ASIAN DEVELOPMENT BANK **RRP: PAK 38458**

REPORT AND RECOMMENDATION

OF THE

PRESIDENT

TO THE

BOARD OF DIRECTORS

ON A

PROPOSED TECHNICAL ASSISTANCE LOAN

AND TECHNICAL ASSISTANCE GRANT

TO THE

ISLAMIC REPUBLIC OF PAKISTAN

FOR

INFRASTRUCTURE DEVELOPMENT

July 2005

CURRENCY EQUIVALENTS
(as of 14 July 2005)

Currency Unit	–	Pakistan rupee/s (PRe/PRs)
PRe1.00	=	$0.0165
$1.00	=	PRs60.50

ABBREVIATIONS

ADB	–	Asian Development Bank
ADF	–	Asian Development Fund
BOT	–	build-operate–transfer
CSPU	–	Country Strategy and Program Update
EAD	–	Economic Affairs Division
EIA	–	environmental impact assessment
IA	–	implementing agency
IEE	–	initial environmental examination
IMU	–	Infrastructure Management Unit
IPP	–	independent power producer
JBIC	–	Japan Bank for International Cooperation
KESC	–	Karachi Electricity Supply Company
LAR	–	land acquisition and resettlement
MOC	–	Ministry of Communications
MOF	–	Ministry of Finance
MOLG	–	Ministry of Local Government
MOPS	–	Ministry of Ports and Shipping
MOR	–	Ministry of Railways
MOWP	–	Ministry of Water and Power
MTDF	–	Medium-Term Development Framework
NEPRA	–	National Electric Power Regulatory Authority
NHA	–	National Highways Authority
NTDC	–	National Transmission and Despatch Company
NWP	–	national water policy
OCR	–	ordinary capital resources
PC I	–	Planning Commission Document I
PC II	–	Planning Commission Document II
PDD	–	Planning and Development Division
PPIB	–	Private Power and Infrastructure Board
PPIF	–	Public Private Infrastructure Financing Facility
PPP	–	public-private partnership
PR	–	Pakistan Railways
PRSP	–	poverty reduction strategy paper
SOIE	–	state-owned infrastructure entity
TA	–	technical assistance
TAP	–	Technical Assistance Program
TOR	–	terms of reference
TSDI	–	ransport sector development initiative
WAPDA	–	Water and Power Development Authority
WSS	–	water sector strategy

NOTES

(i) The fiscal year (FY) of the Government ends on 30 June. FY before calendar year denotes the year in which the fiscal year ends, e.g. FY2004 ends on 30 June 2005.

(ii) In this report, “$” refers to US dollars.

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CONTENTS

LOAN AND PROJECT SUMMARY

Borrower	Islamic Republic of Pakistan
Classification	Targeting Classification: General intervention Sectors: Energy, transport, agriculture and natural resources Subsectors: Energy sector development, ports, roads, railways, water resource management Themes: Sustainable economic growth, private sector development
Environment Assessment	Category C. The Technical Assistance Loan (TA Loan) does not by itself have any environmental impact, but an environmental impact assessment will be an integral component of the subproject preparatory process, which is financed under the TA Loan. The Government of Pakistan will provide an assurance that any subproject will be prepared in accordance with the Asian Development Bank (ADB) Environment Policy 2002.
Project Description	The TA Loan will constitute a key intervention for strengthening and further consolidating the long-term development partnership between ADB and Pakistan in the area of infrastructure development, and it indicates ADB's continued high level commitment to increase infrastructure services. A second key intervention earmarked in the 2005 program is the Public Private Infrastructure Financing Facility (PPIF), which will reduce policy constraints on private participation in infrastructure. While the TA Loan will tackle some immediate policy constraints, the PPIF is expected to focus on private participation in infrastructure over a longer horizon. The TA Loan will (i) strengthen the environment for, and improve the sustainability of, infrastructure investment; (ii) outline an infrastructure investment program for the short, medium, and long-term; and (iii) prepare specific investment and institutional capacity interventions for the infrastructure sectors. Infrastructure and utility sector projects will promote economic growth and reduce poverty. The investments will be technically feasible, financially and economically viable, and compliant with ADB's environmental and social operational policies and procedures. Assistance will be provided through (i) strategic framework definition, (ii) investment environment strengthening measures, (iii) capacity building, and (iv) preparation of feasibility studies. The infrastructure sectors covered under the Project are power, transport, and water resources.

Rationale

The Government's infrastructure strategy is embedded in its Medium-Term Development Framework 2005-2010 (MTDF). The Government is pursuing an integrated approach to infrastructure development through broad-based development of a number of infrastructure sectors while increasing infrastructure services countrywide. The strategy ensures investor-friendly policies. The allocation for infrastructure development has been placed at 54% of the Government's total planned development expenditures.

The Government's vision for economic growth and poverty reduction sets ambitious targets, which will require massive infrastructure development. However, the Government has recently concluded that public funds would be able to meet only about $1.5 billion of estimated total infrastructure investment requirements of $2.5 billion–$3.0 billion annually. The remaining resource gap would have to be funded by the private sector, multilateral financial institutions, and bilateral agencies. Timely development and implementation of infrastructure investment projects are indispensable to economic progress. Infrastructure institutions need sufficient capacity to carry out needs analysis, project development and preparation, and preconstruction activities on time and efficiently for external and/or private financing.

The pivotal step from the strategy to the implementation of infrastructure projects is to create an environment conducive to private investment. The Government is adopting investor-friendly policies, but operational, legal, and procedural constraints still have to be identified and removed to achieve the MTDF's private investment targets. The TA Loan has devoted a component to strengthening the enabling environment for private investment in infrastructure. The PPIF is expected to help develop strategy and policy to attract the private sector to infrastructure financing and management.

The Government is focusing on the simultaneous development of several infrastructure services within the same geographic area, such as transportation, electricity, and water resources, resulting in sustainable economic growth. The multi-sector TA Loan modality supports this integrated approach through its tri-dimensional focus, strategic-based policies to improve the environment for investors, and increased services through institutional capacity building and project implementation. It also ensures strong Government ownership of subprojects since the implementing agencies are directly responsible for preparing the follow-on projects.

ADB's assistance will build on lessons learned and policy dialogue with the Government on the overall infrastructure strategy and policy. The TA Loan is an opportunity to continue the long-term infrastructure partnership with the Government, combining financial support with the joint development of a strategic and implementation framework for overall infrastructure development, and making the infrastructure sectors more conducive to private participation.

Impact and Outcome

The overall objective of the TA Loan is to assist the Government define, plan, prepare, and implement a program for infrastructure development consistent with the MTDF, and thus reduce poverty.

The scope of the TA Loan is to (i) assist the Government create an enabling environment for infrastructure investments for domestic public and private participation as well as bilateral and multilateral agencies, and (ii) increase infrastructure services in Pakistan, by improving institutional capacities to plan, develop, and implement infrastructure projects, and by implementing an infrastructure investment program in the power, transport, and water resource sectors.

The TA Loan will help the Government develop the infrastructure sectors in an integrated manner, as sustainable economic development requires a comprehensive approach to transportation, provision of electricity, and water resources. The TA Loan will develop and improve the investment environment and develop an investment program. Focusing on improved infrastructure deliveries, the TA Loan will (i) enable infrastructure institutions to develop and prepare projects on time and up to international standards and best practices; (ii) ensure that subprojects and subsequent infrastructure projects are ready for implementation; (iii) improve capacities of infrastructure agencies to meet business management and process changes as required by recent sector policies, reforms, and regulatory agencies; and (iv) assist in developing Public-Private Partnership (PPP) modalities in the targeted sectors. The TA Loan will enhance infrastructure agencies' capacity to develop a sector program and project pipeline and to implement projects. The TA Loan will prepare follow-on projects intended for downstream ADB public and private financing modalities, as well as for non-ADB financing.

Cost Estimates

The total project cost is estimated at $33.67 million equivalent, comprising a foreign exchange component of $18.49 million (55% of the total cost) and a local currency component of $15.18 million equivalent (45%).

Financing Plan	ADB will provide a loan of $25 million equivalent to cover the foreign exchange costs, except interest during implementation ($18.15 million equivalent) and part of local currency costs ($6.85 million equivalent). The Government will finance the remaining costs of $8.67 million equivalent, which includes the interest during implementation of $0.34 million.
Loan Amount and Terms	A loan in various currencies equivalent to SDR17,163,000 ($25 million equivalent) will be provided from ADB's Special Funds resources, with a term of 32 years, including a grace period of 8 years, with an annual interest rate of 1.0% during the grace period and 1.5% per annum thereafter.
Period of Utilization	Until 31 March 2010
Estimated Project Completion Date	30 September 2009
Executing Agency	The Planning and Development Division (PDD) of the Government will be the Executing Agency.
Implementation Arrangements	To assist the PDD execute the increased functions related to the Government's emphasis on infrastructure development, an infrastructure management unit (IMU) will be established. It will have pivotal coordination and implementation roles in execution of infrastructure development in Pakistan as envisioned in the MTDF. It will be staffed with a director and experienced infrastructure specialists. It will be responsible for the overall and day-to-day implementation of the TA Loan. Assistance will be provided under the TA Loan to assist the IMU achieve international standards and best practices. Part of the assistance will focus on improving the investment environment, and the IMU will be responsible for this assessment and subsequent interventions. The IMU will monitor the progress of individual subprojects in the three infrastructure sectors, and will assist with timely preparations of PC-Is and PC-IIs, develop request-for-proposal documents, and select consultants. Each subproject will be the responsibility of an implementing agency (IA). An IA may be responsible for more than one subproject. The IAs will be responsible for the detailed preparatory activities and implementation of their subprojects, and will report the progress of each subproject to the IMU. The reporting requirements are to be developed by the IMU in coordination with the IAs and ADB. Each IA will appoint a subproject director to supervise the day-to-day subproject activities.

Procurement	All goods and services under the Project will be procured in accordance with ADB's *Guidelines for Procurement.*
Consulting Services	Consultants, with experience in enhancing investment environments, will assist the Government remove the identified bottlenecks hampering infrastructure investment. Specialists in power, transport, and water engineering, and in infrastructure economics, finance, social, resettlement, and the environment, will assist the IAs carry out comprehensive feasibility analyses and engineering design, prepare bid documents, and procure goods and services in a manner satisfactory to ADB. Specialists in capacity development and institutional strengthening will also be recruited. Each IA will, for each subproject, develop detailed terms of reference, inclusive of associated resources required to fulfill them, and present these plans to the EA and ADB for approval. International and/or domestic consulting firms will be engaged using ADB's quality- and cost-based selection and quality-based selection (QBS) procedures as appropriate for each subproject. Certain subprojects will utilize QBS as they require expertise of limited availability. Individual consultants will be engaged in accordance with ADB's *Guidelines on the Use of Consultants* and other arrangements satisfactory to ADB on the engagement of domestic consultants. For the first year of implementation, about 100 and 200 person-months of international and domestic consulting services, respectively, are required for a combined feasibility and engineering study, including procurement assistance, for the priority subprojects. Tentative estimates for the whole TA Loan are about 600 and 1,500 person-months of international and domestic consulting services, respectively.
Project Benefits and Beneficiaries	The TA Loan will develop (i) the infrastructure investment environment, making it attractive to international and domestic private developers and investors, and to multilateral institutions and bilateral agencies; (ii) increase infrastructure facilities and thereby contribute to national economic development and reduce poverty; and (iii) help (a) improve the general investment environment, (b) increase infrastructure capacities in the power, transport, and water resource sectors without unnecessary delay, (c) continue and introduce international standards and best practices, (d) improve governance, and (e) increase the focus on safeguard issues. Infrastructure users will be able to undertake

economic activities more efficiently and effectively, resulting in an overall improved economic growth. The TA Loan will also support capacity building to improve the impact and sustainability of infrastructure investment.

The ultimate beneficiaries are the consumers, who will benefit from increased infrastructure facilities, which will spur economic activity. Investors will benefit from an improved investment environment. The immediate beneficiaries of the TA Loan will be the EA and IAs as their project preparation capacity will improve to international standards and result in improved governance and transparency in consultant selection and procurement. The medium-term beneficiaries are the poor as improved rural and urban infrastructure will reduce poverty. The Government is expecting the TA Loan, through subproject implementation, to assist integrate the various regions and provinces by improving infrastructure services.

Risks and Assumptions

The risk of delayed project implementation delays is realistic and is mitigated by ensuring that the IMU and IAs have the needed resources, especially during the first 24 months of implementation. A sub-component of the enabling environment for infrastructure investment component is designed to assist the IMU execute the Project, and will allow long-term consultants to work with and for the IMU, assisting IAs in the daily challenges of getting the required information collected and approved. As soon as the TA Loan is operational, a small-scale TA will support its implementation.

Pakistan's ability to develop infrastructure projects in compliance with ADB's environmental and social safeguard policies and procedures needs improvement. Each subproject will ensure that safeguard policies will be covered by each expert's detailed terms of reference.

A lack of institutional capacities, a weak project pipeline, and failure to incorporate lessons learned are clear risks that would hinder the TA Loan's implementation and impacts. The IMU should have sufficiently skilled and experienced personnel—internally assigned Government staff members and externally hired consultants. During the early stages of the TA Loan, IMU personnel will be expected to assess the institutional capacities within each IA, and provide assistance—solutions and time—to ensure that subproject implementation has no gaps. In the medium term, the institutional capacity-building subprojects will ensure improved and sustainable project development and implementation capacities. Project

preparatory subprojects are also intended to help increase these capacities.

Technical Assistance

A small-scale technical assistance (TA) attached to the TA Loan, amounting to $150,000 from ADB's TA funding program, will assist implement the component to encourage infrastructure investment. The small-scale TA will (i) identify constraints on investment and (ii) develop and test solutions to remove them.

I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed technical assistance (TA) loan (TA Loan) to the Islamic Republic of Pakistan for Infrastructure Development. The report also describes the proposed technical assistance (TA) for Support of Infrastructure Investments, and if the Board approves the proposed loan, I, acting under the authority delegated to me by the Board, will approve the TA.

II. RATIONALE: SECTOR PERFORMANCE, PROBLEMS, AND OPPORTUNITIES

A. Introduction

2. Pakistan requires modern and efficient infrastructure facilities to increase and sustain economic development as described by the Government of Pakistan (Government) during the 2004 Pakistan Development Forum.[1] The Government requested the Asian Development Bank (ADB) to focus on major infrastructure projects that can promote economic growth and reduce poverty. ADB is expected to add value by introducing international best practices, building institutional capacities, supporting policy reforms, catalyzing private activities and investments, and filling financing gaps where the private sector is unlikely to invest. ADB is seen by the Government and the domestic financial sector as a strategic partner for private participation in infrastructure development. ADB can use a mix of resources from its public and private sector operations, as well as knowledge-based technical assistance for areas such as public-private partnerships (PPPs).

3. This rapid envisioned infrastructure development in Pakistan is a challenge but also an opportunity to (i) enhance ADB's product attractiveness, complemented by value-added knowledge; (ii) solidify a long-term infrastructure partnership with Pakistan; and (iii) ensure ADB's medium- and long-term relevance, especially in middle-income countries like Pakistan, where borrowing is based not only on cost but also on other considerations.

4. A consultation mission[2] (27 September–1 October 2004) and a fact-finding mission[3] (25 November–2 December 2004) visited Pakistan. The TA Loan was developed based on the aide memoire provided to the Government on 8 December 2004, which covered an understanding between the Government and ADB on the project parameters and details. The TA Loan is included in the 2005–2006 country strategy and program update (CSPU) for Pakistan, and the Project's design and monitoring framework is in Appendix 1.

B. Government Infrastructure Strategy

5. Since the 2004 Pakistan Development Forum, the Government has been developing its Medium-Term Development Framework 2005--2010 (MTDF), which is the strategic basis for infrastructure development for the next 5 years. ADB commenced dialogue with the Government following the release of the draft MTDF in March 2005. The MTDF is based on (i) the 2004 PDF, which focused on sustainable infrastructure development; and (ii) a number of sector presentations made by the ministries and agencies involved in infrastructure activities to

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[1] Held in Islamabad 17–19 March 2004.

[2] The consultation mission and the Government set the perimeters for the fact-finding stage, which was to be undertaken in three phases, as separate fact-finding missions would be conducted for each subsector.

[3] The fact-finding mission was completed in three phases, with (i) the transport sector mission visiting Pakistan from 21 to 28 October 2004, (ii) the water resource sector mission from 26 October to 5 November 2004, and (iii) the power sector mission from 25 November to 2 December 2004.

the Planning Commission during the second and third quarters of 2004. The poverty reduction strategy paper (PRSP)[4] emphasizes economic growth by increasing delivery of infrastructure facilities and services, as these would not only promote economic growth but also further integrate the provinces and regions. Historical external financial assistance to infrastructure sectors is shown in Appendix 2.

6. The Government's Planning Commission's infrastructure framework uses an elaborate and integrated approach. Optimal economic growth will not result from developing only one infrastructure sector. Rather, several infrastructure facilities—in this project defined as power/electricity supply, transportation, and water resources—must be provided. Otherwise, the annual economic targets cannot be obtained or poverty reduced. The PRSP clearly establishes the linkage between economic growth and poverty reduction. It includes creating economic opportunities for the poor, which can only materialize by increasing infrastructure facilities. Basic infrastructure must be increased to reduce rural and urban poverty. An important challenge is linking poor regions to rapidly growing domestic and international markets through adequate infrastructure. Priority infrastructure includes (i) power generation to increase electricity supply sufficient to cover the industrial, commercial, and rural production facilities and markets; (ii) an integrated transportation network to connect poor regions and production centers to domestic and international markets; and (iii) water resources and a sound framework and capacity for their development and management to ensure their sustainability for domestic, municipal, and industrial supply and irrigation.

7. In the infrastructure sectors, the Government continues to be burdened by inefficient state-owned entities (SOIEs), which require federal and provincial technical and nontechnical support. Non-technical matters are directly linked to the Government's efforts to institute sector reforms and institutional restructuring and hence improve the infrastructure environment through increased transparency at all levels. Of particular interest are the efforts related to price-setting mechanisms and governance of infrastructure subsectors. The Government is solving substantial legal and regulatory issues, and recently several independent regulatory bodies have been established, such as the National Electric Power Regulatory Authority (NEPRA) and the Oil and Gas Regulatory Authority (OGRA). These regulators have established transparent processes for licensing and tariff setting, and the real cost of infrastructure services has surfaced during discussions at the public hearings on tariff applications.

