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GOVERNMENT OF PAKISTAN MINISTRY OF FINANCE

INFRASTRUCTURE PROJECT DEVELOPMENT FACILITY

Overview

The development and maintenance of public infrastructure is strongly advocated as the key to sustainable economic development and growth. Strong macroeconomic evidence on the infrastructure-economic growth nexus implies the need for augmented efforts on the part of developing economies to ensure improved access and quality of infrastructure services. In the present context of a multiplying population and a rapidly industrializing economy, the Government of Pakistan faces the monumental challenge of adequate infrastructure delivery. The limited fiscal space and gaps in public sector capacity to undertake infrastructure projects justifies the potential for private sector involvement. One such strategy that has proved its viability and success, especially in the developed half of the world, is Public Private Partnerships (PPP) in infrastructure sector.

In order to structure a comprehensive PPP program for Pakistan, the Government of Pakistan established the Infrastructure Project Development Facility (IPDF) under the umbrella of the Ministry of Finance to provide expertise and hands-on support to Public Institutions (Line Ministries, Provincial Governments, Local Bodies, and State Owned Enterprises). IPDF's spectrum of projects ranges from transport and logistics, urban mass transit, municipal services, Social Infrastructure as well as small to medium scale energy projects.

. IPDF is **tasked** to provide;

1. PPP enabling framework comprising of guidelines and standardized PPP provisions
2. Additional infrastructure services by building much needed infrastructure under PPP modality to meet immediate service demands of citizens
3. Improved the quality of existing infrastructure
4. To ensure the provision of affordable services to people
5. Easy and timely access for Institutions
6. Ensure that viable good quality PPP deals are concluded in a timely manner with private financing from local and international markets
7. To structure projects in a manner to ensure proper risk allocation
8. To promote, facilitate the public sector, structure the regulatory, contractual and legal framework for the projects

9. Development and dissemination of PPP policy and related regulatory guidelines.

As the central PPP unit of the country, IPDF is responsible for the development and implementation of PPP projects. It provides 'hands-on' technical assistance to implementing agencies at all tiers of the Government in developing Infrastructure Projects,

Structuring of Projects

IPDF divides the process of project structuring into three phases, Inception, Feasibility study and Procurement respectively. At "Inception phase" IPDF explores PPP options, assigns a project manager, prepares TOR's for appointment of Transaction Advisor (TA) and Negotiates/ finalizes the contract with Transaction Advisor. At "Feasibility phase" TA prepares a feasibility study based on selected option, which may suggest any requirement for viability gap funding or concessionary requirements; hence determines the final PPP design parameters. While at "Procurement Phase" project RSOQ's for potential investors floated in the market and subsequently; RFP is issued to the pre-qualified investors. Finally, IPDF evaluates the proposals of bidders, Select preferred bidder and finalizes the terms of agreement.

IPDF Boards of Directors

As per its Memorandum and Articles of Association, IPDF's Board is chaired by the Federal Minister for Finance and Revenue. IPDF has an independent Board of Directors; consisting of six Directors, out of which three Directors are eminent professionals from the private sector representing non-governmental organizations, research, banking and legal professions. The Directors are nominated by the Government of Pakistan.

PAKISTAN PPP POLICY

IPDF has worked in close association with the Asian Development Bank in drafting the 2007 Public Private Partnership policy for Pakistan. The PPP policy was approved by the ECC of the Cabinet in November 2007. In 2009, this policy was revised to include detailed referencing to the legal and financial framework which dictates the PPP program in Pakistan.

The 2007 / 2009 Policy is in line with deregulation & liberalization reforms of Government. It communicates the overall PPP Program structure comprising of Task Force, Infrastructure Project Development Facility, Infrastructure Project Financing Facility, Viability Gap Fund and Risk Management Framework all based on international best practice and national experience. It aims to provide a structured approach for infrastructure development in shape of a PPP project life cycle.

The PPP policy's primary objective is: **More services, Better services, Affordable services, and Timely services.** This objective is to be achieved through faster project implementation, leveraging of public funds, enhanced **accountability and transparency** and a shift in public sector management.

The 2009 policy delves more deeply into the specific role of the public and private sectors within a PPP arrangement, defines the role of each relevant institution (MoF, IPDF, Planning Commission and Line Ministries). It also comprises the detailed financial framework that is to be applied in the development of a project through PPP modality. The policy also defines the legal framework in detail and establishes a more comprehensive risk sharing and risk mitigation framework.

