for the Second Tranche**

19. **Corporate Governance.** Pakistan will ensure that no person serving on the board of NTDC, WAPDA, a DISCO, or GENCO concurrently is a board member of any of the other entities, to avoid any actual or apparent conflict of interest.

20. **Tariff.** Pakistan will cause the DISCOs to submit petitions for tariff revisions, as required, to maintain their financial viability. Following a tariff determination by NEPRA, Pakistan will notify such tariff determination in a prompt manner through the official Gazette. The Pakistan will ensure that the tariffs determined for the DISCOs are adequate to cover their operating costs, maintenance, depreciation, and financing costs, and allow an acceptable return on equity.

## SCHEDULE 4

### SELECTION CRITERIA AND APPROVAL PROCESS FOR SUBPROJECTS

#### Subproject

- Selection Criteria** The following criteria will apply in selecting and approving Subprojects intended for financing under the Facility:
- (i) Subprojects will include rehabilitation, augmentation and expansion of transmission substations, transmission lines of 500kv and 220kv, installation of SVC equipment and any associated facilities related to the operations of the power transmission system;
  - (ii) Subprojects will be part of the Transmission Sector Development Program of Pakistan;
  - (iii) Subprojects will be eligible for construction in accordance with the approved feasibility assessment, which includes engineering, financial, economic, environmental and social justifications.
  - (iv) Safety measures will be incorporated in the Subproject designs as required under the relevant policies statutory requirements and regulations of Pakistan, as amended;
  - (v) Design of Subprojects will be finalized taking account of input from public consultation carried out in the social and environmental assessments, as appropriate;
  - (vi) For each Subproject the involuntary resettlement categorization checklist will be carried out to determine whether or not land is needed; if it is the case, substantial land impacts will be avoided or minimization efforts will be carried out by exploring all available design alternatives and clear terms of references will be prepared for the preparation of Land Acquisition and Resettlement Plan (LARP) consistent with the ADB's Policy on Involuntary Resettlement, 1995 and the Investment Program Land Acquisition and Resettlement Framework will be prepared;
  - (vii) For each Subproject, the IPSA will also assess whether or not Indigenous Peoples (IP) (Tribal People) are affected; if it is the case, the terms of reference will be prepared for the preparation of the appropriate IP action consistent with the ADB's Policy on Indigenous Peoples, 1998 and the Investment Program Indigenous Peoples Development Framework;
  - (viii) Subprojects will be selected in accordance with the EARF and shall be environmentally acceptable with no significant residual impacts after mitigation, no Subproject will located in an environmentally sensitive area, such as a wildlife sanctuary, national park, or statutory protected area for biodiversity or ecological functions, or in a critical or sensitive areas identified as archaeological or heritage sites and monuments by the relevant authorities;
  - (ix) A Rapid Environmental Assessment checklist will be prepared for the Subproject in accordance with the EARF, and relevant provisions of the environmental management plan (EMP) including environmental contract clauses that will have been identified;
  - (x) Sufficient counterpart funding will be allocated by Pakistan and NTDC, as required, to implement the Subprojects as scheduled and maintain the Subprojects; and

- (xii) All necessary Federal and Provincial government approvals will have been obtained for each Subproject.

### **Approval Procedures for Subprojects**

Approval procedures for Subprojects intended for financing under the Facility will follow the required provincial and national processes as supplemented by the requirements of the LARF, and IPDF and the EARF.

For the Subprojects already prepared for first tranche, the approval process stands completed at the date of this Agreement.

For the subsequent Subprojects, intended for financing under the Facility, the approval procedures will be as follows:

- (i) NTDC will prepare the Subproject feasibility assessments that will follow the format and content of the feasibility assessments prepared for the first tranche.
- (ii) NTDC will obtain the necessary Governments' approvals such as the Energy Wing of the Planning Commission who will review the Subproject proposals, check compliance with the selection criteria, and, for those found in compliance with the selection criteria, concur with the implementation of the Subproject;
- (iii) NTDC will further submit the Subproject proposals to ADB for review and approval and inform the Economic Affairs Division (EAD) of the Ministry of Economic Affairs and Statistics of Pakistan;
- (iv) To facilitate timely approval of the Subproject financing under the Facility, NTDC will submit the environmental assessments (EIA/IEE/review of environmental implications) for all the Subprojects in the tranche to ADB;
- (v) If any of the Subproject in the Tranche requires compliance with the 120 days circulation rule under ADB's Environment Policy, the SEIA or SIEE must be circulated to the Board and the general public in accordance with ADB's Public Communication Policy 120 days before the PFR is submitted to ADB;
- (vi) NTDC will compile a review report on compliance loan covenants for the previous tranche; ADB will approve the Subproject proposal, subject to satisfactory compliance with all safeguard policies and related loans covenants; and
- (vii) ADB will approve the Subproject proposals, subject to any further modifications required to be made to the proposals.

## **SCHEDULE 5**

### **SAFEGUARD FRAMEWORKS**

1. NTDC will ensure that all the requirements prescribed in the following safeguard frameworks - (i) Environment Assessment and Review Framework (EARF), (ii) Land Acquisition and Resettlement Framework (LARF), and (iii) Indigenous Peoples and Development Framework (IPDF) - which have been prepared with respect to the Facility and of which ADB has been provided full copies, are complied with during the processing and implementation of the Subprojects under the Facility.
2. Prior to the preparation of each PFR, the applicability and relevance of each safeguard framework - EARF, LARF, and IPDF- will be reviewed and updated to ensure relevance and consistency with Pakistan's legal frameworks and ADB's safeguard policies, as amended from time to time.
3. In all cases, for each new PFR preparation, NTDC will review on-going projects to check on the status of compliance with the safeguards plans and frameworks, and submit the review reports to ADB, together with other required safeguard documents relevant to the Subprojects included in the new tranche. In any case, if major noncompliance is discovered in the course of the review of on-going Subprojects, a corrective action plan will be prepared and submitted to ADB.
4. All ADB safeguard policies in effect as of the date the financing of a Subproject is prepared or provided under the Facility will apply to such Subproject.
5. The safeguard frameworks - EARF, LARF, and IPDF - are attached.