8. The Government's overall infrastructure strategic framework is focused on facing these challenges, and it has commenced restructuring SOEs to improve their efficiencies and increase the transparency of decision making and results. Managerial accountability and financial viability and sustainability have become part of the results-oriented focus of the Government, and while several SOEs and implementing agencies (IAs) are well into reform and restructuring, a number of SOEs need to accelerate their efforts. The Government has embarked on an ambitious privatization program. Success was attained in the finance sector, while privatizing infrastructure entities has proven more complicated than expected. Despite difficulties, several infrastructure entities have been privatized while others are near financial closing. Private participation is crucial to increase investment and operating efficiencies and effectiveness. Another element of the strategic framework is creating competition by introducing private entities into the infrastructure sectors, promoting investment, and improving service quality.

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[4] Government of Pakistan. 2003. *Accelerating Economic Growth and Reducing Poverty: The Road Ahead. Poverty Reduction Strategy Paper*. Islamabad.

9. The Government requires substantial financing for infrastructure. Thus, through the PDD and line ministries, it is prioritizing investment in institutional capacity building in agencies and in physical infrastructure projects in each sector. The Government cannot fund more than about $1.5 billion of the required $2.5 billion–$3.0 billion annually. Private domestic and international investors and multilateral and bilateral agencies will be encouraged to fund a substantial portion.

10. The Government should build up investor confidence, focusing on investor protection, sector and investor legal and regulatory fairness and consistency, property rights, transparency of sector policy frameworks, strategic direction, sector development, monetary stability and exchange regulations, and efficient contract enforcement. Several attempts have been made to assess the environment for private sector investments. These efforts have defined the above issues, which need to be resolved item by item. Through market liberalization and various strategic interventions presented in the MTDF, the Government is encouraging the entry of private developers and financiers and other capital resources to increase infrastructure services.

C. Infrastructure Sectors

1. Power Sector

11. The objective of the Government's power sector policy is to deliver more reliable and affordable electricity to industrial, commercial, and household customers nationwide. Key elements to meet this objective are to encourage an increased utilization of hydro power, coal, and natural gas to generate power; reducing technical and non-technical losses of the power sector utilities through further implementation of power sector reforms and restructuring, which includes privatization; and supporting independent regulation of the power sector through NEPRA.

12. Attempts to meet its objective. The key issues as translated into operating performance of the power sector resulted in the Government facing severe cash losses, which have been covered through budgetary support in the form of grants and subsidies. In FY2003, the total financial losses of WAPDA and KESC reached 1% of gross domestic product (GDP), while budgetary support was 1.8%. Although power utilities have improved operationally and financially since 1999, they still face operational inefficiencies: (i) high furnace oil costs, (ii) unreasonable levels of transmission and distribution losses, (iii) high purchase costs of electricity from the independent power producers, and (iv) subsidizing of the agricultural sector and of domestic consumers. WAPDA and KESC are thus being restructured. The Government has approved KESC's privatization, and bidding is expected concluded in the first quarter of 2005. ADB has been an integral partner in privatizing KESC through a TA facility.[5] WAPDA's years-long restructuring has been slow. WAPDA's power sector operations have been unbundled into one transmission and dispatch, three generation, and eight distribution companies. Although the restructuring has been completed legally, unbundling continues to be slower than anticipated and should speed up a stronger focus is required to ensure rapid sector improvements. Of the new companies, one generation and two distribution companies have been identified and selected for privatization. Privatization advisers have been contracted and a bidding round is expected. A few issues are still outstanding, but the Privatization Commission expects that these transactions will be completed in 2005.

13. Under the Government's power sector strategy, actions are being pursued in all areas of the sector. It is planning more generation facilities, and augmentation and expansion of the

[5] ADB. 2000. *Support for the Privatization of the Karachi Electricity Supply Company*. Manila.

transmission and distribution networks to meet the estimated economic growth and reduce the loss level. It is pursuing renewable energy to broaden fuel sources, and using privatization and PPP to increase investment funding. Today, about 40% of the Pakistan's population requires access to electricity, and large investments are needed to supply it. The industrial and commercial annual consumption would increase by about 2,000 megawatts (MW) annually in order to support the economic growth target of about 8%. The transmission and distribution networks are in critical need of investment. Mobilizing investment capital from the three primary sources—public funds, multilateral and bilateral resources, and private funding—is a Government priority. However, the challenge of obtaining funding must be supported by adequate institutional capacity as well as advanced project preparatory activities that meet international environmental safeguard structure, financial, economic, and technical standards. The power sector must function in a transparent and sustainable manner to attract investors. Sector details are in Appendix 3.

2. Transport Sector

14. Transport is an important sector of Pakistan's economy accounting for 10% of GDP and about 20–25% of the annual Public Sector Development Program. Though operational, the transport sector suffers from (i) a very high modal share of roads compared to railways, (ii) deteriorating infrastructure due to inadequate investment and lack of maintenance, (iii) transfer of large road assets from provincial to district governments, (iv) a loss-making railway system, and (v) expensive and inefficient ports.

15. Roads are the predominant mode of inland transport, carrying more than 91% of passenger traffic and 96% of freight traffic. The average growth rate is about 4.5% for passenger and 10.5% for freight traffic. The total road network is about 250,000 kilometers (km), of which about 60% is paved. This includes 8,600 km of national highways and motorways, representing the main transport corridors and providing interprovincial linkages and connections to neighboring countries; and about 95,000 km of provincial roads providing all-weather access to the economic and population centers in the four provinces. The remaining network consists of municipal urban roads that are mostly paved, and largely unpaved tertiary roads providing access to villages and remote areas. The number of registered motor vehicles is 4.8 million and growing at 8% annually. Road transport services are largely private and subject to strong competition. The national, provincial, and district road networks require rehabilitation, reconstruction, and upgrading. About half the national highway network and a large proportion of the provincial road networks are in poor condition, mainly due to inadequate investment and lack of maintenance. The Government has initiated a program to rehabilitate priority highway sections with assistance from the World Bank and ADB, in addition to Government resources. ADB is financing sequenced interventions in each province to rehabilitate and improve provincial highways and district roads. ADB's support is evolving from a project-by-project approach into a programmatic approach, where assistance to all categories of roads goes in parallel with policy dialogue and the preparation of a plan for sector reform. Loans, which mainly focused on provincial roads, now cover all categories of roads, including motorways (through PPPs), national highways, provincial roads, and district roads (where ADB plays a key role in the devolution process).

16. Once the leading transport mode, railways have been in decline for many years. As a result, (i) railways now carry less than 5% of freight traffic, (ii) infrastructure, traction, and rolling stock have deteriorated due to lack of sufficient investment and maintenance, (iii) Pakistan Railways (PR) operates at a loss, and (iv) PR is a drain on the Government budget of about Rs20 billion (about $340 million) per annum. Although PR has reduced staff, it still employs

95,000 people, which is high for traffic levels. The general explanation for this decline is that PR has not been able to adapt to the increasing demand for door-to-door services, competition from improved road transport, and modern logistics. Railways in other countries have had similar experiences. The Government believes that railways could provide the most economical mode of transport for a larger share of traffic. Average haul distances are large, and rail is more competitive than road as haul distances increase. The Government now wishes to reverse the decline of railways and realize their economic potential. It recognizes that this will require sustained institutional and policy reforms together with investment in rehabilitation and upgrading of facilities. ADB is conducting a preliminary assessment of the railway sector to develop a plan to improve it.

17. Pakistan has two operational ports: Karachi Port, run by the Karachi Port Trust, and Qasim Port, run by the Port Qasim Authority. Both are located in Sindh Province and less than 70 km apart. The Government is developing a new port at Gwadar in Balochistan Province. The port is expected to be operational by August 2005. The Government in 1990 embarked on a policy of implementing the landlord concept for ports. The container terminal operations at Karachi and Qasim ports have been privatized. Customs operations have improved with initiatives such as computerization of operations and introduction of automated clearance procedures. Pakistan ports are still expensive and inefficient by international standards.[6] ADB has recently initiated policy and technical discussions with the Government on ADB support for the port sector. Sector details are in Appendix 4.

3. Water Resources Sector

18. Water resources management and development are vital to economic growth and poverty reduction in Pakistan and are inextricably linked to irrigation uses 95% of all developed water supply to support agriculture on 46 million acres of land or about 82% of the irrigable area.[7] Development of irrigated agriculture in the Indus Basin has been a key source of agricultural and economic growth, and irrigated land is responsible for about 80% of agricultural production. Agriculture contributes 25% to GDP, employs over 50% of the rural labor force, and directly or indirectly provides 60–70% of exports. The Indus River has been significantly engineered for irrigation and, indirectly, for the distribution and drainage of water resources throughout the country. The Indus canal system is the largest contiguous irrigation system in the world. It not only supplies agricultural water but is also an important source of rural, municipal, and industrial water supply.[8] Water resources management projects (e.g., storage) have irrigation as a primary component, and institutionally, water resources management and irrigation and drainage (and flood control) are usually addressed through the same agencies. Development of water resources infrastructure has included 5,042 megawatts of installed hydropower capacity and 15.7 million acres feet (Mission Acres Feet—19.4 billion cubic meters) of storage.

19. However, water resources and irrigated agriculture are facing tremendous challenges. A burgeoning population, and a sharp rise in urban demand, will outstrip available supply in the next three decades. New irrigation canals are still a priority of some Government agencies. Over two thirds of surface water resources have already been developed. Groundwater development

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[6] Shippers annually pay about $310 million extra charges, which are passed on to the consumers (World Bank. 2002. *Pakistan: Transport Sector Assistance Strategy Note.* Washington, DC: World Bank).

[7] For the water resource sector component, the TA Loan will address management over the resource base (i.e., water resources management), irrigation and bulk water development and management, and flood management.

[8] Pakistan's drainage network expels up to 8,000 cusecs of saline agricultural drainage water as well as most municipal and industrial wastewater.

has little room for expansion and, in many areas, groundwater is in over-draft situation, while soil and water salinity and waterlogging harm agricultural production. Surface water and groundwater are becoming increasingly degraded and unfit for further exploitation. Surface water is vulnerable due to the high variability of Indus River flows and drought, and only about 12% of it can be stored. Storage capacity is being eroded by sediment deposition, which reduces water supply and energy production.

20. Pakistan is at the crossroads in management and development of its water resources: it will face a severe water crisis if it does not solve its problems and lay the foundation to meet its needs. The recent water sector strategy (WSS), which was developed with ADB TA support[9] to the Ministry of Water and Power (MOWP), helped catalyze the realization within the Government that institutional arrangements and capacity for strategic planning and policy analysis need to be strengthened. The WSS provides a plan for policy and institutional reforms and capacity development, in addition to a medium-term investment plan.[10] Pakistan is also adopting a draft national water policy, which complements the WSS's recommendations. The implementation of the WSS and NWP will require significant institutional and capacity development.[11]

21. Since the 1980s, infrastructure investment in the water resource sector has declined from the high levels when the Indus Basin was developed, but major increases are anticipated. Investment is especially needed (i) in storage for bulk water supply, and (ii) in irrigation infrastructure because systems are dilapidated and agriculture is important to the national economy. The medium-term investment plan estimates that as much as $3.4 billion is required for new and ongoing projects in irrigation, drainage, and flood control, and $4.3 billion for additional storage in ongoing and planned priority projects over a 10-year planning horizon. However, without strong planning and analytical capability to guide this expansion, a significant risk is that investment outcomes could fall short of their potential. Most end uses such as irrigation and domestic and municipal water supply are the responsibility of provincial agencies, which, therefore, need additional capacity for water resources planning and management and policy reform. Sector details are in Appendix 5.

D. External Assistance to the Sector

22. As of December 2004, Pakistan had received about $14.3 billion from the major providers of infrastructure loans. ADB provided $5.4 billion or about 38% of the total, and $12.3 million in non-lending infrastructure financing. The power sector obtained $7.6 billion (53%), transport $3.5 billion (24%), and water resources sector $3.3 billion (23%). The ADB non-lending contribution by sector was $8.3 million (67%), $1.7 million (14%), and $2.3 million (19%), respectively. The principal bilateral source has been the Government of Japan. The World Bank has the largest lending program to the power sector, with ADB the second largest, while ADB and the Japan Bank for International Cooperation (JBIC) are the largest financiers of the transport sector. In the water resource sector the World Bank and ADB lending programs are about equal. External assistance suffered as a result of the nuclear testing activities in the late 1990s, but recently bilateral programs have reengaged in the infrastructure sectors. A summary table of external assistance to the infrastructure sectors is in Appendix 2, while details are in Supplementary Appendix A.

[9] Under ADB. 1998. *Technical Assistance to the Islamic Republic of Pakistan for Water Resources Strategy Study*. Manila (TA 3130-PAK, approved for $650,000 in December 1998).

[10] ADB's water sector plan for Pakistan is based on the WSS.

[11] The WSS and NWP call for an apex body or supporting secretariat to provide enhanced analytical support to the water resources sector.

E. Lessons Learned

23. Over the last decade, Pakistan's ADB-assisted infrastructure projects' capacities for project development and implementation have been diminishing, resulting in the development and approval of the 2003 project implementation action plan. It is a revolving target-oriented plan that focuses on immediate, medium, and long-term actions. It covers (i) contract awards, (ii) disbursement and imprest account turnover ratios, (iii) reducing "at risk" projects, (iv) closing project accounts when due, (v) retaining project monitoring unit staff, (vi) establishing revolving funds, and (vii) operationalizing core project management units. The annual country portfolio review exercise, conducted by ADB, investigates the performance of executing agencies in relation to these key areas, and compares the findings with other South Asian countries, other regions and the ADB-wide benchmarks. The institutional capacity subprojects of the TA Loan will address the above areas and include measurable targets.

24. ADB has prepared a number of project completion reports (PCRs) for infrastructure projects in Pakistan. The PCRs of the three sectors offer a number of common lessons: (i) project delays were caused by (a) lack of counterpart funds, (b) incomplete Government required formalities, or (c) change of key personnel; (ii) institutions lacked the capacity to implement the project; and (iii) improved assessment and implementation schedule of environmental and social safeguard related issues during project development. The TA Loan will address this by improving and increasing the content and standards of project preparation by ensuring incorporation of all the above elements in the project preparatory phase. This will be done through institutional capacity building of the implementing agencies of the subprojects and the follow-on projects, and through detailed structure project preparatory procedures as well as Terms of References to be followed by the subprojects under the TA Loan.

F. Asian Development Bank Infrastructure Strategy

25. That ADB is a key strategic partner of Pakistan in the infrastructure sectors was most recently reiterated in the 2005–2006 CSPU.[12] The country strategy recognizes that substantial infrastructure development is required if the Government is to reduce poverty, and it is part of ADB's areas of intervention: (i) supporting good governance; (ii) pro-poor economic growth (infrastructure, rural development, job creation); and (iii) extensive social development (education, health, water supply and sanitation, and social protection)[13]. Infrastructure development, either rehabilitation or development of facilities, forms an integrated part of the pro-poor economic growth. Individual infrastructure sector plans translate into sustainable pro-poor growth and seek to reduce poverty by financing infrastructure projects that would most reduce poverty. The approach allows ADB to draw upon its strong experience and institutional knowledge within these infrastructure sectors. Different funding modalities will be utilized, such as the Asian Development Fund (ADF) and ordinary capital resources (OCR) lending operations, guarantee facilities, TA, and private operations.

26. The actual infrastructure financing for 2001–2004 shows that ADB provided $837 million compared with the 2005–2008 preliminary programmed infrastructure lending level of $2.7 billion. ADB's private sector operations are expected to financially support infrastructure facilities through possible loan and equity instruments. The ADB program to Pakistan includes innovative modalities for infrastructure development and financing such as the proposed Public-Private

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[12] ADB. 2004. *Country Strategy and Program Update (2005–2006*): *Pakistan*. Manila.
[13] ADB. 2004. *Country Strategy and Program Update (2005–2006*): *Pakistan*. Manila (para. 5).

Facility for Infrastructure Finance and a pilot intervention promoting PPP for NHI, addressing policy issues to attract private participation in infrastructure.

G. Rationale

27. The MTDF establishes the development strategies of Pakistan and focuses on infrastructure. ADB derived its infrastructure strategy and strategic approach from it and aims to support pro-poor development and economic growth through infrastructure investment. The TA Loan intends to address how it should be done and also identify who would be best suited to implement the activities. Appendix 6 presents a schematic overview of the infrastructure development framework, which emerged from ADB's review of the MTDF.

28. In 2005–2010, the Government is committing as much as 54% of development expenditure to infrastructure. It has recognized that it cannot fund more than a third of the identified infrastructure investments and needs substantial support from development partners. In line with the MTDF, ADB will assist the Government obtain funding from the private sector and multilateral and bilateral institutions by developing an enabling environment for investments. These activities would operationalize the implementation of the MTDF.

29. At the sector level, the MTDF will be implemented through sustainable structural and operational institutional capacity building of the IAs, and intensified project preparatory work for new infrastructure projects. In the process, the Government intends to increase its ownership of developing infrastructure projects by increasing institutional capacities of Government ministries and agencies, where relevant, and by borrowing to develop and promote infrastructure projects, making IAs more responsible and accountable. Increased Government ownership would encourage ADB to think of innovative ways to develop infrastructure and obtain adequate financing for projects. ADB's TA resources need to be supplemented to fund the Government's areas of focus as well as ADB's increasing program.

30. ADB is adopting a multi-product approach to develop infrastructure, introducing mixed loans from its ADF and OCR resources, utilizing guarantee instruments, and promoting private sector participation. Therefore, infrastructure institutions need to have the capacities to efficiently and effectively carry out project development and preconstruction. Successful project implementation requires timely high-quality preparatory work to comply with ADB requirements for project processing and to avoid delays. The TA Loan, as a readily accessible financing facility, will allow infrastructure institutions to efficiently conduct project preparatory and preconstruction activities as well as support capacity development. The Government's ability to manage the increased infrastructure focus will be supplemented by an infrastructure management unit, which will strengthen the ability to assist implementing agencies with timely project identification, approval, and implementation.

31. ADB's assistance will build on lessons learned and policy dialogue with the Government on the overall infrastructure policy, and input received through donor coordination. The TA Loan is an opportunity to continue the long-term infrastructure partnership with the Government, combining financial support with the joint development of a strategic and implementation framework for overall infrastructure development.

III. THE PROPOSED PROJECT

A. Impact and Outcome

32. The overall objective of the TA Loan is to help the Government define, plan, prepare, and implement a program to develop infrastructure consistent with the MTDF in order to increase the supply of infrastructure services, and thus reduce poverty.