The policy covers the following sectors:

- **Transport & Logistics;** including provincial and municipal roads, rail, seaports, airports, fishing harbors as well as warehousing, wholesale markets, slaughter houses and cold storage
- **Mass Urban Public Transport;** including buses, and intra and intercity rail
- **Municipal Services;** including water supply and sanitation; solid waste management; low cost housing, and health / education facilities
- **Small Scale Energy Projects;** hydroelectric and captive power generation projects - other than those being facilitated by Private Power Infrastructure Board (PPIB) and the Alternative Energy Development Board (AEDB).
- **Social Infrastructure;** schools, hospitals, universities

PROJECT SYNOPSIS

The Government of Pakistan recognizes the importance of improving and expanding infrastructure services for sustaining economic and social development in its **Medium Term Development Framework (MDTF) 2005-2010**. Pakistan's infrastructure needs are massive and its resources are limited. Not only is there limited fiscal space, there are also huge gaps in public sector capacity to build and operate infrastructure. Due to a growing population, rising income and increased social awareness, there is a huge demand for infrastructure projects in Pakistan. The Government of Pakistan understands the importance of private sector participation in meeting with the challenges of infrastructure development in Pakistan. The **Public Private Partnership (PPP)** program of Pakistan has taken a front seat in promoting private sector participation in various infrastructure projects.

Infrastructure Project Development Facility (IPDF) was established as central unit under the aegis of **Ministry of Finance** to facilitate various line ministries and other government agencies in the structuring of infrastructure projects on PPP basis. IPDF's current pipeline comprise **mass transit, water reservoir, communication sector, solid waste management and water supply, real estate development, ports, healthcare and education sector** projects. IPDF assists the respective implementing agency right from origination to attaining the financial closure of the project. All these sectors represent lucrative investment opportunities for the private sector investors. While structuring these projects on PPP basis, it is ensured that once the projects come to the market for private sector participation, they are highly bankable and offer attractive return on the investment of the private sector.

Under the communications & logistics sector, Ministry of Commerce and Pakistan Horticulture Development and Export Board is working on the establishment of **Cool Chain System under the National Trade Corridor (NTC)**. A US\$ 153 million project, it aims to improve post harvest management for fruits and vegetables by the introduction of cold stores, pack houses and reefer yards. The project will be rolled out in two clusters namely "Baluchistan-Sindh" and "Punjab-NWFP". The return for this project is highly attractive for private sector investors. Karachi Port Trust is establishing the **Karachi Harbor Crossing** project on PPP basis. An estimated US\$ 416 million project, it aims to connect Pakistan deep water container port with main arteries of road network. Having a length of 13.5 km, the project comprises cable stay bridge across the channel with 470 m span and 65 m air draft to cater for shipping traffic under it. The project offers attractive returns to the private investor. KPT is also in the process of structuring the **KPT Maritime Enclave-77** on PPP basis. Maritime Enclave-77 development is planned to be a 78 storey building with four low level residential towers, a convention center and a shopping mall. Established on 12.8 acres of land, the total cost of the project will be around US\$ 500 million. A project being implemented by Karachi Port Administration, **Cargo Village and Industrial Park** will be located in the northern part of the western back waters, west of Karachi Fish Harbor and south of the Macchar and Mohammadi Colony

on an area of 534 hectares. National Highway Authority is structuring roads and highways projects on various PPP modalities. These projects include **Karachi Northern Bypass (M-10)**, **Rawalpindi Flyover (N-5)**, **Karachi, Muzaffargarh-D.G Khan (N-70)**, **Lahore Southern By-pass and Overhead Bridge at Habibabad**. The total cost of these projects is around US\$ 500 million. Historically, highways and roads projects have offered high returns to private investors. All the afore-mentioned road and highways are located in prime location with high traffic flow due to which the private investors will be able to garner high returns on these projects. National Industrial Parks Development & Management Company is establishing **Karachi Creek Industrial Park** on 240 acres of land. This industrial park will cater to small & medium enterprise and will include industry clusters as well as a commercial epicenter. The total project cost is estimated to be around US\$ 18 million. Port Qasim is actively seeking participation by private sector in **Dualization of Main Excess Road, Flyover and LNG Floating Terminal** project. Both these projects aim at the development of the port infrastructure in Pakistan. Due to strategic geographical location of Pakistan, Port Qasim is set to become an important port in the region. Private sector is expected to earn high rate of return on investments in Port Qasim.

In the solid waste management and water supply network, currently two projects are being structured on PPP modality. The City District Government Faisalabad and the Urban Unit is establishing an **Integrated Solid Waste Management** system in four towns of Faisalabad with a population of approximately 2.78 million. The total cost of the project is around US\$ 27 million. The project is forecasted to offer high returns to the private investors. The other project is being implemented by Capital Development Authority. A US\$ 122 million project, it involves the **Rehabilitation of Water and Waste Water in Islamabad**.