33. The TA Loan will assist the Government enhance the infrastructure investment environment for the private sector and bilateral and multilateral agencies by identifying investor bottlenecks, developing a strategy to remove them, defining activities to overcome these major obstacles, and executing subprojects to remove constraints on investors. The TA Loan will (i) assist the Government develop its infrastructure sectors in an integrated manner, expanding the economic foundation by providing electricity, transportation, and water resources, (ii) prepare infrastructure projects that promote economic growth and reduce poverty, and are technically feasible, financially and economically viable, and in accordance with environmental and social policies and procedures, (iii) improve institutional capacities within infrastructure agencies and institutions, and (iv) assist develop PPP modalities. Following sector reforms, institutional capacity building will enhance agency and ministry functions. These efforts will focus on policy development and formulation, strategic planning, efficient project preparation, and operational and financial sustainability.

B. Components and Outputs

34. The TA Loan will consist of four components. One will focus on strengthening the infrastructure investment environment. The others will each cover a major infrastructure sector: power, transport, and water resources. Under each sector component the TA Loan will help prepare, as appropriate, (i) project feasibility studies, (ii) project detailed designs, (iii) project bidding documents and evaluation, (iv) capacity building and development of PPP models for the financing, construction, and operation and maintenance of infrastructure facilities, and (iv) institutional capacity building and policy development. The TA Loan will help enhance the capacity of the IMU. The TA Loan will accommodate projects intended for downstream ADB public and private sector financing, as well as for non-ADB-financed projects. The subprojects can be divided into three categories—institutional capacity building, project preparation, and policy and institutional development.

1. Enabling Environment for Infrastructure Investments

35. This component will (i) assist the Government identify the constraints on infrastructure investment, (ii) develop subprojects and define activities to remove identified conditions that negatively affect the investment climate and the sustainability of investment options in infrastructure sectors, and (iii) execute the subprojects addressing the constraints. The financial allocation to this component from the TA Loan is $1.25 million. The diagnostic work related to defining constraints and identifying solutions will be supported by a small-scale TA of $150,000. The Government and ADB have identified a need to improve and supplement the skills of the IMU. This subcomponent will provide assistance to the IMU for (i) implementing the infrastructure strategy, (ii) planning and coordinating the infrastructure sectors, (iii) implementing project preparatory activities, and (iv) monitoring activities.

2. Power Sector

36. Subprojects were identified by the Government through its presentations and interaction with line agencies and SOEs. ADB supports the development of the subprojects as they will focus on areas requiring attention and improvement. The financial allocation to the component under the TA Loan is $6.75 million, to be distributed among the subprojects, which will cover either project preparation or institutional capacity building.

37. The power sector subprojects are expected to (i) address shortcomings in and improve power generation, (ii) augment and expand transmission and distribution systems, (iii) build the capacity of the National Transmission and Despatch Company, and (iv) build the capacity of the eight new distribution companies. A complete list of the power sector subprojects is in Appendix 3, while the detailed subproject descriptions and outline TORs are in Supplementary Appendix B. The details on all the proposed subprojects for the three sectors are in Supplementary Appendix B.

3. Transport Sector

38. The primary tasks of the TA Loan are to provide resources to assist the Government prepare transport sector projects, and to build sustainable institutional capacities of transport sector ministries and agencies. The Government identified, and ADB agreed to, subprojects to improve certain areas of the transport sector. The allocated $11 million will be distributed among the subprojects.

39. The subprojects cover (i) road project preparatory facilities, (ii) railway project preparatory facilities[14], (iii) a model concession and project preparatory facility for a PPP pilot project in national highways and motorways, (iv) capacity building for the National Highway Authority (NHA), (v) policy development and capacity building for the Ministry of Railway (MOR) and PR, and (vi) policy development and capacity building for Ministry of Ports and Shipping. A list of the transport sector subprojects are in Appendix 4.

4. Water Resources Sector

40. The primary task of the TA Loan is to build capacity for water resources planning, development, and management within the concerned federal and provincial agencies, so that over the medium term, they can most effectively start preparing and implementing major dams and other large water infrastructure. The TA Loan for the water sector will support implementation of a TAP that is being prepared under ADB TA at the request of the Government.[15] The TAP builds from the ADB-supported WSS and draft NWP, and reflects the outcome of significant policy dialogue with the Government. The TAP will strengthen the institutional framework and build new capacity for strategic planning and policy analysis to bolster overall management of water resources. The TAP will build professional capacity and skills at the federal and provincial levels, but focus on the new apex body or policy cell, by assisting the Government with the following activities: recruiting staff; designing and implementing a capacity development program; providing short- and long-term national and international consultants; providing funds to contract needed studies and related activities to centers of expertise in Pakistan; and providing funds to establish and equip the unit and make it

[14] Subject to agreement between the Government and ADB on the development of a reform program and a plan.

[15] ADB. 2004. *Technical Assistance to the Islamic Republic of Pakistan for the Water Sector Irrigation Development*. Manila (TA 4435-PAK approved for $300,000 in November 2004).

fully functional. The TAP will cover (i) developing water resource analytical and planning capacity of sector institutions, (ii) improving the technology for and management of decision support systems, and (iii) strengthening and reforming the institutional and legal arrangements. Of the $6 million allocated to the water resources component, $4 million will support the TAP.

41. The remaining $2 million will be used by provincial agencies to prepare proposals for small, quick-gestation subprojects, with an indicative amount of $500,000 allocated to each province.[16] All activities supported through the TA Loan funds at the provincial level, including all projects to be prepared through the feasibility studies, will have to be within the capacity of the provincial governments to implement and manage. During fact-finding for the water resources sector component of the TA Loan, the provincial governments, represented by departments of irrigation and power, planning and development, and finance, identified numerous projects and management programs in various stages of preparation that could be supported through the TA Loan. Many of the proposed feasibility studies identified in the different provinces were similar in scope, and included small storage structures, development of spate irrigation systems, capacity building, and groundwater management.

42. As water supply and sanitation are provincial and/or local government subjects, and no federal department and/or ministry deals with them, they were not covered by TA Loan. ADB is approaching water supply and sanitation holistically through the basic urban services projects, which are series of interventions with at least one project for each province in 2003–2007.

C. Cost Estimates

43. The total project cost is estimated at $33.67 million equivalent, including interest during implementation. The foreign exchange cost is estimated at $18.49 million, while local currency costs are estimated at $15.18 million. The total cost includes interest during implementation of $0.34 million, which will be paid by the Government. The cost estimates are inclusive of taxes and duties to be financed by the Government. The amounts associated with taxes and duties are immaterial as they only relate to minor equipment purchases under each subproject. The concern of forward recurrent costs related to operation and maintenance is not an issue as none of the interventions under the project require continuous financing. However, it is an issue for the follow-on loans, and recurrent costs concern will be incorporated as part of the TOR for each relevant subproject.

Table 1: Project Cost Estimates
($ million)

Item	Foreign Exchange	Local Currency	Total Costs
Enabling Environment for Infrastructure Investors/ IMU	0.85	0.80	1.65
Power Sector Component	4.92	4.08	9.00
Transport Sector Component	8.14	6.54	14.68
Water Resources Sector Component	4.24	3.76	8.00
Interest during Implementation	0.34	0.00	0.34
Total	**18.49**	**15.18**	**33.67**

Source: Asian Development Bank estimates.

[16] Large dams and major, federally-executed water projects will not be prepared; rather, this is expected to follow upon the institutional and human resources capacity to be developed under the TA Loan. Separate projects for major canal and irrigation rehabilitation at the provincial level will be prepared under ADB grant-financed project preparatory TAs covering Punjab (2005) and Sindh (2006). Hence, these investments will not be covered under the TA Loan.

D. Financing Plan

44. ADB will provide a TA Loan of $25 million equivalent, about 75% of the total project cost, to cover the foreign exchange costs, except for the interest during implementation, as well as 44% of the local currency costs. However, the split between foreign and domestic currencies should be seen as the best possible indicative estimate available, as it may change during implementation because of better knowledge about the use of international and domestic consultants in each subproject. The Government will finance the remaining $8.67 million (about 25%), which will cover local currency counterpart financing as well as the $0.34 million for interest during implementation in foreign exchange. The Government financing is expected to cover items such as (i) remuneration of counterpart staff, (ii) local travel, (iii) equipment (vehicles, computers, software, etc.), (iv) surveys and data gathering, (v) taxes and duties, and (vi) other miscellaneous costs, of which most will be provided in kind and accordingly the availability of counterpart financing should thus not be an issue.

45. The Ministry of Finance (MOF) will be responsible for repaying the TA Loan. The Government's financial position indicates sufficient internally generated resources with a corresponding balance of payments to support timely repayments of the ADB loan. Should MOF need to recover a proportional amount of the loan repayment from each sector agency, the amounts could be reduced at source.

Table 2: Financing Plan
($ million)

Item	Foreign Exchange	Local Currency	Total Costs
Asian Development Bank	18.15	6.85	25.00
Government	0.34	8.33	8.67
Total	**18.49**	**15.18**	**33.67**

Source: Asian Development Bank estimates.

46. ADB will provide a loan of $25 million equivalent from ADB's Special Funds resources, with a term of 32 years, including a grace period of 8 years, with an interest rate of 1% per annum during the grace period and 1.5% per annum thereafter, and such other terms and conditions as will be set forth in the loan and project agreements.

47. Although no cofinancing is envisioned in conjunction with the TA Loan, cofinancing from official (loan and grant) and commercial sources may be mobilized for the follow-on projects, which will be developed under the TA Loan. Cofinancing from commercial sources may benefit from ADB's credit enhancement, including ADB's guarantee instruments, and will be presented in conjunction with the processing of follow-on projects.

E. Implementation Arrangements

1. Project Management and Coordination

48. The IMU will be established within the PDD to manage the increased activity resulting from the Government's focus on infrastructure. The IMU will be responsible for implementation of all components, day-to-day operations of the TA Loan, and coordination with ADB. The IMU will have a director of at least the joint secretary level, and experts with substantial experience in various infrastructure sectors as well as overall planning exposure. The IMU will steer infrastructure development and coordinate with all involved Government ministries and

agencies. It will report to the Secretary of the PDD, and it will discuss, review, and approve the program on utilizing the TA Loan, including approval of subprojects. The TA Loan will provide assistance so the PDD can perform executing agency functions through the IMU. The IMU will be responsible for developing each component's program, overseeing the implementation, and monitoring the progress of the individual subprojects within the four components. The IMU will assist each IA prepare and submit on time Planning Commission Approval Document 1 (PC I) and Planning Commission Approval Document 2 (PC II) as required, as well as recruit consultants on time, inclusive of development of requests for proposals and selection of consultants. Each IA will be responsible for its subproject's detailed activities and implementation, and will report the progress to the IMU. The reporting requirements are to be developed by the IMU in coordination with the respective IAs and ADB. The TA Loan structure and flow chart are in Appendix 7. The EA/IMU will submit the proposed approved subprojects to ADB for review and approval. The format of the subproject proposal is in Appendix 8.

49. Each IA will nominate a subproject director, acceptable to ADB, to administer the subproject. Each subproject director will be responsible for overseeing social, resettlement, and environmental issues as well as engineering, financial, and economic aspects required to execute the subproject. Each subproject director will have the resources and facilities to implement their respective subprojects.

50. The TA Loan aims to ensure timely implementation and use of its resources by allowing reallocation of funds between the four components should they be constrained by the original allocation. Any reallocation will be determined by the IMU in close consultation with the sectors and ADB. Line ministries will be responsible for handling the federal and provincial aspects of the TA Loan.

2. Component-specific Implementation Arrangements

a. Enabling Environment for Infrastructure Investments

51. This component will be implemented by the IMU. The IMU will share the consultants' findings with a wide spectrum of stakeholders, and enlist assistance from ministries and agencies when the interventions to remove investor constraints have been prepared. ADB has made arrangements to ensure that activities are well coordinated with the proposed Public-Private Facility for Infrastructure Finance once approved.

b. Power Sector

52. As each subproject has been identified, inclusive of its IA (Appendix 3), the focus will be on implementation. Each IA is responsible for developing the detailed TORs and for presenting them to the IMU and ADB for approval. Where appropriate, the IMU will seek input and concurrence from MOWP before approval and calling for expressions of interest. The IAs will be responsible for short-listing consultants, evaluating proposals, and preparing the documents for approval of the selection by IMU and ADB.

c. Transport Sector

53. A Transport Sector Steering Committee (TSSC) will be established to coordinate with all involved Government agencies, and will be chaired by the Secretary, PDD, and will meet at least semiannually. Other members will be representatives of the MOF, MOC, MOR, MOPS, MOLG, EAD, NHA, ADB, and all other relevant Government agencies. The TSSC will discuss,

review, and approve the program to use the transport component, including approval of subprojects. Each subproject may have, if required, several consulting contracts so that the consultants' work program can be efficiently and effectively monitored and adjusted. The IAs will be responsible for monitoring the consultants and will provide logistical support to them and review their outputs.

54. NHA will be the main IA for the roads sub-component, including PPP projects, MOR for railways, and MOPS for ports. The IAs will (i) maintain the quality of work programs, (ii) monitor the level of project utilization to ensure consistency with national development objectives, and (iii) supervise the consultants' work.

d. Water Resources

55. The MOWP will be the IA for the TAP that will be developed under TA No. 4435-PAK[17] to develop irrigation and will assist in preparation of the detailed TOR and costing for the activities covered under the $4 million of the TA Loan allocated to the TAP. A TAP steering committee will oversee development and implementation of the TAP, provide policy guidance, and monitor and evaluate the TAP's impact. The TAP steering committee will meet at least semiannually and have representation from MOWP, the PDD, MOF, EAD, and the Indus River System Authority, among others.

56. Component activities will require approval by the EA and ADB. The provincial agencies that avail themselves of TA Loan funds will be the IAs and responsible for developing proposals for funding, the PC-I or PC-II, detailed TORs, recruiting consultants, and monitoring and evaluating outputs with support from the IMU. Once the TA Loan is approved, provincial agencies will formally solicit proposals. Within 6 months after all proposals have been received, the agencies will select activities that will use TA Loan funds. Provisionally, $500,000 is earmarked for each province.

3. Subproject Selection Criteria

57. An objective of using the TA Loan modality is to ensure increased Government ownership of its institutional capacity building and project preparatory program and activities. As the subprojects are implemented, ADB is expected to find increased capacities to address substantial project preparatory and sector issues. The overall objective of selecting subprojects was to engage the Government authorities in identifying and evaluating candidate subprojects. In selecting subprojects, the Government aims to adopt the PC's integrated approach to infrastructure development. It will use the following criteria (i) the subproject must be based on a sector strategy, master plan, or road map, (ii) it must be in line with ADB's objectives as stated in the current CSP and CSPU, (iii) it must be organizationally and/or technically feasible, (iv) it must be financially and economically viable and sustainable, (v) it must be prepared in accordance with ADB's *Environment Policy (2002)* and meet the Government's environmental requirements; (vi) it must be in accordance with ADB's social policies and operational procedures including *Policy on Involuntary Resettlement*, and a resettlement plan will be prepared under each subproject and measures will be taken in accordance with ADB's *Policy on Indigenous People*, if required and (vi) it must be implemented during the project period. The standard subproject proposal form to be used by the IAs when presenting the subproject proposal to the EA is in Appendix 7.

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[17] Under ADB. 2004.*Technical Assistance to the Islamic Republic of Pakistan for TA 4435-PAK: Water Sector Irrigation Development*. Manila (TA 4435-PAK, approved for $300,000 in November 2004).

58. A number of the identified subprojects are project preparatory facilities for projects included for ADB financing in the 2005–2006 CSPU[18], and the subprojects are expected to form the backbone of ADB's infrastructure assistance to Pakistan beyond the current planning framework. The TA Loan modality is important to ensure the establishment of a healthy lending and nonlending program for ADB. It is also a strong link between the Government infrastructure development program and ADB's CSPU development process. The complementarity is a result of successful dialogue between the Government and ADB on ADB's operational program for Pakistan.

59. The power and transport sectors have preselected all subprojects as part of the processing of the TA Loan, identified IAs, and prepared outline TORs. They have also ensured that the IMU has sector competence and the resources to help the IAs implement their subprojects. Sector-specific criteria are given below.

60. All follow-on projects, arriving from successfully implemented subprojects, selected for financing by ADB (as part of ADB's lending operations) must have their feasibility studies reviewed by the EA and ADB. To qualify for full-scale project processing, the follow-on project will be (i) technically feasible; (ii) economically and financially viable and sustainable; (iii) in accordance with ADB's *Environment Policy (2002)*; (iv) in accordance with ADB's *Policy on Involuntary Resettlement*; and (v) in accordance with ADB's *Policy on Indigenous People*.

4. Implementation Schedule and Period

61. The TA Loan is expected to be implemented over 4 years, from September 2005 to September 2009. The implementation schedule is in Appendix 9. Each subproject will have an implementation schedule independent of but within the TA Loan's implementation period, to be shown in the subproject agreement.

5. Procurement

62. All goods and services under the TA Loan will be procured in accordance with ADB's *Guidelines for Procurement*. The IAs will determine the required goods and services, and submit their requests for ADB approval. As most subproject procurements are expected to be for routine office and administrative equipment of an estimated value of less than $100,000 and most efficiently acquired off the shelf, direct procurement procedures are recommended. Supply contracts for equipment of more than $500,000 will follow international competitive bidding, while contracts of $500,000 or less will follow international shopping procedures.

6. Consulting Services

63. The IAs, in coordination with the IMU, will be responsible for selecting and engaging the consultants, which could be international or domestic firms and individuals, to provide the required services, including as per the TORs for each subproject, which include (i) development of strategy to enhance the enabling environment for infrastructure investments; (ii) preparation of the subproject feasibility studies; (iii) preparation of the subproject detailed designs; (iv) preparation of the subproject bidding documents and evaluation; (v) institutional capacity building; (vi) development of a public-private modality for financing, constructing, and operating

[18] Project selection criteria for these projects are also reflected in the 2005–2006 CSPU, as a result of the policy dialogue between ADB and the Government.

and maintaining infrastructure facilities; and (vii) preparation of environmental, poverty, and social assessments and, if required, a resettlement plan, an indigenous people's development plan. The process will follow ADB's *Guidelines on the Use of Consultants*, and other arrangements satisfactory to ADB for the engagement of consultants. ADB will review and approve the processing of the consultant recruitments.

64. Each IA will be responsible for monitoring the consultants for each subproject, in consultation with IMU. Each IA will provide logistical support to the consultants and review their outputs. Consultants, whether individuals or firms, may be contracted for several subprojects within one or more sectors as long as they are first-ranked. Each consultant contract is viewed as an independent event and is subject to evaluation by the IA, review and approval by the EA/IMU, and agreement by ADB. If the IA and/or IMU evaluate the consultants' performance as unsatisfactory, the IMU reserves the right to terminate them and recruit new ones, subject to ADB's agreement. For the first year of implementation, about 100 and 200 person-months of international and domestic consulting services, respectively, are required for a combined feasibility and engineering study, including procurement assistance, for the priority subprojects. Tentative estimates for the whole TA Loan are approximately 600 and 1,500 person-months of international and domestic consulting services, respectively.