In the healthcare sector, Pakistan Institute of Medical Sciences (PIMS) is establishing National **Institute of Dentistry** and **Center for Liver Disease and Organ Transplant**. Each of these projects costs around US\$ 5 million. Owing to their specialized and one of a kind nature in the country, these projects will represent lucrative investment opportunities for the private sector.

In the mass transit sector, the Ministry of Railways and Karachi Urban Transport Company (KUTC) is working on the revitalization of **Karachi Circular Railway (KCR)** to a modern mass transit commuter system at a total cost of US\$ 1.56 billion. It is envisaged that for the operation & maintenance of KCR a private party will be procured. Private sector will also be able to participate in real estate development and construction of stations as well as auxiliary facilities. Established in the heart of one of the largest cities in Pakistan, KCR will provide private sector with an unparalleled opportunity to participate in the growth of a burgeoning metropolis.

NATIONAL TRADE CORRIDOR COOL CHAIN SYSTEM

The **horticulture sector** in Pakistan contributes 12% to national agricultural GDP of Pakistan. Additionally it holds great potential for increasing national export and offering substantial employment opportunities. However growth and profitability of the sector is restrained due to lack of adequate post-harvest management and transport infrastructure resulting in 30%-40% post-harvest losses. Due to dearth of proper packing and testing facilities, only 4% of the total produce is exported at less than 50% of the going international market rate.

To ameliorate this situation, Pakistan Horticulture Development and Export Board (PHDEB) - Ministry of Commerce, has decided to establish the Cool Chain System (CCS along the **National Trade Corridor** (NTC). The CCS will comprise of three components:

1. Cold Stores will maintain the optimal storage temperature of produce. A total of 23 independent cold stores are proposed to be built under the CCS project.
2. Pack Houses will facilitate washing, grading, sorting and packing of fruits and vegetables to prevent the produce from being contaminated. A total of 39 pack houses with cold storage facilities are proposed to be built.
3. Reefer Yards will provide parking facility for refrigerated and controlled atmospheric containers used to transport produce from one place to another. A total 2 reefer yards would be established one each in Karachi and Lahore

This integrated cool chain will not only reduce the post harvest losses but will also improve the shelf-life and quality of fruit making it more suitable for and valuable in, the international market.

Total cost of the project is approximated at **US\$ 153 million**. With incentive of bringing in private sector efficiency and technological know-how, the project is being developed on Public-Private Partnership basis. Pakistan's central PPP unit, the Infrastructure Project Development Facility (IPDF) is facilitating PHDEB, Ministry of Commerce to develop CCS along the National Trade Corridor (NTC) under the PPP concept.

Project Update: The project feasibility report has been completed by the transaction advisor as of December 2009. The project is nearing the end of the transaction structuring phase and is now entering the transaction structuring phase. Of the ten options presented by the transaction advisor, two options have been short-listed: Provincial Mix without Labs and Consolidated without labs. Under 'Provincial Mix less Testing Labs' option, the project is expected to be rolled out at a cost of **US\$ 148 million** collectively with Punjab-NWFP costing **US\$ 89 million** and Baluchistan-Sind costing **US\$ 59 million** while the 'Consolidated less Testing Labs' option costs US\$ 153 million.

Projected returns on both options are highly attractive with **equity IRR** ranging from **41% to 46%**, and the **pay-back** period on both options being less than **6 years**.

FAISALABAD SOLID WASTE MANAGEMENT PROJECT

Solid waste Management in the rural and urban areas stands as one of the key challenges in the infrastructure sector of Pakistan. In Pakistan the general rate of waste generation on average from all municipal controlled areas varies from 0.283 kg/capita/day to 0.613 Kg/capita/day or from 1.8906 kg/house/day to 4.29 kg/house/day. In particular context of Faisalabad; the reliable estimates shows the generation of approximately 924.3 tons of waste per day (0.391 kg/capita/day). The waste collection ration in the city is not more than 54%. Regarding potential of recycling, Faisalabad has recycling ratio of 18.1%, producing 50,189 tons of recyclable waste each year and generating gross and net amounts of **income** i.e. PKR 547.4 (**USD 6.8**) million and Rs. 273.7 million respectively. Presently waste is being disposed off into low lying areas like ponds etc; without giving any treatment except separation of recyclables by scavengers.

In order to address the challenge of solid waste management in the city, the City District Government Faisalabad (CDGF) has shown interest towards designing and development of appropriate Public Private Partnership (PPP) Model. This model may satisfy all the technical, environmental, social, financial and legal aspects of solid waste management; improve operational efficiency as well as provide affordable service to the citizens of Faisalabad. The Infrastructure Project Development Facility (IPDF) is the main facilitator, providing technical, financial, legal and other support to CDGF for timely implementation of this project. Salient features of the project are mentioned below:

Implementing Agency of this project is City District Government Faisalabad. Four Urban Towns (Jinnah, Lyallpur, Iqbal & Madina Town) to be covered under FSWM Project, while Population of 4 towns is 2.78 million, Project Area is approximately 1,351 kilometers. The total **Project Cost** is approximately **US\$ 40 Million**. The Project Scope covers Collection, Transportation, Treatment and Landfill Management. Whereas Waste collection is classified into Waste involves residential and commercial sectors, excluding industry, hospitals and agriculture. In order to structure this project IPDF hired M/s Earnest & Young Pakistan as a Transaction Advisor.

Transaction Advisor submitted "Need & options Report" to IPDF identifying different options for the rolling out of the project. IPDF vetted this report and furnished their comments to TA. The modified version of the report has been submitted by TA to IPDF, which was sent to CDGF for its feedback. A Meeting held between TA, CDGF, Urban Unit (UU) and IPDF in Faisalabad on December 22nd, 2009 to review the report. TA was accordingly advised to conduct Waste Characterization Study based upon latest data available. This study has now been finalized and the fresh version of Need & options Report will be submitted in the Month of January 2010. TA has committed that once this report is finalized, the Feasibility Study will be completed in couple of weeks.

CENTER FOR LIVER DISEASE AND ORGAN TRANSPLANT (CLOT)

The project aims at setting up a dedicated and autonomous centre providing tertiary level treatment facility to patients with liver diseases. Liver related diseases are amongst the most highly occurring health problems in the country. Currently there are 16 million individuals suffering from liver related illnesses with **4 million in need of liver transplants**. In Islamabad alone there are 100,000 liver patients with 20,000 needing transplants. Such patients thus far have been left with no option than to get treatment and transplants from medical institutions in other countries; US, Japan, Singapore, China and India, as there are no transplant or dedicated liver treatment facilities in Pakistan.

The Centre for Liver Disease and Organ Transplant (CLOT) has been envisioned as one such dedicated state-of-the-art facility to be established in Islamabad on the premises of Pakistan Institute of Medical Sciences (PIMS). The total **capital cost** of the project is estimated to be **USD 8.9 million**. The hallmark of the project as envisioned by the Ministry of Health and PIMS, is the setting up of a viable and sustainable liver transplant program of international standards. The project will entail the following:

1. A new building block within the premises of PIMS with a minimum capacity of 50 beds, 2 operation theatres, an ICU, an out patient clinic and transplant related hepatology, pathology and radiology support services.
2. Induction of surgeons, anesthetists and other specialized staff.
3. Procurement of all necessary equipment required for liver transplant surgery and related therapeutic and diagnostic interventions
4. Induction of Administrative and general management staff for independent working of the centre.

It is estimated that there are approximately 10,000 potential transplant patients every year. While the treatment costs in competing international facilities range from USD 350,000 (US) to USD 60,000 (India), CLOT aims to charge USD 30,000 for the same treatment. Annual Operations and Maintenance cost for the project is estimated at **USD 1.8 million** for the first year and lower for the consequent years.

The project, due to lack of technical know-how is to be implemented on a PPP basis with PIMS and Ministry of Health providing 2000 sq yards of land, all necessary infrastructure including roads, communication, water, power, gas supply and sewerage connections. Additionally the PIMS facility will also provide waste disposal. The private investor will be liable for financing all areas of capital investment, procurement of debt, and recurring expenditure from operations of the facilities. The private operator will also be responsible for hiring and inducting staff.

Given the absence of comparable facilities in the country and demand for such a facility, the project promises to offer lucrative returns to investors.

NATIONAL INSTITUTE OF DENTISTRY

Pakistan Institute of Medical Sciences (PIMS) established in 1986 with 5 dental surgeries in Islamabad Hospital (IH) and one dental surgery in Children Hospital (CH). Over the years the number of patients has increased many folds and existing facilities for dental department are therefore insufficient. Moreover, many modalities of dental treatment still cannot be provided to the patients because of the lack of technical facilities and manpower.