65. The consultant firms will be engaged using ADB's quality- and cost-based selection procedures or quality-based selection (QBS) procedures, whichever is best suited for the subproject. QBS is required where technical expertise is the overriding requirement. Two or more QBS contracts could be required in the transport component.

66. The outline TORs for all subprojects are in Supplementary Appendix. These will be reviewed and enhanced by the IAs, and additional refinements are expected before issuance of the request-for-proposal documents, which will include the detailed TORs.

7. Disbursement Arrangement

67. TA Loan disbursement will be in accordance with ADB's *Loan Disbursement Handbook*, as amended from time to time, and detailed arrangements between the Government and ADB. The loan proceeds will be paid disbursed directly to the consultants based on approved contracts under the direct payment procedure. A signed withdrawal application must be submitted by the IMU to ADB together with the consultant's claim or invoice. The statement of expenditure procedure will be used to reimburse eligible expenditures for any individual payment transaction up to $50,000 equivalent.

8. Project Performance Monitoring and Evaluation

68. Each IA will monitor and evaluate project performance in accordance with the TORs and the project framework. Primary monitoring targets will be agreed on between the IMU and IAs per subproject, and these targets will be used by the IAs and reported to the IMU and ADB in accordance with the established reporting schedule.

9. Reports

69. The IMU will monitor project and subproject executions to provide a basis to identify the areas for infrastructure development. The IAs will submit quarterly progress reports on project implementation, which the IMU will consolidate. The reports should indicate, among other items, (i) progress made against established targets, (ii) problems or issues encountered and remedial

actions taken or proposed to resolve them, and (iii) proposed project activities as well as progress expected during the implementation period, including details on contract awards and disbursement projections.

70. The progress reports are expected to summarize sufficient information to enable the Government, IMU, IAs, and ADB to monitor the most recent progress, identify issues, and ensure compliance with the subprojects' objectives. Consultants are expected to prepare detailed reports for the IAs and the IMU as well as for ADB's review missions. The progress reports will contain an executive summary of the detailed reports, with format and content allowing ADB staff members to readily capture key information for inputting into the project performance report. This will serve as the main tool for monitoring project implementation performance within ADB.

71. Each IA will prepare a completion report for each subproject within 3 months of complete disbursement of the subproject. The report should contain detailed information concerning the subproject's implementation and outcome. It will evaluate how effectively the subproject has assisted the infrastructure developments of the respective sector and its contribution to national development objectives. The TA Loan project completion report will be provided by the IMU within 3 months of completed disbursement.

10. Evaluation of Feasibility Reports and Final Consultant Reports

72. The IMU and ADB will review and comment on the consultants' draft final feasibility reports. ADB will be engaged throughout the progress of the institutional capacity-building subprojects, especially those that have policy dialogue and sector reform elements. As these subprojects will vary in nature, it will be up to the ADB sector divisions to monitor, evaluate, and guide the IAs and ministries, and engage them in policy dialogue. ADB will review and comment on the consultants' reports prepared as part of the subprojects.

11. Project Review and Accounts and Audit

73. ADB will regularly review (i) the TA Loan; (ii) the use of facilities, IAs, and subprojects, to prevent significant fund underutilization; (iii) the approval of additional IAs; and (iv) the need for fund reallocation, if any. A midterm project review is expected to be undertaken halfway through the TA Loan implementation, to assess implementation, progress, and achievements.

74. The IAs will maintain separate records and accounts to identify financing resources received and expenditures made on the TA Loan, including the equipment and services financed out of the loan proceeds and local funds. These TA Loan accounts and financial statements as well as the state-owned enterprise procedure will be audited annually in accordance with sound auditing standards by auditors acceptable to ADB. The Government will submit annual audited reports and related financial statements to ADB within 6 months after the end of each fiscal year.

IV. TECHNICAL ASSISTANCE

75. Since the TA Loan aims to improve the enabling environment for investment in infrastructure, the Government requested ADB to provide a small-scale TA to identify and develop solutions for immediate obstacles. The small-scale TA will have two elements that will be implemented in succession: (i) undertake a diagnostic review of the environment for investment in infrastructure, which will result in a list of investment constraints; and (ii) design

interventions to remove these constraints. The interventions will be funded by the enabling environment component of the TA Loan. Domestic consultants will be hired, providing a total of 32 person-months, and will have skills in assessing investment climate and experience in enhancing infrastructure investments. The $150,000 small-scale TA will be financed on a grant basis from ADB's TA funding program. The outline of the small-scale TA is in Appendix 10.

V. PROJECT BENEFITS, IMPACTS, AND RISKS

76. Increased funding of infrastructure projects will be ensured by improving the enabling environment for infrastructure investment, and additional projects can be developed and implemented after removing investment constraints diagnosed and resolved under the TA Loan.

77. The TA Loan will ensure that (i) institutional capacities of infrastructure project identification, development, preparatory activities, implementation, and monitoring materialize on time while meeting international standards and best practices; and (ii) infrastructure services are increased by enhancing resources for subproject preparation and financing follow-on projects.

78. The TA Loan will support efficient development of infrastructure services and thereby contribute to national economic development and poverty reduction. It will provide infrastructure facilities required by sector development plans, and benefit rural and urban infrastructure users by enabling them to efficiently undertake more economic activities. The TA Loan will bring IAs' project preparation capacity up to international standards and improve governance and transparency in consultant selection and procurement.

79. The risk of uncoordinated development of infrastructure facilities will be mitigated by the Planning Commission and the IAs. The EA will coordinate an integrated approach to infrastructure development, with several subprojects in the same region and provinces using the TA Loan to provide an appropriate level of assistance to avoid overloading provinces, regions, IAs, and domestic consultants.

80. Close ADB supervision of implementation will mitigate the risk of its delay. ADB will be involved with the IMU, which will have authority to decide on the TA Loan utilization. ADB will also guide the EA and IAs in preparing proposals for assistance through the TA Loan. To avoid delays in engaging consultants, the Government has agreed to (i) identify the EA, establish the IMU, and nominate the project director, (ii) nominate IA coordinators, and (iii) prepare several subprojects for immediate financing. Consultant engagement and procurement will follow ADB guidelines to ensure transparent and competitive processes.

81. The TA Loan is expected to ensure development of environmentally and socially viable lending and non-lending projects. Follow-on loans will be prepared in compliance with the Government's environmental laws and regulations and ADB's Environment Policy (2002). Because of the nature of project preparation, the TA Loan is not expected to have any adverse environmental or social impacts. The summary poverty and social analysis report for the TA Loan is in Appendix 11. Environmental and social impacts relating to follow-on loans will be examined and assessed in accordance with the Government's environment laws and regulation and ADB's environment policy.

VI. ASSURANCES

A. Specific Assurances

82. In addition to the standard assurances, the Government has given the following specific assurances, which will be incorporated into the legal documents:

(i) The Government will ensure that the TA Loan and all its subprojects and follow-on projects will be prepared in accordance with (a) the Government's applicable environmental laws and regulations; and (b) ADB's Environment Policy (2002).

(ii) The Government will ensure that for subprojects and follow-on projects entailing land acquisition and resettlement, resettlement plans are prepared in accordance with (a) the Government's applicable laws and policies, and (b) ADB's Involuntary Resettlement Policy (1995) and relevant resettlement procedures. Adequate measures to avoid or minimize land acquisition and resettlement will be incorporated into subproject and follow-on project designs. The Government will ensure that (a) measures will be prepared in accordance with the Government's applicable laws and regulations related to indigenous peoples, and (b) ADB's Policy on Indigenous Peoples (1999) and relevant procedures of indigenous peoples are incorporated into subproject and follow-on project designs.

(iii) The Government will provide adequate resources and facilities to implement the TA Loan and all its subprojects effectively through the EA and IAs.

(iv) Each IA will appoint a competent subproject director, acceptable to ADB, for the duration of the subproject, who will have capacities to oversee social, resettlement, environmental, and sector aspects of the relevant subproject.

(v) The Government will ensure that the EA and each IA will enter into a Subproject Agreement for execution of the relevant subproject.

(vi) The Government will ensure that all draft final feasibility study reports related to the TA Loan will be submitted to ADB for review.

B. Conditions for Loan Effectiveness and Disbursement

83. The Government will meet the following condition before the loan becomes effective: the IMU will be established by the Government, and its director appointed.

84. No disbursement shall be made under each subproject unless its Subproject Agreement has been duly executed, to the satisfaction of ADB.

VII. RECOMMENDATION

85. I am satisfied that the proposed loan would comply with the Articles of Agreement of ADB and recommend that the Board approve the loan in various currencies equivalent to Special Drawing Rights (SDR17,163,000) to the Islamic Republic of Pakistan for Infrastructure Development from ADB's Special Funds resources with an interest charge at the rate of 1% per annum during the grace period and 1.5% per annum thereafter; a term of 32 years, including a grace period of 8 years; and such other terms and conditions as are substantially in accordance with those set forth in the draft Loan Agreement presented to the Board.

Haruhiko Kuroda
President

27 July 2005

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets/Indicators	Data Sources/ Reporting Mechanisms	Assumptions and Risks
Impact The population of Pakistan has access to increased and improved infrastructure services in the power, transport, and water resources sectors.	Increased amount of infrastructure services in Pakistan in the power, transport, and water resources sectors. Sector Indicators: 15% net increase in generation capacity. 10% of additional roads.	Pakistan Energy Sector Yearbook. Statistics provided by PPIB. New licenses for power generation projects issued by NEPRA. Annual reports from the new Water Resources Council. Annual reports for the Provincial Irrigation and Power Departments. Statistics provided by Government ministries and research institutions.	**Assumptions** Continued focus by the Government on infrastructure development to reach its economic growth and poverty alleviation targets. Private developers and investors view the investment climate conducive. Identified projects reach financial close and are implemented. Government will approve the recommended changes in policies and regulations.
Outcome Detailed enhanced infrastructure investments policies, plans, and projects are available and ready for consideration and implementation by non-public developers and investors.	Sequenced action plan to address the investment constraints by end 2006. At least 7 subprojects with primary focus on sector planning, project identification, development, and implementation. At least 15 infrastructure projects prepared for financing by nonpublic sources.	Government policy statements, and regulatory determinations. Statistics provided by PPIB, Government ministries and research institutions. New licenses for generation projects issued by NEPRA. Periodic progress reports IMU. Project completion reports.	**Assumptions** Actual implementation of the policies and regulations recommended under the TA Loan. The identified projects reach financial close and are implemented. **Risk** Civil society groups oppose the defined projects and/or investments.
Outputs 1. Identification and prioritization of constraints for investments in infrastructure projects. Recommendations of new policies and regulations for	Diagnostic study identifying constraints for nonpublic investments in infrastructure, leading	Consultant's Diagnostic study of the constraints. Signed Subproject Agreements and	**Assumptions** Government agencies are able to retain qualified staff. Sufficient resources,

infrastructure investments are enhanced. 2. Power sector: NTDC and the new distribution companies have increased capacities, and feasibility reports for generation projects are ready for financing. 3. Transport sector: NHA's PPP planning and project preparatory capacities are enhanced, and road, port, and railway feasibility reports are ready for financing. 4. Water resources sector: enhanced sector structure and project feasibility reports available for financing.	to at least 2 sub-projects removing identified constraints. At least 2 institutional capacity building subprojects and 5 feasibility reports for the power sector. At least 3 institutional capacity building subprojects and 5 feasibility reports for the transport sector. At least 3 institutional capacity building subprojects and 5 feasibility reports for the water resources sector.	respective PCRs. Improved policies and regulations as issued by the Government. Pakistan Energy Sector Yearbook (issued annually), PPIB statistics, and Power System Statistics issued by WAPDA. Progress reports ADB review missions	equipment, and management available in each infrastructure agency. Effective operation of the EA, IAs, and Infrastructure Management Unit. Sufficient environmentally sound pipeline of infrastructure projects can be identified. Land disputes and resettlement issues can be resolved. **Risk** Delays in project identification, development of terms of references, feasibility study exercise, and project implementation of infrastructure projects.
Design Summary	**Performance Targets/Indicators**	**Data Sources/ Reporting Mechanisms**	**Assumptions and Risks**
Activities with Milestones 1.1 Contract consultants for the IMU by 1 October 2005. 1.2 Identify the current constraints preventing investors to provide funding for infrastructure projects, through a diagnostic study to be completed by 1st quarter 2006. 1.3 Define subprojects and activities to strengthen identified constraints that negatively affect the investment climate and the sustainability of investment options in infrastructure sectors by end 1st quarter 2006, 1.4 Completed at least 3 sub-projects removing identified constraints by end 2007. 2.1 Prepare at least 5 Project Feasibility studies by end 2007. 2.2 Prepare at least 2 Institutional Capacity building subprojects completed by end 2008. 3.1 Prepare least 5 Project Feasibility studies completed by end 2007. 3.2 Prepare least 3 Institutional capacity building subprojects end mid-2008. 4.1 Prepare least 5 Feasibility studies completed by mid-2008. 4.2 Prepare least 3 Institutional capacity building and policy development subprojects completed by end 2007.			**Inputs** ADB - $25.0 million in ADF loan – 600 person months of international and 1,500 person months of domestic consultants ADB – SSTA of $150,000 - 32 person months of domestic consultants Project Management – 25 ADB review missions, and 16 person-months of ADB staff oversight. Government in-kind contribution of - $8.67 million

ADB = Asian Development Bank, EA = executing agency, IA = implementing agency, SSTA = small-scale technical assistance TA = project/program preparatory technical assistance.

EXTERNAL ASSISTANCE TO INFRASTRUCTURE SECTORS
(MAJOR PROVIDER OF ASSISTANCE)

Table 1.1: Lending to the Infrastructure Sectors
($ million)

Organization	Power Sector	Transport Sector	Water Resources	Total	Percent
Asian Development Bank	2,470.7	1,371.9	1,514.6	5,357.2	38
Japan Bank for International Cooperation	1,635.4	1,401.3	—	3,036.7	21
World Bank	3,360.1	697.4	1,764.1	5,821.6	42
Total	**7,466.2**	**3,470.6**	**3,278.7**	**14,215.5**	**100**

— = not available.
Sources: Asian Development Bank estimates, Japan Bank for International Cooperation, and World Bank.

Table 1.2: Nonlending Assistance to the Infrastructure Sectors
($)

Organization	Power Sector	Transport Sector	Water Resources	Total
Asian Development Bank	8,294,000	1,758,500	2,290,400	12,342,900
Percent	67	14	19	100

Source: Asian Development Bank estimates.

POWER SECTOR

A. Power Sector Assessment

1. **Power Sector Background**. Pakistan's power sector consists primarily of two public sector utilities: the Water and Power Development Authority (WAPDA), which is a government-owned statutory body, and the Karachi Electric Supply Company (KESC), which is a public limited liability company with predominantly government ownership. In addition to WAPDA and KESC, the sector consists of 21 independent power producers (IPPs), and two nuclear power generation companies. The total installed generation capacity is 17,793 megawatts (MW), of which WAPDA's capacity is 9,781 MW (55%) and KESC's capacity is 1,756 MW (10%), while the total nuclear capacity is 462 MW (3%). The total generation capacity of the IPPs is 5,693.76 MW (32%). In terms of fuel source, 12,285 MW (69%) is thermal based, while 5,046 MW is hydel based (28%), and nuclear accounts for 2.3%. The total annual generation for FY2003 was 75,682 gigawatt hours (GWh), which translates into an annual compounded growth rate (ACGR) of 4.0%.

2. **Government Policy**. The objective of the Government's new infrastructure initiative in the power sector policy is to deliver more reliable and affordable electricity to the industrial, commercial, and household customers on a nationwide basis. Infrastructure has become equal to economic growth, and well-guided economic growth should benefit the macroeconomic position of Pakistan as well as the alleviation of poverty. There are several key elements in the power sector to meet this objective, and specifically government-supported initiatives are (i) encourage an increased utilization of hydropower, coal, and natural gas reserves for power generation, which are fuel sources yielding a lower cost of production than what is being experienced today; (ii) reduce technical and nontechnical losses of the power sector utilities; (iii) gradually increase the tempo of power sector reforms and restructuring, inclusive of privatizations, and (iv) continue support of the National Electric Power Regulatory Authority (NEPRA) the independent regulator of the power sector through issuance of mainly licenses and tariff determinations.

3. In order for the Government to meet the policy, a number of issues facing the power sector such as (i) financial and operating performance of the sector, (ii) lack of generation facilities, (iii) old and outdated dispatch center, and (iv) transmission and distribution system augmentations and expansions need to be addressed. The power sector deficit, which has been funded through budgetary support in the form of grants and subsidies, cannot continue as it encroaches on social sector spending. For FY2003, the total financial losses of WAPDA and KESC reached 1% of gross domestic product (GDP), whereas 1.8% was the budgetary support for the same period. The power utilities have faced operational inefficiencies during the last 2 decades in terms of (i) high furnace oil costs, (ii) unreasonable levels of transmission and distribution losses, (iii) high purchase costs of electricity from the IPPs, and (iv) ineffective subsidization of the agriculture sector as well as domestic consumers. To combat these inefficiencies, restructuring of WAPDA and KESC was initiated from the mid to late 1990s.

4. **Government Power Sector Strategy**. The power sector strategy and its detailed activities are developed to support the establishment of a financially and technically sustainable sector, which supports and encourages economic growth through a single buyer market. The activities are substantial and require substantial resources. Some of the key aspects are (i) ensure independent regulation of the power sector; (ii) unbundle WAPDA and establish the 3 gencos, 8 discos, and the National Transmission and Despatch Company (NTDC) which is the national transmission company and the executor of the single buyer model of power sector; (iii)

commence the privatization program; and (iv) evaluate and optimize the fuel sources of the power sector to reduce the overall tariff requirement. Other activities are also being pursued but, in terms of sector impact, these activities would not be as substantial as the items listed above. The increase of renewable energy contribution to the national generation pool is one such area, while other areas are off-grid systems, energy conservation, and cleaner production technologies in the industry sector.

5. The first action required is to further unbundle WAPDA's power wing, and move the unbundling from a legal separation to a functional and operational separation of the 12 new companies. This would entail the new companies operating with increased autonomy, and with directors of their respective boards being independent of any other company in the power sector. The second action would be to complete the privatization of KESC, and the third action would be to enhance the role of the regulator as NEPRA gets more and more mature through experience and provision of institutional capacity building. Additional generation capacity is required and this would be by undertaking the first phase of project development in the public sector and then seek, through a competitive process, private sector capital, management, and technical know-how to erect and operate the new projects.