PIMS has very vast catchments areas ranging from Jhelum to Nowshara, Murree, AJK and Gilgit-Baltistan. Currently there is no Postgraduate Dental Institution in our country. The National Institute of Dentistry (NID), first of its kind will fulfill the following objectives:

- Approximately 128,000 patients per annum will be examined, investigated and treated in the dental institute.
- Teaching and training of FCPS/MDS students in each specialty of Dentistry.
- Conduct short term courses in various fields of dentistry.
- Carry our research regarding existing nature of dental diseases, prevention and their management and produce regular publications.
- Teaching/training of dental auxiliary staff i.e. dental hygienist, dental nurses etc.
- Start a BDS program in the near future.

Project total cost is approximately US\$ 6.82 million. The **revenue** estimated from this project is approximately **USD 1.45 million**, the number of patients rush to this facility is estimated to be 400-450 per day.

Following is the list of services which will be offered by National Institute of Dentistry (NID) facility:

- Dental O.P.D. / Filter Clinic (Orthodontics)
- Dental Radiology (Prosthetic)
- Operative Dentistry (Periodontology)
- Oral & Maxillofacial Surgery (Oral Medicine)
- Anesthesiology (Oral Pathology)
- Electro Medical Engineering

ISLAMABAD WATER AND WASTE WATER NETWORK REHABILITATION

Currently Islamabad district derives water from three sources: Simli dam, Khanpur Dam and ground water derived from tube wells. With the ICT region's population growing at an average of 3% per annum, the water supplied is meeting only 60% of the demand. The water shortage has resulted in intermittent supply; leading to low pressure in distribution channels which combined with the deterioration on the pipelines has resulted in seepage from sewerage system and contamination of potable water. The current demand stands at 115 MGD (millions of gallons per day), while the average supply is at 73 MGD.

To overcome the shortage and contamination, CDA has decided to rehabilitate the water and waste water supply network and to integrate an additional source of water from the Indus river system. The total **project cost** is estimated at PKR 10.44 billion (**USD 124.3 million**) With O&M cost estimated at PKR 140 million (**USD 1.6 million**) per annum. The project aims to connect an additional (30 sectors with 500 houses each) 150,000 households and provide uninterrupted water supply at sufficient pressures to eliminate the needs for water pumps to overhead storage. This will reduce the power usage. The scope of the project also includes installing bulk water metering which will charge the users on the amount of water used. It is expected that water usage will become more judicious as a result of this. In addition, the new pipe network is also to be laid out and the existing network to be replaced. The existing network has not been replaced or updated since the 1960s when it was first laid out.

Following is the detailed scope of the project:

- Design the right-sized system to deliver contamination free potable water to consumers under 24 hours metered supply strategy. This will result in reduction in water losses (detection of leakages) and also in increased revenue.
- Reconstruction / rehabilitation of existing water supply and waste water networks
- Design water supply for public building and business centers with the objective to provide fire-hydrants to work at desired pressure for the purpose
- Install bulk water meters
- Incorporate the water to be received from the new source of Indus River system

The **revenue generation** from the project is expected to be PKR 1.16 billion (**USD 13.8 million**) per annum The French Government has offered a Protocol Loan for the project upto the amount of Euros 31.6 million (PKR 3.84 billion @ PKR 120 per Euro) at 1% interest and repayment period of 20 years + 8 years grace.

RUNNING OF OIL TRAINS ON PAKISTAN RAILWAY SYSTEM

Pakistan Railways has capacity to lift about 1.5 million tons of petroleum products by rail from Karachi to up country whereas average loading has been reduced to 1.0 million tones at an average per annum due to overage and ineffective rolling stock. The consumption of petroleum products in Pakistan is 22.0 million tones per annum and indigenous crude oil meets only 18% of total requirements whereas 82% requirements are met through import in the shape of crude oil and refunded petroleum products. The crude oil import is about 12 million tones per annum and 60% of country's demand for petroleum products is for Punjab and Frontier Provinces.

At present, the supply of gas to the IPPs and industrial units is gradually decreasing due to scarcity of gas. Pakistan State Oil (PSO) and WAPDA have shifted towards Pakistan Railways for transportation of Furnace Oil. PSO has agreed for the transportation of about 2.5 million tones of Furnace Oil form Karachi to Mehmood Kot (near Multan) by PR for the supply of fuel to Power Stations. The demand of furnace oil will increase in future due to installation of rental power stations on account of shortage of electricity in the country.

Pakistan Railway is encouraging private sector to bring rolling stock for the running of oil trains on Pakistan Railways track by paying track access charges under open track access policy. It is a good chance for the private sector to bring locomotives and tank wagons for transportation of furnace oil from Karachi to various locations for feeding to the Power Stations. Pakistan Railway has the proposal for running of three oil trains daily in private sector from Karachi to areas surrounding Mehmood Kot in which 10 locomotives and 240 tank wagons including brake vans will be required with turn round time of three days.

The total investment in rolling stock will be about Rs. 6,205.0 million and there will be net earning of **US\$ 11.90 million** per year after payment of track access charges and other operational expenditures. The full return of investment is expected in about six years whereas the rolling stock has the life of about 20 years.

A good opportunity is available for running of oil trains for transportation of oil to up country in Pakistan.

RUNNING OF CONTAINER TRAINS ON PAKISTAN RAILWAYS

Pakistan Railways has capacity to carry about 7.5 billion tons kilometer of freight traffic which is about 4% of the total freight traffic available in the country and the remaining 96% is transported by road as well as pipe lines. The present trend for transportation of cargo is through containers as a result of which all the import and export cargo is transported in containers which is evident from increasing population of containers in the world market and shipping industry. Increase in container traffic in Pakistan is evident from the establishment of inland container terminals (Dry Ports) at the following locations of Pakistan:

- Multan
- Kot Radha
- Kishan
- Prem Nagar
- Faisalabad
- Jia Bagga

Lot of investment has been made by the private sector at Karachi Port and Port Qasim for quick handling of the container traffic. A large number of containers are always available at ports for transportation by rail but these cannot be transported from ports due to shortage of rolling stock thus resulting its movement by road which results in congestion and damages to roads.

Pakistan Railways is now encouraging private sector to bring its rolling stock for movement of containers by running full train loads by paying track access charges under open track access policy. It is proposed to run container trains daily from Karachi to Lahore with turn round time of four days for speedy service as this travel time is much less than travel time by road. A proposition has been worked out for running of one container train daily from Karachi to Lahore initially with four locomotives and 150 container wagons including brake vans. The frequency of container trains can be increased for other destinations as well.

The total investment will be about **US\$ 32.38 million** with expected net earning of **US\$ 4.04 million** per year after paying track access charges and other operating expenditures. Total pay back period for the initial investment will be about eight years with continuous earning in future.

The average life of the rolling stock is about 20-25 years with proper maintenance. A good opportunity is available in this way for investment through transportation of container traffic by rail for the private sector.

CARGO VILLAGE / INDUSTRIAL PARK

The Karachi Port Administration, being aware of the need for expansion and modernization of its facilities especially carried out a Feasibility Study through an American International Consultant, to examine cargo handling / storage / dispatch constraints, with a view to setup an off-dock facility in the shape of Cargo Village. The American Consultants in their conclusion recommended developing Cargo Village and Industrial Park in phases.

The Cargo Village and Industrial Park will be located in the Northern part of the Western Backwaters, west of Karachi Fish Harbor and south of the Macchar and Mohammadi Colony. The Cargo Village and Industrial Park shall utilize 534 hectares which means that more than 20 percent of the total area of the Western Backwaters shall be reclaimed. The western backwaters of Karachi harbor cover in total an area of approximately 2,590 hectare or 6,400 acres. The location of Cargo Village offers good approach to Lyari Expressway, ICI- Bridge and shall be connected to the future Karachi Harbor Crossing from Karachi Deep Water Port.

Scheme I is expected to be completed in 60 months. Development of approximately 320 hectares (790 acres) of land is expected to be completed within the first phase of development. Provision for additional 214 hectares (528 acres) of land will be incorporated in future development.

The project also includes; construction of a “multipurpose berth” of 360m length to the southern tip of the amended perimeter, two access roads connecting the Cargo Village with Lyari Expressway/Maripur Road in the north and ICI-Bridge in the east, Rail access corridors, an Intermodal Yard to handle block trains up to 800 m, Refrigerated Cargo Facilities, Inland Container Depot (ICD), an area for a coal terminal, capable of handling 5 million ton per annum/year. This includes two respective berths with a total length of 600m, to be designed and constructed by the private sector. Land is also set aside for a Coal Power Plant in the range of 500 to 1000 Mega Watt.