6. The immediate institutional capacity requirements focus on the power sector restructuring activities, and in particular on ensuring that the new companies within the power sector are able to execute the assigned tasks and responsibilities. The first priority is to ensure that NTDC develops its skills to handle both the power transmission system and the single buyer function, as NTDC will be the focal point between the generation and distribution companies. The TA Loan will further establish NTDC as an independent company. The second priority is for the new discos to develop their respective skills in the areas of (i) distribution system planning, (ii) project identification and prioritization of project development, and (iii) project design and implementation. These functions used to be the responsibility of WAPDA, but now need to be integrated into each of the new discos. The TA Loan will address this aspect through a subproject.

7. **Karachi Electric Supply Company (KESC)**. As for KESC, the Government established a steering committee to develop a privatization strategy and plan. This took place under the ADB program called Energy Sector Restructuring Program.[1] In addition, ADB undertook the contracting of the privatization advisors for the KESC privatization through a technical assistance[2]. The financial restructuring process of KESC has taken a bit longer than anticipated, but the Government and the lenders have been able to work out all major issues for the privatization to take place, and the bidding process is expected to be concluded during the 1st quarter of 2005. During the most recent years, the Government has spent about $200 million for funding of the annual cash deficits in KESC. The budget relief estimated from a partial sale of KESC would give the Government substantial resources to pursue the development agenda set forth in the Poverty Reduction Strategy Paper.

8. **Water and Power Development Authority (WAPDA)**. WAPDA's reform and restructuring parameters were agreed between the World Bank and the Government in the mid-

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[1] ADB. *Report and Recommendation of the President to the Board of Directors on Proposed Loans to the Islamic Republic of Pakistan for the Energy Sector Restructuring Program*. Manila (Loan numbers 1807/1808, approved on 14 December 2000, which was supported by loan number 1809 (ADB. 2000. *Report and Recommendation of the President to the Board of Directors on Proposed Loans to the Islamic Republic of Pakistan for the Capacity Enhancement in the Energy Sector*. Manila).

[2] ADB. 2000. *Technical Assistance to the Islamic Republic of Pakistan for the Support for Privatization of Karachi Electric Supply Company*. Manila.

1990s, but the actual unbundling has been under implementation for quite some time. WAPDA's power sector operations have, in principle, been unbundled into 12 companies; 3 generation companies, 1 national transmission and despatch company (NTDC), and 8 distribution companies. Although this restructuring has been completed in legal terms, the implementation of the unbundling continues to be slower than anticipated and required to ensure rapid sector improvements. Of the new companies, one generation and two distribution companies have been identified and selected for privatization. Privatization advisors have been contracted and, in terms of two of the transactions, the process has proceeded towards a bidding round. A few issues are still outstanding, but Privatization Commission estimated that these transactions would be completed during the first half of 2005. The World Bank has been working with the Government, WAPDA, and the new companies to produce the Financial Recovery Plan (FRP) for the WAPDA group of companies. The FRP is a medium-term financial roadmap for the period 2005–2009. The World Bank has been working on FRP for the WAPDA group of companies.

9. **Regulation**. NEPRA has established its regulatory credentials over the last 5 years, and continues to emerge as a pillar of the power sector reform effort through diligent execution of the NEPRA Act. ADB provided institutional capacity support to NEPRA in 2000 and 2001 through a technical assistance project[3]. From a principal point of view, NEPRA is moving the tariff-setting approach away from subsidies and towards full cost recovery of production of electricity. Some of the details in the determinations have been viewed to lean in favor of the consumers creating limited or negative cash values for the power sector companies and investors due to inherent inefficiencies in the sector. NEPRA continues to issue licenses to generation, transmission, and distribution companies, as well as presenting tariff determinations for each distribution company. Of particular interest is the license issued to NTDC, which calls for NTDC to be the single buyer of electricity in Pakistan as well as being the national dispatcher of electricity responsible for the transmission network. As part of ADB's sector reform and restructuring interventions, it is supporting the transformation of NTDC[4] from a department within WAPDA's organization to an independent company responsible for the single buyer market operations and dispatcher of electricity in Pakistan. The untangling of the high financial and technical losses, reduction of the subsidy levels, and meeting the consumers' expectations of improved supply at minimum cost increase appear to be impossible tasks. NEPRA has continued to address the issues with determination and sustainability of the power sector as its main focus. Further improvements in the timeliness of implementation of NEPRA's determinations and further strengthening of its capabilities through a World Bank-funded facility should further improve the financial and operational sustainability of the power sector.

10. **Investments**. Today, there are three major investment concerns facing the power sector and a number of less dominant but still rather important issues. The major issues are (i) investments to meet the technical deterioration of the transmission and distribution system as well as the generation assets that are coming of age, (ii) meeting the expectations and demand from about 40% of Pakistan's population who requires access to electricity supply, and (iii) meeting the annual increase of about 2,000 MW in generation capacity, plus related expansion of the transmission and distribution network, required to support the economic growth target of about 8% set by the Government. It is recognized that transmission and distribution network investments in terms of augmentation and expansions have not been adequate over the last 10

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[3] ADB. 2000. *Technical Assistance to the Islamic Republic of Pakistan for the Capacity Building of the National Electric Power Regulatory Authority*. Manila.

[4] ADB. 2003. *Technical Assistance to the Islamic Republic of Pakistan for the Institutional Capacity Building of the National Transmission and Despatch Company Limited*. Manila.

years, and are in critical need of investments. There have been limited funds provided by the international lending agencies due to focus on the reforms and restructuring aspects. The limited progress related to the introduction of reforms yielded several program loan facilities, but no investment loans. In addition, the testing of nuclear missiles resulted in the postponement of further funding from major bilateral partners. The current mobilization of investment capital appears to come from the three primary sources, namely, public funds, multilateral/bilateral resources, and private sector funding, becomes a priority for the Government. However, the challenge of funding activities must be supported by an adequate level of institutional capacity as well as an advanced level of project preparatory activities that meet international standards in terms of social and environmental safeguard structures, financial and economic considerations, and technical standards.

11. **The Way Forward.** The power sector is progressing in a positive direction with a clear focus on both technical and financial viability and sustainability. However, further regulatory transparencies and improved governance of the sector would substantially improve its financial recovery. Major investments are required to improve the power sector's technical performance, but such investment projects take time and resources to be properly developed. The TA loan will allow for further reform and restructuring progress to evolve in the sector, while project preparation and institutional capacity building is completed on a parallel basis. The timing for ADB's financial support in a major way would be according to progress on the major issues within the sector.

B. Power Sector Parameters

12. Following the overall parameters above, detailed discussions were held with the Ministry of Water and Power (MOWP), WAPDA, NTDC, PPIB, and the Planning Commission, which yielded a list of subprojects proposed to be addressed within the power sector segment of the TA loan. The power sector allocation is $6.75 million that has been allocated among the identified subprojects. The subprojects can be divided into two categories—project preparatory and institutional capacity building.

13. The power sector subprojects are listed below and the detailed description is provided in Supplementary Appendix B.

Table A3.1: Power Sector Subprojects

Description	**Amount** ($)	**IA**
a. Transmission Project: Subprojects preparation	600,000	NTDC
b. Distribution Project: Subprojects preparation	600,000	MOWP
c. Rehabilitation/refurbishing IPP Feasibility Study	800,000	PPIB
d. Sindh small gas field IPP	750,000	PPIB
e. Hydel feasibility and bidding documents (2 projects)	1,300,000	PPIB
f. NTDC continuation of institutional capacity building	700,000	NTDC
g. Discos: planning, design, monitoring capacity building	2,000,000	PC
Total Allocation	**6,750,000**	**PC**

IPP = independent power producer, NTDC = National Transmission and Despatch Company.
Sources: Asian Development Bank estimates.

14. The total allocation is the ADB portion of the total cost and financing of the power sector segment. The counterpart financing from the Government is reflected in the individual cost estimates and financing plan table within each subproject description given in Supplementary

Appendix B. The counterpart financing covers areas such as office accommodations for consultants, facilities for workshops and seminars, remuneration of counterpart staff, and transportation arrangements for field visits. Other cost items as specific per subproject could also be included.

C. Costs and Financing Plan

15. The total cost of the power sector component has been estimated at $9.00 million, with the foreign exchange costs and local currency costs estimated at $4.92 million and $4.08 million, respectively. ADB undertakes to finance $6.75 million of the power sector costs, which will cover the foreign exchange costs and $1.83 million of the local currency costs. The Government undertakes to finance domestic currency costs amounting to $2.25 million equivalent.

Table A3.2: Cost Estimate and Financing Plan – Power Sector
($ million)

Item	Foreign Exchange	Local Currency	Total Cost
A. Asian Development Bank Financing			
1. Consultants Services	4.92	1.83	6.75
Subtotal (A)	**4.92**	**1.83**	**6.75**
B. Government Financing			
1. Administration, Taxes, and Duties	0.00	2.25	2.25
Subtotal (B)	**0.00**	**2.25**	**2.25**
Total	**4.92**	**4.08**	**9.00**

Source: Asian Development Bank estimates.

D. Subproject Description and Scope

16. Supplementary Appendix B contains a brief description of each subproject in the power sector and the related outline terms of reference. The subprojects have all been discussed in detail by MOWP, EA, the respective IAs, and ADB, and there is agreement on the parameters of each subproject. The next task for each subproject is to develop the detailed TORs, and commence the consultant selection process by ensuring proper advertisement of the opportunities available, followed by the establishment of the long list of interested when the expression of interest deadline has expired.

TRANSPORT SECTOR

A. Sector Assessment

1. Transport is an important sector of Pakistan's economy, accounting for 10% of the gross domestic product and about 20–25% of the annual public sector development program. The impact of the sector on the economy could have been much greater if the investments were more strategically directed. The reduced impact was due not to lack of planning, but to the inability of the responsible agencies to develop a comprehensive policy through coordinated efforts. The result is insufficient and imbalanced funding in the sector, outdated legislation and regulatory framework, nonenforcement of existing regulations, and failure to attract foreign investments.

2. Though operational, the transport sector in Pakistan is suffering from (i) a very high modal share of roads compared with railways, (ii) deteriorating infrastructure due to inadequate investment and lack of maintenance, (iii) transfer of large road assets from provincial to district governments, (iv) a loss-incurring railway system, and (v) expensive and inefficient ports.

3. The transport sector is characterized by multiple agencies that fall under the purview of various ministries, with some agencies responsible for infrastructure, others for operations, and others for both. The Ministry of Communications is responsible for the national highways, the Ministry of Ports and Shipping for seaports and shipping subsectors, the Ministry of Railways for the railway subsector, the Ministry of Defense for the civil aviation subsector, and the provincial and district governments for the provincial and rural road subsectors. Enforcement of traffic regulations at the provincial level is the responsibility of the provincial police department and the Ministry of the Interior. For national highways, the National Highway and Motorway Police, under MOC, is responsible for enforcing highway regulations. The Railway Police performs this function in the railway subsector. This diversity in agencies promotes an environment in which coordination, intermodal planning, and enforcement are compromised.

4. Pakistan requested ADB to reorient its focus from provincial-level projects that directly target poverty alleviation to major infrastructure projects that can promote economic growth and thus contribute to poverty reduction. ADB can also assist the Government in its efforts to introduce international best practices, build institutions, support policy reforms, catalyze private sector activities, and fill the gaps where private sector is unlikely to invest. This is a challenge but also an opportunity: enhancing our product attractiveness, complemented by added-value knowledge, is a long-term guarantee to ADB's relevance, specially in middle-income countries like Pakistan where borrowing is based on cost but also on other types of considerations.

5. Lending assistance, which was mainly focused on provincial roads, will now cover all categories of roads, including motorways (through PPPs), national highways, provincial roads, and district roads (where ADB plays a key role on the devolution process). On railways, an agreement on a road map of reforms could trigger ADB's first ever operations in the sector, by combining deep reforms with infrastructure rehabilitation in this strategic subsector; additionally, the Government has requested to receive technical assistance from ADB for developing sector strategies for future improvement of the railway sector, and strengthening MOR and PR's capacity at the managerial level. On ports, while financial assistance is not expected in the short term, ADB can assist the Government to achieve its objectives and rationalize its investment decisions through knowledge-based services, especially providing technical assistance to prioritize investment plans of the major ports, and capacity building to support the newly created Ministry of Ports and Shipping.

6. ADB is also seen by both the Government and the domestic financial sector as a strategic partner for private sector participation in transport infrastructure development, for which it can use a mix of resources from both the public and private sector windows, as well as knowledge-based technical assistance for PPPs. ADB is providing assistance for identifying the key constraints to increased private sector financing, and providing support for strenghtening the institutional, policy, and regulatory framework for developing private sector participation in national highway development [1]. Additionally, the Government has requested that capacity building on PPPs be provided for NHA, the Planning Commission, MOF, and other stakeholders The ADB-assisted pilot project for the development of motorway M4 between Faisalabad and Multan (included in the country lending program for 2006) will be a crucial landmark for developing private sector participation in the sector.

1. Roads

7. Roads are the predominant mode of inland transport in Pakistan carrying more than 91% of passenger traffic and 96% of freight traffic. The average growth rate is about 4.5% for passenger traffic and 10.5% for freight traffic. The total road network in the country is approximately 250,000 kilometers (km) of which about 60% is paved. This includes 8,600 km of national highways and motorways representing the main transport corridors, and providing interprovincial linkages and connections to neighboring countries; and about 95,000 km of provincial roads providing all-weather access to the economic and population centers in the four provinces. The provincial roads are generally categorized as highways, and secondary and access roads. The remaining network consists of municipal urban roads that are mostly paved, and largely unpaved tertiary roads providing access to villages and remote areas. The number of registered motor vehicles is 4.8 million and is growing at 8% annually. Road transport services are largely in the private sector and are subject to strong competition.

8. The road network requires rehabilitation, reconstruction, and upgrading at national, provincial, and district levels. Based on road conditions assessments, about half of the national highway network and a large portion of the provincial road network are in poor condition. The Government has initiated a program for rehabilitation of priority highway sections with assistance from the World Bank and ADB in addition to the Government's resources. For the provincial highways and district roads, ADB is financing sequenced interventions in each province for rehabilitation and improvement of road networks. To ensure sustainability, these projects also support policy and institutional reforms and capacity building of the road agencies.

9. For maintenance, the National Highways Authority (NHA) receives Government resources that are supplemented by toll revenues. NHA's road maintenance fund, established in 2000, is financed through toll revenues to ensure a stable and secure source of operation and maintenance funding. Annual revenues collected in 2003 were over PRs3.6 billion. As toll revenues are increasing every year, NHA has sufficient resources to maintain the national highways (NH) network and other designated parts of the road network.

10. The Government and ADB agree that major investment in the road sector is required to sustain continued economic growth and poverty reduction. Building an NH system and an integrated road network are preconditions for achieving these targets. Public resources are, however, not sufficient to meet the financing requirements and the Government is actively exploring options for reducing the financing gap through support from multilateral development

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[1] ADB. 2004. *Technical Assistance to the Islamic Republic of Pakistan for Facilitating Public-Private Partnership Initiative in National Highway Development*. Manila.

banks and the private sector. It is recognized that the inclusion of the private sector will necessitate institutional reforms and capacity building for the concerned road agencies.

11. As mentioned above, ADB's support in the sector is evolving from a project-by-project approach into a programmatic approach, where assistance to all categories of roads is in parallel with policy dialogue and the preparation of a road map for sector reform. A policy framework comprising road user charges, road fund, axle load control, road safety, environmental and social aspects, and private sector participation in road construction and operation is needed to sustain the overall road network. Institutional improvements and capacity building are required so that the road agencies can plan, develop, and manage road assets.

2. Railways

12. Having once been the leading transport mode in Pakistan, railways have been in decline for many years. As a result (i) railways now carry less than 5% of freight traffic, (ii) infrastructure, traction, and rolling stock have deteriorated due to lack of sufficient investment and maintenance, (iii) PR operates at a loss, and (iv) PR is a drain on the government budget at about Rs20 billion (about $340 million) per annum. Although PR has streamlined staffing requirements, it currently employs 95,000 staff, which is high in relation to traffic levels. The general explanation of this decline is that PR has not been able to adapt to the increasing demand for door-to-door services, emergence of competition from improved road transport, and modern logistics. Railways in other countries have had similar experiences.

13. The Government believes that railways have the potential to provide the most economic mode of transport for a larger share of traffic. Average haul distances in Pakistan are large, and the competitiveness of rail compared with road increases with haul distance. There is also potential for railways to contribute to Pakistan becoming a regional transport hub providing port connections for its neighboring countries to the north and west, including Afghanistan and Iran. The Government now wishes to take steps to reverse the decline of railways and realize their economic potential. It recognizes that this will require sustained institutional and policy reforms together with investment in rehabilitation and upgrading of facilities.

14. In 2000, the Railways Board was restructured, an executive committee was established, and efforts were made to give more responsibility to managers of the main lines of business. The executive committee has been granted authority for raising tariffs without need to seek higher approval. There is scope for tariff rebalancing to enhance commercial performance.[2] A financial advisory team was hired to suggest measures for modernizing PR's financial management and for valuing its assets. This work included valuation of assets and liabilities, preparation of IAS compliant accounts and audit, and preparation of a business plan including financial projections for future scenarios. The business-as-usual scenario suggested an annual deficit of Rs20 billion. The reform and investment scenario suggested that, following corporatization and financial restructuring, MOR could eventually become financially self-sufficient. A private sector marketing team was recruited to initiate commercial exploitation of PR's land assets (so far this raised about Rs1 billion). PR's traffic forecasts envisage that investment in asset renewal and improvement will attract a large amount of additional traffic, including a near trebling of freight over the next 7 years. With a view to supporting private sector participation in railways, an ordinance was approved in 2002 for establishing a rail regulatory authority, although this is not yet operational. The Minister of Finance announced in his most

[2] There is scope for tariff rebalancing to enhance commercial performance. Average revenues per ton km are three times average revenues per passenger km.

recent budget speech that the Government has decided to corporatize PR. Drawing on the work of the financial advisory team, MOR has prepared a draft corporatization plan for core railway activities, and its manufacturing units may be converted into independent entities. The draft Railways Act intending to corporatize PR is currently being discussed.