The Implementation Phase has been divided into following Packages:

1. All Marine Works including Dredging, Seawall, Revetment, Reclamation & Stabilization, Quay Wall, Wharf piling, etc (Tender Documents available).
Estimated cost : **US\$ 453 (Million)**
2. Connection to ICI Bridge, Northern Bypass & Lyari Expressway, Approaches and Railway Linkage. (Details to be worked out) Estimated cost : **US\$ 24 (Million)**
3. Internal Roads & Cargo Village Approaches, Footpath – Walkways, Entry / Exit gate house, utility Services, Fencing etc. (Concept Design completed)
Estimated cost : **US\$ 12 (Million).**
4. Common users Facilities including all Amenities, Security, Masque, Administration & Commercial Buildings etc. (Concept & Preliminary Design available) Estimated cost: **US\$ 1.20 (Million).**

DEVELOPMENT OF RAILWAY LAND FOR COMMERCIAL ACTIVITIES & HOUSING

Pakistan Railways plans to develop low cost housing for its employees on its land available at different prime locations throughout Pakistan. In this regard Pakistan Railways wants to undertake the development of a housing project initially at I-11, Islamabad through PPP modality. On the success of this project the same model would be replicated throughout Pakistan on other Pakistan Railways lands.

The Capital region is one of the most expensive housing markets in Pakistan, which means that those with limited, fixed or low incomes have difficulty in purchasing, decent housing or even plots to build houses, within their financial means. Pakistan Railways aims to develop low cost housing for its employee initially on an approximately 50 Acres Plot. This land is located near the administration block of Carriage Factory in I-11, Islamabad. This housing would ensure that employees of the Pakistan Railways, who have either retired or are nearing their retirement (especially moderate & low income households), have a reasonable space to live.

In order to reduce the fiscal burden on the Pakistan Railways/Government the Private Party would be allowed to explore and utilize the commercial aspect of this housing project. The Private Party responsible for constructing and operating this housing project would be allowed to construct a commercial area (i.e. shopping centers, recreation centers, office building etc.) on specified portion of the land offered by the Pakistan Railways for the project. Income from these commercial areas would be used by the Pakistan Railways to provide cost effective housing solution to its own employees.

Following benefits are foreseen through development of land owned by Pakistan Railways:

- The land is already situated in the Federal Capital & other populated cities;
- Demand/market for the public housing project would be already available due to the concentration of Pakistan Railways employees and other Middle income population in the Federal Capital, resulting in economies of scale for the development of the project;
- Availability of infrastructure and trunk utilities.
- Higher comfort level to the investors & lenders for the development of the project.
- Commercial activities in the center of populated cities.

- Site for development in other cities like, Karachi, Hyderabad, Multan, Lahore, Faisalabad, Rawalpindi and Peshawar are also available. It is good opportunity for the Private sector to invest in development of land for commercial purposes.

KPT MARITIME ENCLAVE- 77

The project reflects the aspiration of Karachi Port Trust (KPT), inline with suggestions of World Bank to undertake effective and commercially sound real estate projects to enhance the financial returns of KPT together with the idea of introducing international standard buildings in Pakistan.

Maritime Enclave-77 is to be built on 12.8 acres with covered area comprising 3.9 million square feet. The primary development is planned to comprise of 78 storeys, the top 5 of which will be dedicated to a five star hotel serving 250 beds. The enclave will also encompass four low level residential towers (690,000 square feet), a convention centre (120,000 sft) and a shopping mall. The project is designed to serve the maritime community and will accommodate port oriented businesses in particular. The project is estimated to cost **USD 500 million**, and is expected to be completed in 48 months.

To achieve the requisite international quality, the bidding was conducted internationally and after careful bid review was awarded to M/s Aedas of UK. M/s Aedas is supported in the design by M/s Mott McDonald of UK. Project Marketing is to be conducted by M/s. Cushman & Wakefield. The following studies have been conducted: Site Selection, Soil Investigation, Market Analysis, Traffic Studies, Environment Study, Preliminary Design Details, Tender Document Stage-1, and Prequalification of Contractor Report.

International contractors with capabilities of high-rise buildings were invited for prequalification. Two contractors namely M/s Arabtec and M/s China Estate Construction were prequalified for the first stage bidding. Tenders for the first stage were received on 15 December 2007 and discharged.

NATIONAL HIGHWAY AUTHORITY PROJECTS

Karachi Northern Bypass (M-10)

Karachi is principal seaport of the country; almost all-upcountry commercial traffic is routed through the city. Karachi Northern Bypass (KNB) is presently a 2-Lane facility serving the through freight traffic bypassing the city up-north. There is a dire need to dualize the facility to a 4-Lane controlled access expressway reducing travel time for freight traffic and at the same time relieving the city of undue traffic strain

Layari expressway is an urban elevated highway competing with the KNB due to its shorter length (to be completed in 2011). The expressway currently serves traffic of 15,000 vehicles. Since it is a competing route, it is being made suitable to the concessionaire for toll collection and maintenance for a period of five years to improve viability of the project.