15. ADB has not previously supported railways in Pakistan. In early 2004, the Government asked ADB to consider including support for railways in its Country Strategy and Program (CSP) for Pakistan. ADB is currently conducting a preliminary assessment of the railways sector and identified areas of technical assistance through the TA loan, with a view to developing a framework or "roadmap" for future improvement of the railway sector. However, ADB would wish to see certain advance actions and commitments being met prior to approval of any possible ADB support for infrastructure rehabilitation. Examples might include (i) establishing a reform implementation task force; (ii) approving the draft legislation for corporatization, and then enacting the legislation and operationalizing the corporation, (iii) preparing an overarching reform program for railways, and obtaining a high-level government commitment for it; and (iv) recruiting and carrying out the proposed consulting services to develop and implement a new activity-based accounting system.[3] If the assessment is positive, ADB might include support for railways in the CSP and prepare a detailed timetable for formulation of support during 2005 and 2006.

3. Ports

16. Pakistan has two operational ports: Karachi Port which is run by the Karachi Port Trust (KPT) and Qasim Port which is run by the Port Qasim Authority (PQA) . Both these ports are located in Sindh Province of Pakistan and are less than 70 km apart. In addition the Government is currently developing a new port i.e. Gwadar Port in Baluchistan Province. It is expected that Gwadar Port will be operational by April 2005. The current declared depth of Karachi and Qasim Ports are 11.5 meters (m). Gwadar Port currently has a declared depth of 11.5 m. In 2003, the total cargo throughput at Karachi Port was 26 million tons and for Port Qasim 16 million tons. The container capacity of Karachi Port is 1.1 million twenty-foot equivalent units (TEUs) and in 2003, it handled 710,000 TEUs. The capacity of Port Qasim is 500,000 TEUs and in 2003, it handled 420,000 TEUs. Gwadar Port will have three berths in its initial phase and the capacity is expected to be 54,000 TEUs.

17. The Government in 1990 embarked on a policy of implementing the landlord concept for ports. The container terminal operations at both Karachi Port and Port Qasim have been privatized. There are two private container operators at Karachi Port i.e. Karachi International Container Terminal (KICT) and Pakistan International Container Terminal (PICT) while in Port Qasim, there is a single container terminal operator, Qasim International Container Terminal (QICT). The KPT has already invited applications for the leasing out of general cargo berths at Karachi Port. Once the successful bidder is selected, 90% of the terminal operations at Karachi Port will be handled by the private sector. The Government is planning to lease out the terminal operations at Gwadar Port as well and is currently holding preliminary discussions with potential terminal operators.

[3] Establishment of a modern activity-based accounting system is recognized as an essential requirement for enabling a corporatized railway to operate on a commercial basis, and to provide a reliable method for reestablishing a reliable system of public service obligations.

18. Pakistan ports are still expensive and inefficient by commonly accepted international standards.[4] However, the efficiency of ports' terminal operations has increased tremendously in recent years. Average turnaround of container ships in Karachi Ports was reduced from 7 days to 16 hours. Labor force of Karachi Port has been reduced by 5,000 and KPT intends to reduce this further by another 3,000 through attrition.

19. Customs' House Karachi is responsible for the customs operations at both Karachi and Qasim Ports. Computerization of customs operations was introduced in 1984. Goods declaration documents can be submitted online by importers. The Customs has also setup service centers equipped with computers for smaller companies and customs agents who do not have their own computers to submit goods declaration documents online. Customs has introduced automated clearance procedures (ACP) for 189 large and multinational companies as well as for government-linked companies so that their imports are not inspected at all except for random post-importation audit. The ACP covers approximately 50% of imports. For the rest, a risk profile system has been put into place to identify which containers are selected for physical inspection. From 1 July 2004, the Customs is open 24 hours a day so that consigners/consignees are not limited to traditional office hours. So far there has not been much response from the private sector to this initiative. The Customs has also set up 11 recommendatory committees consisting of two reputable business representatives and one customs officer on each committee to make recommendations in cases of disputes between importers and the Customs on classification and valuation for duty purposes. This helps to reduce the time lost in disputes, which would otherwise have to be referred to the Central Board of Revenue (CBR) in Islamabad. Manifests are submitted by terminal operators directly to Customs, which inputs them into its computer system. These manifests are then electronically sent to the KPT and PQA. However, because of computer hardware limitations, it is not possible to link the KPT and customs computer systems online in real-time. Scanners will soon be installed in both Karachi and Qasim ports to comply with Customs Security Initiative.

20. ADB has recently initiated policy and technical discussions with the Government on possible ADB support for the port sector. The first priority is a comprehensive port sector prioritization plan that will prioritize investment for Karachi Port and Port Qasim considering the economic viability and national interests. This is because plans for channel dredging suggest that both ports are trying to change their role from feeder ports to attracting main line operators. It is not immediately obvious that both ports would simultaneously be successful in attracting main line operators. Thus, that investment in channel deepening at both ports is economically viable. Once analysis of the demand and potential of both ports is carried out, it would become clearer which investments in the port sector would be economically viable and serve the national interest.

4. Development of a Transport Sector Strategy

21. The Government attaches high priority to the development of infrastructure as the prime engine for economic growth and poverty reduction. Strategic investment in infrastructure is necessary for Pakistan to take advantage of the geopolitical situation in the region and benefit from regional opportunities for cooperation in trade and commerce. The Government will have to address four major challenges: (i) lack of an integrated national transport policy to guide the development of subsector policies, (ii) poor governance, (iii) weak public institutions, and (iv) the need for targeted investment based on sound economic criteria.

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[4] Shippers annually pay about $310 million extra charges that are passed on to the consumers. (Source: World Bank. 2002. *Pakistan: Transport Sector Assistance Strategy Note.* Washington, DC: World Bank.)

22. The Government made several attempts in the past to articulate a comprehensive transport policy that encompasses all subsectors. Under a transport sector development initiative (TSDI) sponsored by the World Bank,[5] major stakeholder consultation involving the public and private sectors and civil society was undertaken through a series of workshops and focal group discussions to elicit views on a transport development strategy. The findings of TSDI were shared with MOC to help in formulating a national transport policy. The TSDI recommendations included (i) development of an enabling policy framework that incorporates the perspectives of the three key stakeholders—the Government both as service provider and regulator, the private sector, and users; (ii) establishment of a national transport policy board; (iii) creation of a unified Ministry of Transport that encompasses all subsectors; (iv) policy reforms and incentives to encourage the private sector; (v) development of human resources in the sector; and (vi) enforcement of existing legislation on safety standards, environment, etc. The National Transport Research Center (NTRC) under MOC was assigned the responsibility to use the TSDI findings in developing a comprehensive transport policy. Due to lack of capacity, NTRC was unable to develop a draft policy document acceptable to the Government. The quality of the drafts prepared by NTRC failed to meet the Government's approval. Accordingly, the Government requested ADB's assistance to help in framing a national transport policy for the country. ADB is currently providing advisory assistance to the Government for the preparation of a national transport policy[6] covering road, rail, air, shipping, and ports subsectors.

B. Transport Sector Subprojects

1. Subproject Selection

23. The subproject selection for the transport sector component was prepared, together with the subproject selection of the transport sector component, by the Planning Commission and the relevant line Ministries (MOC, MOR, Ministry of Local Government (MOLG), and MOPS) in close coordination with the relevant subsector agencies, primarily NHA and PR. It is expected that the preparation of about four road projects will be covered under the TA loan, primarily the projects included in the ADB lending program for 2005–2006, and the projects to be initiated in 2007 and 2008. The TA loan may also cover the preparation of a railway project, subject to agreement between ADB and the Government on the development of a reform program for the sector. Subject to government request, the TA loan may also accommodate non-ADB projects that are consistent with the government development plan, economically viable, and environmentally and socially sustainable.

2. Subproject and Package Selection for Project Preparatory Facility (Roads and Railways)

24. The subproject selection for the transport sector component was prepared together with the Planning Commission and the relevant line Ministries (MOC, MOR, and MOPS), in close coordination with the relevant subsector agencies, primarily NHA and PR. It is expected that the preparation of about four road projects will be covered under the TA loan, primarily the projects included in the ADB lending program for 2005-2006, and the projects to be initiated in 2007 and 2008. The TA loan may also cover the preparation of a railway project, subject to agreement between ADB and the Government on the development of a reform program for the sector.

5 From June 1999 to March 2000. The primary purpose of the initiative was to help define the World Bank's transport sector strategy for Pakistan that will ultimately provide inputs to the country assistance strategy.

6 ADB. 2004. *Technical Assistance to the Islamic Republic of Pakistan for the Transport Policy Transport Project*. Manila.

Subject to government request, the TA loan may also accommodate non-ADB projects that are consistent with the government development plan, economically viable, and environmentally and socially sustainable. An indicative list of packages was agreed between ADB and the Government for the transport sector component (see below).

3. Transport Sector Subprojects

25. The transport sector sub-projects covers the following areas (i) road project preparatory facilities, (ii) railway project preparatory facilities, (iii) model concession and project preparatory facility for a PPP pilot project in NHs, (iv) capacity building for NHA, (v) policy development and capacity building for MOR and PR, and (vi) policy development and capacity building for MOPS. The individual subprojects are listed below:

Table A4.1: Transport Sector Subprojects

	Description	Amount ($)	IA
a.	Road Project Preparatory Facility (2 projects) [7]	5,400,000	NHA
b.	Road Project Preparatory Facility[8]	2,000,000	MLG
c.	Railway Project Preparatory Facility	800,000	MOR
d.	PPP Initiative for NHs Development	1,200,000	NHA
e.	Capacity Building for NHA	600,000	NHA
f.	Policy Development/Capacity Building for MOR/PR	500,000	MOR
g.	Policy Development/Capacity Building for MOPS	500,000	MOPS
	Total allocation	**11,000,000**	**PC**

NH = National Highways, NHA = National Highways Authority, MOR = Ministry of Railways, MOPS = Ministry of Ports and Shipping, PR = Pakistan Railways.
Source: Asian Development Bank estimates.

4. Cost Estimates for the Transport Component

26. The total cost of the transport sector component has been estimated at $14.68 million with the foreign exchange costs and local currency costs estimated at $8.14 million and $6.54 million, respectively. ADB undertakes to finance $11.0 million of the transport sector costs, which will cover the foreign exchange costs and $2.86 million of the local currency costs. The Government undertakes to finance domestic currency costs amounting to $3.68 million equivalent. Details are provided in the table below.

[7] Includes contract packages 1 and 4 of the roads subcomponent (national highways).
[8] Includes contract package 3 of the roads subcomponent (district roads).

Table A4.2: Cost Estimate and Financing Plan – Transport Sector
($ million)

Item	Foreign Exchange	Local Currency	Total Cost
A. Asian Development Bank Financing			
1. Consultants Services	8.14	2.86	11.00
Subtotal (A)	**8.14**	**2.86**	**11.00**
B. Government Financing			
1. Administration, Taxes, and Duties	0.00	3.68	3.68
Subtotal (B)	**0.00**	**3.68**	**3.68**
Total	8.14	6.54	14.68

Source: Asian Development Bank estimates.

5. Contract Packages

27. An indicative list of subprojects is given below. Each package will be divided, if required, so that the consultants' work program can be monitored and adjusted when necessary. The IAs will be responsible for monitoring the consultants for each subproject, and will provide logistical support to the consultants and review their outputs.

6. Indicative Contract Packages

Table A4.3: Transport Sector Contract Packages

Item	Km	Cost	Outputs
A. Roads			
Package 1			
1. Subregional Connectivity and Trade Facilitation project (2005)	About 800 km of NHs	$1.0 million	(i) Conclude detailed design; (ii) assist procurement, which includes (a) bid document preparation and evaluation, (b) bid processing, and (c) contract negotiations for selecting civil works contractors, supervision consultants, and equipment vendors; and (iii) financial management assessment of each subproject IA.
2. Subregional Connectivity and Trade Facilitation project II (2007)	About 500 km of NHs (ind.)	$2.0 million	(i) Prepare feasibility studies; (ii) prepare detailed design; (iii) assist procurement, which includes (a) bid document preparation and evaluation, (b) bid processing, and (c) contract negotiations for selecting civil works contractors, supervision consultants, and equipment vendors; and (iv) financial management assessment of each subproject IA.
Package 2			
PPP Initiative for National Highway Development (2006)	184 km, 4-lane motorway	1.2 million	(i) Review design and engineering work, perform economic and financial analyses and conduct all assessments necessary to ensure that ADB's compliance requirements are fulfilled; (ii) develop a model concession agreement and concession documents; (iii) prepare bidding documents; (iv) assist the Government on concession's contract negotiations; (v) capacity building for NHA, the Planning Commission, MOF, and other stakeholders; and (iv) financial management assessment of each subproject IA.
Package 3			
District Roads Resource Management project I (2006)	About 850 km of district access roads (ind.)	$2.0 million	(i) Prepare feasibility studies; (ii) prepare detailed design; and (iii) assist procurement, which includes (a) bid document preparation and evaluation, (b) bid processing, (c) contract negotiations for selecting civil works contractors, supervision consultants, and equipment vendors; and (iv) financial management assessment of each subproject IA.
Package 4			
Road project (2008)	TBD	$2.4 million	(i) Prepare feasibility studies; (ii) prepare detailed design; and (iii) assist procurement, which includes (a) bid document preparation and evaluation, (b) bid processing, (c) contract negotiations for selecting civil works contractors, supervision consultants, and equipment vendors; and (iv) financial management assessment of each subproject IA.
Package 5			
Capacity building for NHA in project planning, development, and management		$0.6 million	Reengineer business processes in NHA through (i) strengthening Road Planning and Programming, (ii) strengthening preconstruction processes in the Highway Design, Bridges and Construction and Maintenance Divisions, and (iii) strengthening construction management in the Construction and Maintenance

Item	Km	Cost	Outputs
			Division.
B. Railways			
Package 1 Railway project (2007)	TBD	$0.8 million	(i) Prepare feasibility studies; (ii) prepare detailed design; and (iii) assist procurement, which includes (a) bid document preparation and evaluation; (b) bid processing; (c) contract negotiations for selecting civil works contractors, supervision consultants, and equipment vendors, and (iv) financial management assessment of each subproject IA.
Package 2 Policy development and capacity building		$0.5 million	(i) Develop sector strategies for future improvement of the railway sector, and (ii) strengthen capacity at the managerial level.
3. Ports			
Package 1 Policy development and capacity building		$0.5 million	(i) Develop sector strategies and a prioritized investment plan for the port sector, and (ii) strengthen capacity at the managerial level.

IA = implementing agency, NH = national highway, NHA = National Highways Authority, MOF = Ministry of Finance, PPP = public-private partnership, TBD = to be determined.
Source: Asian Development Bank estimates.

WATER RESOURCES SECTOR

A. Sector Assessment

1. Agriculture uses about 95% of the water resources of Pakistan. Until the 1990s, expansion of water supply for irrigation, first from surface water until the 1970s, then from groundwater through the mid-1990s, was a key engine of agriculture sector growth. Investment in water resources and irrigation infrastructure has declined steadily since the 1980s. Since that time, it has been limited to a few projects and piecemeal rehabilitation that has failed to halt the steady deterioration of the substantial asset base caused by the lack of resources for operations and maintenance, and ineffective institutional arrangements and governance. The recent severe drought that lasted from 1999 to 2001 and reduced water supplies by up to 50% helped galvanize the Government's focus on the sector and on the need for greatly increased investment.

2. The response of the federal and provincial departments and agencies has been (i) to propose a huge portfolio of projects to develop, over the medium to long run, new storage reservoirs and canals; and (ii) during the short run, to rehabilitate and line the canal distribution system, including the vital but aging barrages. In addition, the provinces have identified quick-gestation investments that would benefit water-deficit areas, such as small dams and spate irrigation systems. However, the combination of rising water demand in agriculture and other sectors, high population growth, and persistent rural poverty have brought into sharp focus the long-term scarcity and limits to water resources development in Pakistan, and to the growing realization that the traditional supply-driven approach may no longer be appropriate to achieve the needed high economic growth rates. Long-term incremental needs for additional water resources in all sectors, including environmental flows in the lower Indus River, are greater than the available incremental supply of water from all sources regardless of how much new storage is built. Hence, in the future, water infrastructure investment will have to be accompanied by a greater and more balanced focus on increased efficiency, demand management, and improved productivity that will require significant institutional and policy reforms.

3. In March 2004, the Government proposed a PRs883 billion ($14.8 billion) long-run program of investment[1] in new dams and canals to be implemented over the next 10 years, and in more immediate system improvement and drainage. However, investment in the water resources sector in Pakistan has been and continues to be problematic. The Public Sector Development Plan (PSDP—FY 03-04) for water resources and agriculture is about PRs15 billion and the carry forward to finance completion of ongoing and recently started projects at the end of the FY04 financial year will be about PRs350 billion. The FY 04 PSDP budget was a 36% increase over the FY 03 PSDP, but at that level of funding over the next 5 years, the total investment of about PRs72.5 billion would be over PRs270 billion short of the funding needed to complete the projects being carried forward. Failure to complete projects in the PSDP has been a persistent problem caused not only by a long period of fiscal stringency, but also by over-commitment to too many projects and to long gestation projects. Achieving much higher economic growth targets on the order of 8% or more will require greater attention to project completion during the plan period, as well as to quicker-gestation investments that yield early returns.

[1] This contrasts with a figure of $7.7 billion for investments recommended for the Medium Term Investment Plan under ADB. 1998. *Technical Assistance to the Islamic Republic of Pakistan for the Water Resources Strategy Study. Manila*. The Government's proposal included a number of very large projects that were not recommended for medium-term consideration by the TA and the subsequent Water Sector Strategy (see para. 5).

4. To achieve greater development impact from infrastructure investment, there will need to be greater clarity of objectives with a more coherent strategy that addresses the challenges of the future. This will require a more integrated approach and greater emphasis on introducing new thinking about how inefficient water use could be reduced, in addition to simply looking at large storage projects. To help meet the Government's macroeconomic growth objectives, an analytical and institutional framework is needed for setting investment priorities and reshaping the water infrastructure portfolio. Achieving this will require capacity development along with restructuring of the institutional arrangements for water resources management.

5. **Reforms in the Sector.** Recognizing the need for change, the Government has initiated actions intended to stimulate reform in the water sector. In October 2004, the Ministry of Water and Power (MOWP) endorsed the draft National Water Policy (NWP) that is anticipated for approval by the full Cabinet in the second quarter 2005. Moving forward on the new NWP was a key recommendation of the ADB-supported Water Sector Strategy (WSS) study completed in October 2003.[2] Both the WSS and the draft NWP will require restructuring of institutional arrangements at the federal level to improve water resources management and sector strategic planning and policy analysis. Both the WSS and draft NWP call for development of an apex body for water resources management that would require significant capacity development.[3] The apex body would carry out expanded and improved strategic planning and policy analysis and help forge a consensus on a water sector strategy and master plan. The apex body would also develop a framework and common metrics for project assessment to ensure that infrastructure investment achieves maximum developmental impact. Development of the apex body and the capacity to ensure its effectiveness are key objectives of the Government and are necessary to improve infrastructure investment within the water resources sector.