The KNB expressway is 50.2 km in length originating in the vicinity of the port and connecting the Karachi –Hyderabad Motorway. The Project Cost is expected to **cost Rs. 7.50 billion (USD 89.3)** and is to be completed in 3 years. This project is currently in the project preparation phase.

Muzaffargarh -D.G.Khan

The road between Muzaffargarh - D.G Khan is part of National Highway N-70 and serves as an important east – west link across the river Indus.

The link is presently a 2-lane highway which needs to be converted into a 4-lane, partially access controlled divided highway. The present route is encroached by ribbon development and is plagued with heavy traffic generated by the oil business in the region. The city of Muzaffargarh is another bottleneck hindering the traffic plying the link. Expected Average Annual Daily Traffic at Ghazi Ghat – 8,000 and at Shershah – 14,000

The project is 53 Km in length, with expected project Cost of Rs. 6.50 Billion **(USD 77.4 million)** and is to be completed in 3 years. This project has qualified to receive Viability Gap Funding (VGF) by GoP and will also benefit from a cross subsidy of the Shershah Bridge.

Link Road between N-5 and Motorway (M-2) from Rawat to Thulian

This new Expressway will connect National Highway (N-5) at Rawat and Lahore-Islamabad Motorway (M-2) at Thulian. The Project comprises of a new 4-lane divided access controlled Expressway. The total length of project expressway is 28.5 km, and will have 5 fly-over bridges, 9 waterway bridges and 4 interchange bridges. The construction cost is estimated at PKR 5.15 billion (**USD 61.3 million**).

N-5 Sections

The N-5, popularly known as the Grand Trunk Road is the life line of Pakistan and serves almost all the North-South freight activity and the urban centers along the route. N-5 is a 4 –lane highway and has recently been upgraded through World Bank /GOP Financing. The following sections of N-5 shall be offered on Operating Concessions for a proposed period of 20 years:

1. Peshawar – Lahore (440 Km)
2. Lahore – Multan (330 Km)
3. Multan – Sukkur (208 Km)

Motorways M-3 and M-1

The National Trade Corridor constitutes of a growing network of motorways which are operational and harnessing the ever growing load on the countries transportation needs.

However, the need to maintain the level of service on these motorways is straining the National Highways resources.

The following completed motorways will be offered for Operating Concessions for 20 Years: PindiBhattian – Faisalabad M-3 (53 Km), Islamabad - Peshawar M-1(155 Km).

KORANGI CREEK INDUSTRIAL PARK

The KCIP is to be constructed on 240 acres of land in Karachi. This industrial park will cater for small & medium enterprises. The vision of the Park is to develop a modern Industrial Park with the basic infrastructure with all the essential facilities. The salient features of the park are:

- Industry Clusters with basic business themes
- Self Power Generation
- Provision of Utilities
- Effluent Treatment Plant
- Safety & Security system
- Vibrant Commercial Centre
- One – Stop Service
- Estate Management
- International Environmental Standard.

The KCIP will have a dedicated low density and high density zones. The high density zone is reserved for Light Engineering, Packaging & printing, Food Processing and Garment Clusters. The high density zone (29 acres) is envisioned to be developed as a modern Business District comprising of mid-rise buildings with state of the art facilities.

The total saleable area as per the master plan is 132 acres. The Building Regulations for The industrial constructions have been formulated by the company and approved by the Cantonment Board Korangi Creek, Karachi. The Company has also obtained approval from the Cantonment Board Korangi Creek and Civil Aviation Authority.

The total project cost is estimated to be PKR 1.5 million (USD 17.8 million). Revenue will be generated through renting of commercial customers from within the KCIP as well as from outside.

PORT QASIM AUTHORITY PROJECTS

Dualization of Main Access Road, Flyover

Port Qasim Authority has sent an advertisement in the leading newspaper for Expression of Interest to undertake Main Excess Roads Projects through Public Private Partnership on BOT basis. The Project includes dualization of Main Excess Road of 11.5 kilometer from National Highway Marginal Wharfs and 14.5 kilometer of Eastern Industrial Zone. The said advertisement may be issued in a couple of days and Private Parties interested in the projects may apply for the same.

LNG Floating Terminals

Port Qasim Authority (PQA) appreciates proposals for establishment of LNG Floating terminals in the remote areas of Navigational Channel subject to clearance of qualitative / quantitative Risk assessment and other studies. Pakistan at this moment needs energy and natural gas to meet the increasing demand. M/S 4Gas, EVTL and Vitol Dubai Ltd. have been issued provisional NOC letters for QRA on October 2009. This scheme has been open for any LNG developer to complete the required formalities of GOP / PQA and undertake these projects.