6. **The Indus River System Authority (IRSA).** IRSA was established in 1992 by an act of Parliament to implement the 1991 Inter-provincial Water Accord. The Act established the five member IRSA Board with one member from each Province and one appointed by the Federal Government. The statutory powers and duties of IRSA include, among others, (i) establishing the basis for regulation and distribution of Indus waters among the provinces according to the allocations spelled out in the Water Accord, (ii) reviewing and specifying reservoir operation patterns, (iii) exchanging data among the provinces, and (iv) issuing consolidated operational directives to the Water and Power Development Authority (WAPDA) for making releases from reservoirs. IRSA has the potential to be the regulator that would be necessary to administer a system of secure, exchangeable water rights under which Indus waters are apportioned seasonally, but neither the Government nor the Provinces has supported the development of the required technical capacity within IRSA, full exercise of the power assigned to IRSA in current legislation, or the necessary changes in legislation. IRSA and WAPDA have jointly been implementing a project to install telemetry monitoring devices at 21 control points in the Indus water distribution system that would enable nearly real time data on flows and gate positions to be known everywhere in the system by all stakeholders. However, although the system is installed, there have been long delays in completing calibration and verification, and in working out the flow of data, creating the risk of loss of confidence and opposition to its use. To help improve management of the major water resources in Pakistan, it is important to strengthen and modernize IRSA's capacity to play a stronger role in managing Indus waters. In addition to IRSA

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[2] Under ADB. 1998. *Technical Assistance to the Islamic Republic of Pakistan for the Water Resources Strategy Study. Manila*.

[3] Alternately, MOWP has suggested that a new policy cell be established within the Ministry that would serve a similar role as the Apex Body.

capacity, overall data collection and management capability and technical options need to be reviewed, and management information systems put in place to support effective decision making for water management and investment planning.

7. **Key Issues in the Water Resources Sector.** The ADB-supported WSS and a more recent World Bank sector review[4] provide considerable analysis of the challenges and issues Pakistan must address in the future. Pakistan diverts an average of 103.8 million acre-feet of Indus River Basin flows (about 72% of the mean annual flow) through 16 barrages into 37 canals[5] to irrigate about 36 million acres. The system has only about 12.8 million acre-feet of storage, just about 12% of current use. Nevertheless, this storage is crucial because it provides 89% of the existing hydropower capacity, as well as the capacity for carry over of water from the high-flow summer season to the arid, low-flow winter season, enabling a major increase in annual cropping intensity.

8. The Indus River Basin is a major, complex hydrologic system that must be carefully managed, yet responsibility for managing the infrastructure is divided between the Federal and Provincial Governments. Water distribution to farmers and other users has always been a provincial responsibility in Pakistan, while interprovincial water management, including reservoir operation, has been a Federal responsibility. Major capital works such as new major dams and canals are normally built by the Federal Government, but operated by the provinces. They are an integral part of the provincial water distribution system. The management challenges at the basin or federal level include the following:

(i) Managing water resources in the upper basin, or "mountain tops", which involves better management of the supply in terms of both increased storage, reservoir operations, and monitoring the upper basin hydrology to improve both the predictability of supplies and the management of reservoirs; and

(ii) Managing the allocation and diversion of water from the Indus River and reservoir systems to each of the canal heads and in the lower Indus River below Kotri Barrage to improve the transparency and reliability of supply, and avoid economic losses and environmental damages.

9. The Provincial Governments are responsible for managing the water and infrastructure from the head gates where diversion takes place to the minor canal outlet that provides water to the farmer-owned watercourses and field channels. The management challenges at this level include (i) managing the performance of the canal network and the reliability of bulk water deliveries to the distributary and minor canal commands, (ii) monitoring and managing groundwater recharge and use, and (iii) managing drainage effluents. Issues of equity, efficiency and productivity become dominant within the distributary and minor canals, and within the watercourse network below the outlet.

10. The following challenges have also been observed with regard to water resources management. Irrigation considerations are vital in looking at water resources management since irrigation uses 95% of Pakistan's developed water supply. Water management with regard to

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4 World Bank. 2004. Pakistan Public Expenditure Review, Volume II, Accelerating Development of Water Resources and Irrigated Agriculture. *World Bank Report No. 25665-PK*. Washington, DC: World Bank.

5 Water is also diverted into 12 link canals, which connect the western and eastern rivers in the basin. These link canals were built as key elements of the Indus Replacement Works agreed as a part of the Indus Basin Treaty with India.

irrigation is also critical since irrigated agriculture (i) contributes 25% to Pakistan's gross domestic product, (ii) employs over 50% of the rural labor force, and (iii) directly or indirectly provides 60–70% of exports. Improving agricultural productivity is also vital to poverty reduction. The challenges facing the irrigation sector include the following.

(i) The surface water system is seriously aging. Some infrastructure is over 100 years old, and deferred maintenance has rendered the vital distribution system badly in need of modernization, replacement, and rehabilitation.

(ii) Soil salinity, sodicity, and waterlogging persists, with the serious risks of stagnating growth and that production will become unsustainable.

(iii) Water distribution is inefficient, unreliable, and inequitable, and operations and maintenance have suffered from low budgets and low cost recovery.

(iv) There is low accountability for service, little transparency, and excessive centralization.

(v) The lack of participation and empowerment of farmers, including their understanding of their rights and involvement in effective water control, has resulted in little incentive to conserve water, pay water charges, or respond to policy incentives or new technology opportunities that could increase productivity.

11. At the basin and federal levels, the water management challenges are strategic and no less daunting:

(i) Demand for water is rising as new area is added to canal commands, population grows, rural poverty persists, and farmer's profits are squeezed.

(ii) Water supply is vulnerable to the high variability of Indus River flow and drought. Only about 12% of supply comes from storage.

(iii) There is little or no additional groundwater to develop, and there is no mechanism in place to manage groundwater.

(iv) Depletion of storage capacity by sediment is resulting in slowly diminishing winter water supply and energy production.

(v) Both surface and groundwater quality is seriously degraded.

(vi) Pakistan is fast approaching the limits of its surface and groundwater resources, and it will be difficult to meet water demands across all sectors in the future.

(vii) The consensus on water and its development that existed in the 1960s has deteriorated into conflict, especially at the provincial level, and threatens progress in addressing needs in the sector.

12. **The Way Forward.** If the Government is poised to increase public investment in water resources and irrigation by 200–500% over the next 5 years as it has indicated, it must at the same time give equal urgency and meticulous attention to institutional, governance, and policy

issues. In doing so, it should address the key institutional and policy issues at both the federal and provincial levels.

13. At the federal level, the Government must address the lack of capacity and institutional focus on strategic planning and policy analysis. The Government needs to create a critical mass of technical talent and skills to take responsibility for (i) addressing the strategic questions and challenges, including the development of a modern, shared information system; (ii) developing new analytical models and tools such as GIS and remote sensing; (iii) enhancing the knowledge base; and (iv) providing planning support and assistance to the provinces that enable accelerated investment in the modernization of their distribution systems.

14. At the provincial level, if more rapid, equitable, and sustained growth is to be achieved, then investments in the modernization, rehabilitation, and expansion of water infrastructure must deliver more reliable water service to villages, towns, and cities, and to farmers, who in turn must be empowered to manage their canals and their water entitlement in ways that encourage and allow them to use water most productively. To do this, more accountability and transparency have to be introduced into the institutional arrangements for irrigation water management, and farmers have to be brought into the process meaningfully.

B. Uses of the TA Loan

15. **Selection of Subprojects.** The primary activity under the water resources sector component is implementation of the TAP, which represents the outcome of the ADB-supported WSS, the draft NWP, and TA 4435-PAK. The Government requested the TA loan to support implementation of the TAP, indicating the commitment to capacity development and reforms.

16. For programs and subprojects submitted for funding by provincial agencies, priority will be given to activities that support institutional reform and improved water resources management, as reflected in the WSS and the ADB water sector roadmap, such as groundwater management, regulation, and implementation plans, along with capacity development. Activities at the provincial level that can be linked to the TAP will also be given priority. Provincial governments also submitted requests to support feasibility studies for quick gestation infrastructure subprojects such as spate irrigation systems and small storage structures that supply water to communities currently without adequate access to water. All the indicative subprojects were identified as a part of the provincial planning process, involving the departments of irrigation and power, planning and development, and finance. Subprojects resulting from feasibility studies supported by the TA loan would have to be within the capacity of provincial agencies to implement and manage themselves.

17. **Overcoming Institutional Constraints in the Water Sector**. The primary task of the TA loan is to build capacity and strengthen institutions for water resources planning, development, and management within the concerned federal and provincial agencies. It is through this capacity building that these agencies will, over the medium term, most effectively initiate the preparation and implementation of major dams and other large water infrastructure. The TA loan will support implementation of a technical assistance program (TAP) that was initially recommended under the WSS and is now being designed in detail at the request of the Government under ADB TA.[6] The TAP will receive $4 million of the TA loan proceeds.

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[6] ADB. 2004. *Technical Assistance to the Islamic Republic of Pakistan for the Water Sector Irrigation Development.* Manila.

18. TA 4435-PAK is supporting MOWP to prepare the TAP, including its detailed resource requirements, in order to strengthen the institutional and legal framework in the water resources sector, and build new capacity for strategic planning and policy analysis for overall water resources management. The TAP will build professional capacity and skills at both the federal and provincial levels, and across all stakeholder agencies, focusing in particular on the implementation of the draft National Water Policy and providing assistance to implement it as well as strengthening new institutional arrangement and a technical secretariat to support it, by assisting the Government with the following activities *inter alia*: (i) recruiting staff and providing training for improved institutional arrangements to support the draft National Water Policy; (ii) providing national, regional, and international training opportunities; (iii) providing short- and long-term national and international consultants as required; (iv) providing funds for the unit to outsource special studies and related activities enabling it to tap into centers of excellence and expertise in the public and private sectors in Pakistan; and (v) providing funds to establish and equip a technical secretariat and its associated data and decision support systems, and to make it fully functional. Capacity development under the TAP will also support enhancement of Pakistan decision support systems for water resources management. This will include review of existing decision support systems such as IRSA's flow data telemetry system, other hydrological and hydrogeological monitoring systems, as well as metrological monitoring capacity. Recommendations to improve management of and technically upgrade decision support systems for water resources management at the federal and provincial levels will also be addressed under the TAP.

19. The TA loan will support the following activities *inter alia*: (i) assisting the Government with recruiting staff and providing training for technical support to help implement the draft NWP and WSS and to strengthen overall water resources management activities; (ii) providing national, regional, and international training opportunities for agencies such as the MOWP, PC, and Ministry of the Environment; (iii) providing short- and long-term national and international consultants as required; (iv) providing funds for the unit to outsource special studies and related activities for improved water resources management and investment planning and development through centers of excellence and expertise in the public and private sectors in Pakistan; and (v) providing funds to establish and equip the institutional arrangement to support the Water Resources Council, draft NWP, and WSS and needed associated data and decision support systems, and to provided needed technical and human resources to strengthen institutions to make them fully effective.

20. **Preparation of Irrigation Sector Subprojects.** Although they will be a critical part of Pakistan's medium- and longer-run water resources development, large dams and major, federally executed water projects, as well as large-scale canal rehabilitation programs at the provincial level, will not be prepared under the TA loan.[7] Rather, the TA loan will prepare quicker-gestation and relatively small-scale subprojects that can be implemented and managed entirely at the provincial level. TA loan funds amounting to $2 million will be split among the different provincial agencies, with $500,000 earmarked for each province, to be used for project preparation. The following indicative list of projects was provided by the provinces when the TA loan was prepared: Balochistan – (i) spate irrigation development studies; (ii) feasibility studies for small dams; and (iii) development of a groundwater management institutional framework and implementation strategy; Punjab – (iv) feasibility studies for small dams including an agricultural development component and (v) possible transbasin diversions or improved interlinking of the

[7] Proposed projects for canal and irrigation rehabilitation at the provincial level will be prepared under ADB grant-financed project preparatory TAs covering Punjab (2005) and Sindh (2006). Hence, these investments will not be covered under the TA loan.

existing canal system; Sindh – (vi) development of a strategy and long-term plan to prioritize investments as well as identify capacity needs and requirements for institutional reforms in the water sector; (vii) capacity development for farmer organizations to manage irrigation systems; and (viii) technical studies for management of groundwater; North-West Frontier Province – (ix) development of a regulatory framework and implementation strategy for groundwater management; and (x) feasibility studies for spate irrigation and small dams.

C. Costs and Financing Plan

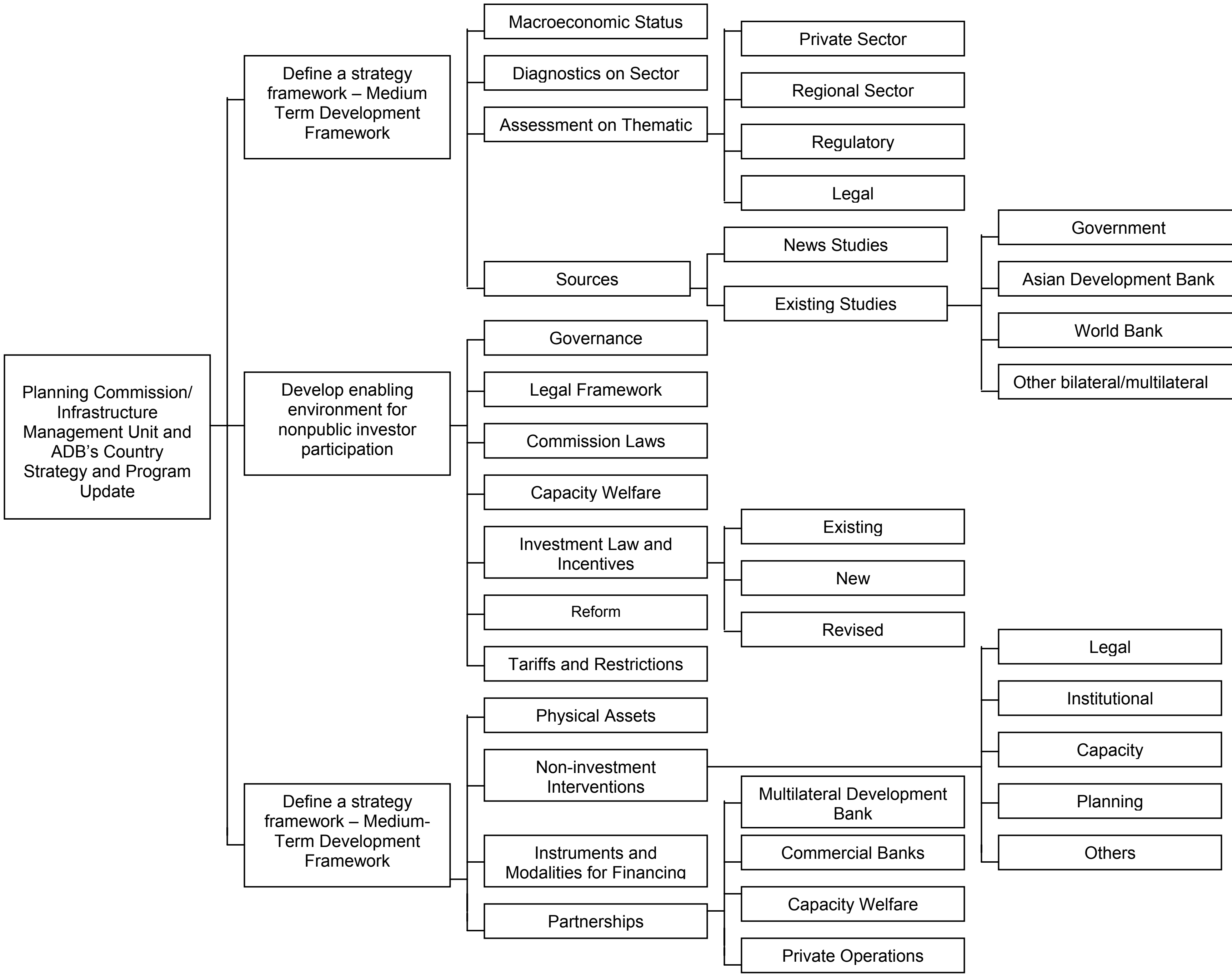
21. The total cost of the water sector component has been estimated at $8.00 million, with the foreign exchange costs and local currency costs estimated at $4.24 million and $3.76 million, respectively. The proposed ADB loan will finance $6.0 million, which will cover the foreign exchange costs and $1.76 million of the local currency costs. The Government undertakes to finance domestic currency costs amounting to $2.00 million equivalent, covering office accommodations for the consultants, facilities for workshops and seminars, remuneration of counterpart staff, transportation arrangements for field visits, and other costs that may arise in subproject preparation. Detailed cost estimates are shown in Table 1.

Table 1. Cost Estimate and Financing Plan – Water Sector
($ million)

Item	Foreign Exchange	Local Currency	Total Cost
A. Asian Development Bank Financing			
1. Consultants Services	3.14	1.56	4.70
2. Equipment	0.20	0.10	0.30
3. Training	0.40	0.10	0.50
4. Contingencies	0.50		0.50
Subtotal (A)	**4.24**	**1.76**	**6.00**
B. Government Financing			
1. Administration, Taxes, and Duties	0.00	2.00	2.00
Subtotal (B)	**0.00**	**2.00**	**2.00**
Total	**4.24**	**3.76**	**8.00**

Source: Asian Development Bank estimates.

TA LOAN FOR INFRASTRUCTURE DEVELOPMENT – SCHEMATIC OVERVIEW



ORGANIZATIONAL CHART
SECTOR COMPONENTS

TA LOAN FOR INFRASTRUCTURE DEVELOPMENT

ADMINISTRATION AND PROJECT IMPLEMENTATION

- Planning and Development Division
  - Infrastructure Management Unit
    - Project Director
    - Project Staff

Enabling Environment for Infrastructure Investments

- Allocation: $1.25 million
  SSTA: $150,000
- Diagnostic Study identifying investment constraints
- Preparation of subprojects removing constraints
- Execute subprojects removing constraints
- Implementing agency: IMU

Power Sector:

- Allocation : $6.75 million
- Subprojects : 7
  - Institutional
  - Capacity Building : 2
  - Project Preparation : 5
- Implementing Agencies
  - MOWP
  - NTDC
  - PPIB
  - PC

Transport Sector:

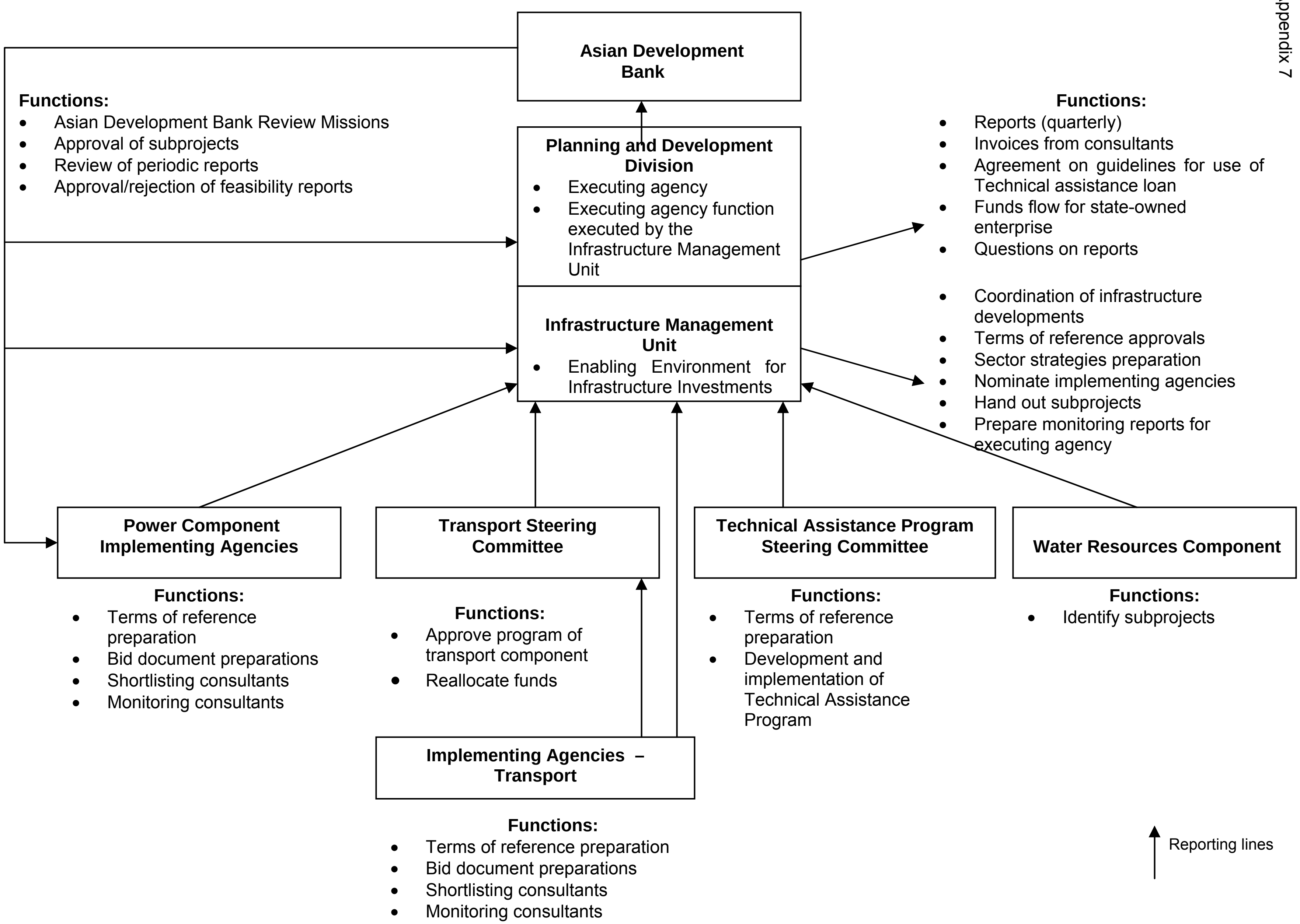
- Allocation : $11.0 million
- Subprojects : 8
  - Institutional : 2
  - Capacity Building : 1
  - Project Preparation : 5
- Implementing Agencies
  - NHA
  - MOLG
  - MOR
  - MOPS

Water Sector:

- Allocation : $6.0 million
- Subprojects : 6
  - Institutional : 1
  - Capacity Building : 1
  - Project Preparation : 4
- Implementing Agencies
  - MOWP
  - Provincial Irrigation and Power Departments of Balochistan, Punjab, Sindh and NWFP

IMU = Infrastructure Management Unit, MOLG = Ministry of Local Government, MOPS = Ministry of Ports and Shipping, MOR = Ministry of Railways, MOWP = Ministry of Water and Power, NHA = National Highway Authority, NTDC = National Transmission and Despatch Company, PC = Planning Commission, PPIB = Private Power and Infrastructure Board.

PAKISTAN: INFRASTRUCTURE TECHNICAL ASSISTANCE LOAN
PROJECT FLOW DIAGRAM



SUBPROJECT PROPOSAL FORM

1. The IA will prepare the following proposal per subproject for utilizing of the TA Loan inclusive detailed cost estimates.

1. Name of the Project and IA:	
2. Project Description: (short and concise) • Background: • Purpose: • Components: • Expected results:	
3. Project Areas:	
4. Development Plan: (Reference to Government Development Plan or sector strategies and/or plans.) • Development Plan: • ADB lending program (CSP/CSPU): • Other agreement:	
5. Cost Estimates and Proposed Financing Arrangements:	
6. Facility Type • Expected year of ensuing loan/ investment: • Expected amount of ensuing loan/ investment:	(i) Institutional Capacity Building (ii) Feasibility Study (iii) Detailed Design and Bidding Document (iv) Procurement Assistance
7. Contact Details:	Name of Project Director: Address: Email: Phone:
8. Clearances: • Name and signature of the Head of IA:	
• Date approved by the Head of IA:	
• Name and signature of the Director of EA:	
• Date approved by the Director of EA:	
9. ADB-Funded PPTA Number and Title, if any:	
10. Status of PPTA or Feasibility Study (if applicable): • PPTA or feasibility study duration: • Draft final report: • Environmental impact assessment: • Resettlement plan: • Other studies:	
11. Status of investment project processing (if applicable): • Status of PPTA or feasibility study: • Date of fact-finding mission: • Date of expected approval: • Expected commencement of facility use:	

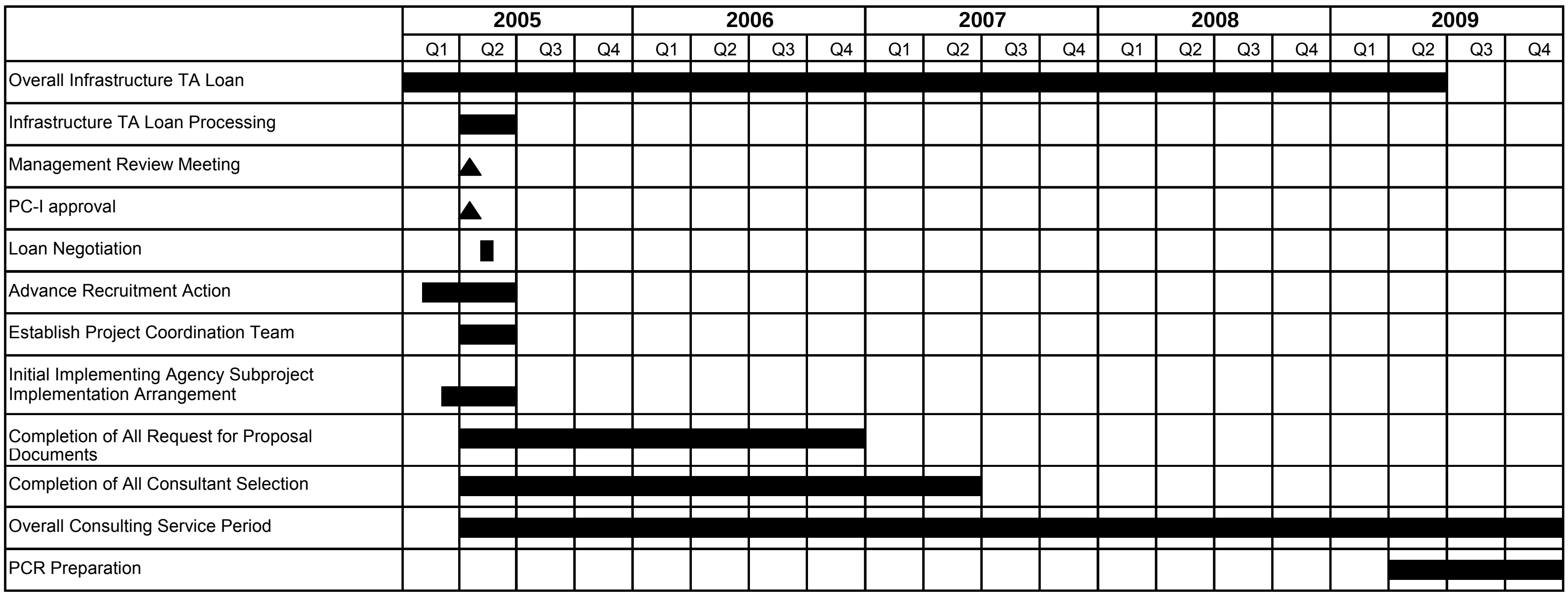
ADB = Asian Development Bank, CSP/CSPU = country strategy and program/country strategy and program update, EA = executing agency, IA = implementing agency, MOU = memorandum of understanding, PPTA = project/program preparatory technical assistance.

2. The IA will provide the EA with detailed terms of reference for consulting services and the detailed cost estimates.

Table A8.1: Sample Format of Cost Estimates
($)

Item	Foreign Exchange	Local Currency	Total Cost
A. Asian Development Bank Financing (about 75%)			
1. Consultants			
a. Remuneration and Per Diem			
i. International Consultants			
Number of Person-Months			
ii. Domestic Consultants			
Number of Person-Months			
b. International and Local Travel			
c. Reports and Communications			
2. Equipment (computer, printer, etc.)			
3. Surveys			
4. Miscellaneous Administration and Support Costs			
5. Contingencies			
Subtotal (A)			
B. Government Financing (about 25%)			
1. Office Accommodation and Transport			
2. Remuneration and Per Diem of Counterpart Staff			
3. Others			
Subtotal (B)			
Total			

IMPLEMENTATION SCHEDULE[a]



PC-1 = Planning Commission Document I; TA = technical assistance.

[a] A separate detailed implementation schedule will be developed for each subproject, and approved by the EA and ADB.

OUTLINE SMALL-SCALE TECHNICAL ASSISTANCE FOR SUPPORT OF INFRASTRUCTURE INVESTMENTS

A. Introduction

1. **Background**. The Government of Pakistan (the Government) has undertaken significant activities to support and promote infrastructure investment. In March 2005, the Planning Commission (PC) released its Medium Term Development Framework (MTDF) for public review with approval expected in June 2005. The MTDF provides development objectives and a strategic framework for Pakistan from 2005 to 2010, and it addresses infrastructure needs for those sectors to be addressed by the ADB Technical Assistance Loan for Infrastructure Development (the Project); i.e. power, transport; and water resources and irrigation. The MTDF will provide the foundation for the Project through its focus and elaboration on (i) infrastructure needs for the relevant sectors; (ii) legal and regulatory issues; (iii) public private partnerships; and (iv) macroeconomic considerations.

2. Although the Government has made substantial progress in defining needs and developing a plan for sector investments in power, transportation, and water resources, the enabling environment for infrastructure investments for the private sector, multilateral and bilateral development agencies needs strengthening. Some of the challenges facing infrastructure investment by nonpublic agencies include investor protection, sector and investor legal and regulatory fairness and consistency, property rights, transparency of sector policy frameworks, strategic direction and sector development, overly bureaucratic regulations and procedures, monetary stability and exchange regulations, and efficient contract enforcement. To help address these investment constraints faced by private sector and external development assistant, the Project includes a component, enabling environment for infrastructure investments, for $1 million to help eliminate infrastructure investment constraints and ameliorate the overall investment climate for energy, transport, and water resources infrastructure. However, assistance is needed to most effectively develop and implement a program to improve the enabling environment for infrastructure investments.

B. Scope

3. **Objective**. The objective of the small-scale technical assistance (the TA) to support the Project is to assist identification and implementation of interventions to strengthen the enabling environment for infrastructure investment by nonpublic entities. The TA will have three components: (i) investigation and diagnostic work for constraints to infrastructure investment; (ii) development of subproject using the $1 million in funds from enabling environment component to address constraints identified; and (iii) assistance in implementation of subprojects and dissemination of their results.

4. **Diagnosis**. The identification and diagnosis of constraints to investment will involve review of literature and current government policies and procedures. This would draw upon previous work studies by ADB and other foreign and domestic institutions. Diagnostic work would also include formal and informal discussions with investment stakeholders to solicit their views. The goal of this TA component is to identify gaps in addressing infrastructure investment constraints and develop a prioritized list of constraints to be addressed. The types of interventions to be identified would include such activities as policy and legal reforms, improved access to information, sector-specific studies, and capacity development activities.

5. **Development of Interventions**. The specific interventions to be developed under the TA will focus on finding ways to resolve the constraints identified during the diagnostic phase. The interventions will be prioritized, but most likely several of the interventions will be executed on a parallel basis. The TA will develop TOR and implementation arrangements for the prioritized list of interventions. The $1 million in funds allocated to the enabling environment for infrastructure investments component will be used to support the interventions. Wherever possible, cofinancing opportunities will be sought with development partners and other interested stakeholders to leverage funds. Interventions will be developed and implemented until the $1 million in funds are exhausted.

6. **Implementation of Interventions**. The TA will also provide management oversight to implement the developed interventions. This will include calls for expressions of interest; recruitment of consultants; project management; quality control over outputs; and monitoring and evaluation. An important aspect of this activity will be the wide dissemination of results and support to ensure that intervention outputs results in a meaningful change to the enabling environment for infrastructure investments. This will include direct dialog with relevant federal and provincial government ministries and agencies, workshops, and distribution of position papers and publications.

C. Expertise, Implementation Arrangements, Cost Estimates, and Financing Plan

7. Two domestic consultants will be recruited for 16 months each over a period of 2 years for a total of 32 person-months. The consultants will be engaged in accordance with *ADB's Guidelines on the Use of Consultants*. Consultants will have expertise in (i) infrastructure investments; (ii) institutional reform; (iii) project management; and (iv) with ADB and government procedures for recruitment and contracting of consultants.

8. In terms of implementation arrangements, the Infrastructure Management Unit (IMU) of the PC, which will be responsible for overall management of the Project, will also be responsible for the implementation of the TA. Staff from the IMU will be assigned to and support the TA consultants, and other PC staff will be seconded on an ad hoc basis as needed to assist the TA consultants.

9. The total cost of the TA is estimated at $190,000 equivalent, comprising $5,000 in foreign exchange and $185,000 equivalent in local currency. ADB will finance $150,000 equivalent on a grant basis from ADB's TA funding program to cover the entire foreign exchange and $145,000 equivalent of the local currency cost. The Government will finance the remaining local currency cost amounting to $40,000 for (i) office accommodation and utilities; (ii) counterpart staff support; and (iii) workshop facilitation as needed.

COST ESTIMATES AND FINANCING PLAN
($'000)

Item	Foreign Exchange	Local Currency	Total Cost
A. Asian Development Bank (ADB) Financing[a]			
1. Consultants			
a. Remuneration and Per Diem			
i. Domestic Consultants	0.0	128.0	128.0
b. Local Travel	0.0	5.0	5.0
2. Office Expenses[b]	5.0	5.0	10.0
3. Contingencies	0.0	7.0	7.0
Subtotal A	**5.0**	**145.0**	**150.0**
B. Government Financing			
1. Office Accommodation	0.0	6.0	6.0
2. Remuneration and Per Diem of Counterpart Staff	0.0	30.0	30.0
3. Workshop Facilitation	0.0	4.0	4.0
Subtotal B	**0.0**	**40.0**	**40.0**
Total	**5.0**	**185.0**	**190.0**

[a] Financed by ADB's technical assistance funding program.
[b] Office expenses include purchase of equipment (i.e. computers, copy machine, fax machine).
Source: ADB estimates.

SUMMARY POVERTY AND SOCIAL ANALYSIS REPORT

A. Linkages to the Country Poverty Analysis

Sector identified as a national priority in country poverty analysis? Yes	Sector identified as a national priority in country poverty partnership agreement? Yes

Contribution of the sector/subsector to reduce poverty in Pakistan
Limited capacity and access to, as well as poor condition/ageing of, infrastructure assets and services are among the main constraints preventing poor people from gaining access to economic opportunities and good-quality services. An efficient infrastructure network consisting of water resources, roads, and electricity will provide raw materials for increased production, stronger linkages between remote and poor regions, and access to more developed markets. Removal of the physical bottlenecks in infrastructure sectors and improved capabilities within infrastructure institution will improve the overall performance of infrastructure services, thereby alleviating these constraints and reducing poverty.

B. Poverty Analysis — Targeting Classification: General intervention

The technical assistance Loan (TA Loan) provides only a financing facility for the Government to undertake institutional capacity building within the infrastructure institutions in Pakistan and prepare feasibility studies and detailed design for follow-on infrastructure projects. The poverty analysis will be conducted by using the TA Loan for the follow-on projects, even if these projects are not be financed by ADB.

C. Participation Process

Stakeholder analysis? Yes. The policy and institutional reform program in the road sector was developed on the stakeholder analysis prepared under a technical assistance.[1]

Participation strategy? Yes. The reform program was developed through stakeholder participation, including government agencies to be reformed, private sector, chamber of commerce, civil society, contractors association, engineers association, and labor unions. Selection of the roads to be improved was based on social requirements, road conditions, and economic importance. Community consultations were carried out to determine selection priority, including engineering solutions to exclude all resettlement impacts. Based on technical requirements, opportunities for local communities to work on the civil works, particularly earthworks, will be incorporated.

D. Gender and Development

Strategy to maximize impacts on women: Gender analysis will be part of the feasibility studies undertaken as components of the TA Loan. The TA Loan itself does not have such a strategy.

Gender plan prepared? No

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[1] ADB. 2000. *Technical Assistance to the Democratic Socialist Republic of Sri Lanka for Re-engineering of Road Sector Institutions.* Manila.

E. Social Safeguards and other Social Risks

Item	Significant/ Not Significant/ None	Strategy to Address Issues	Plan Required
Resettlement	None	The TA Loan only provides a financing facility for subprojects, and the subprojects are either institutional capacity building initiatives or project preparation for follow-on infrastructure projects. Resettlement issues will be assessed when each follow-on loan is processed, following ADB and government policy and procedures.	None
Indigenous Peoples	None	Please see above.	No
Labor	None	Please see above.	No
Affordability	None	None	No
Other Risks/ Vulnerabilities	None	None	No