

PN-ABK-536  
75766

REVIEW OF ELECTRIC  
POWER GENERATION  
PAKISTAN  
REPORT AND RECOMMENDATIONS

FEBRUARY 1987

James R. Phillips  
Deputy Assistant Secretary  
Capital Goods and International  
Construction  
International Trade Administration  
U.S. Department of Commerce  
Washington, D.C.

TABLE OF CONTENTS

	<u>PAGE</u>
EXECUTIVE SUMMARY.....	1
INTRODUCTION.....	5
I. POWER GENERATION REPORT.....	4
Background.....	4
Initial Factors.....	5
An Approach.....	5
Sources of Funds.....	6
Domestic Sources of Energy.....	7
Natural Gas.....	7
Coal.....	7
Hydro.....	8
Privatization.....	8
II. RECOMMENDATIONS.....	9
III. CONCLUDING REMARKS .....	12
IV. ADDENDUM.....	13
USAID Power Sector Programs.....	14
Bibliography.....	15
Power Plant Projects Status Reports.....	16

## EXECUTIVE SUMMARY

It was agreed during a meeting of Prime Minister Mohammed Khan Junejo of Pakistan with U.S. Secretary of Commerce Malcolm Baldrige that a personal review would be made of the power generation conditions in Pakistan.

U.S. Department of Commerce Deputy Assistant Secretary James R. Phillips visited Pakistan and conducted the review with the assistance of USAID personnel, the U.S. Embassy staff, the Senior Commercial Officer and with full cooperation of agencies of the Pakistan Government.

The substantial shortfall of electric power supply in Pakistan is limiting economic development and causing a load shedding condition affecting industrial growth, investment and public concern. The Pakistan government has placed strong focus on this problem including a charge to WAPDA to eliminate load shedding by 1990. Resolution involves not only the need for added generating capacity but also attention to operating and maintenance problems.

A number of projects are already addressing some of these issues involving the United States Agency for International Development and the multilateral development banks.

The present mix of power plants includes hydro, nuclear and conventional thermal plants burning natural gas, imported coal and oil. Future additions will logically include all of these forms of plants. However, priority should be given to early on-line capacity that can attract the necessary financing if the load shedding goal is to be met.

Financing is the key issue and all sources of funds need to be reviewed.

For the long term, it is important that indigenous fuel supplies be strongly considered such as low grade coal and low BTU gas. Also, because of the potential for attractive cost/KW of hydro units and the necessary long lead times, early attention to those projects is important.

Privatization has been encouraged by government leaders, however there does not appear to be adequate response from the bureaucracy in support of these programs. Since private investment can ease the financial burden and provide advancements in technology and management, immediate attention should be given to developing adequate support efforts to privatization schemes by the Pakistani government.

Two recommendations are suggested to assist the resolution of the power generating problems in Pakistan.

First: There are a number of USAID programs under review that address the issues. A meeting of all appropriate Pakistan Government agencies with U.S. government officials should be convened to review the status, identify unresolved issues and develop a program for progress.

Second: Collaboration between both governments and the private sectors would be valuable in designing programs for resolution of the problems. The governments should jointly convene a power sector and investment technical workshop to discuss topics of common interest. Participants will include all appropriate agencies of both governments and the private sector.

## INTRODUCTION

During his visit to the United States in July 1986, Mr. Mohammed Khan Junejo, Prime Minister of Pakistan, visited with Malcolm Baldrige, U.S. Secretary of Commerce. Subjects discussed included energy sector requirements in Pakistan and the potential for U.S. involvement in its development.

It was decided that a concentrated review and in-depth discussions by a representative of the U.S. Department of Commerce, on a visit to Pakistan, would contribute to a better understanding of the issues involved.

This is a report of an investigation conducted by James R. Phillips, Deputy Assistant Secretary for Capital Goods and International Construction prior to and during a visit to Pakistan. It is not intended to add to the substantial body of information contained in the documents listed in the bibliography. Rather, it is to address the problems facing Pakistan and suggest a possible role the United States might play in contributing to their resolution.

In-depth analysis of technical and economical considerations are aptly covered in other reports. Among them are reports prepared or sponsored by the United States Agency for International Development. The extensive programs of USAID, (See addendum) in Pakistan and the highly competent contribution of AID/Washington and the USAID/Pakistan mission personnel were extremely valuable resources for this report.

Assistance by U.S. Embassy personnel in Islamabad and extensive contribution by the US/FCS senior commercial officer in Karachi were vital to this report. The status report of energy projects appearing in the addendum is an important addition the value of this work.

## I POWER GENERATION REPORT

### BACKGROUND

A substantial shortfall condition in electric power supply in Pakistan has become a critical issue in the economic development of the country. A number of studies of this situation have been conducted and it is clearly a major concern to the government.

Energy is the largest single element in the Sixth Five-Year Plan expenditures, amounting to nearly 40% of the total. There is an optimistic plan for increasing the generating capability of the Water and Power Development Authority, (WAPDA).

Studies have been made of projected demand compared to a realistic appraisal of expansion plans. These evaluations indicate there may still be a deteriorating condition. Continued load shedding will have a devastating effect on industrial growth while discouraging investment and adding to the potential for public dissatisfaction.

A strong government focus on the problem has been graphically expressed in the Prime Minister's charge to WAPDA to formulate a plan to eliminate load shedding by 1990. It is this extremely difficult, perhaps impossible, goal that the United States desires to assist Pakistan in addressing.

The studies that have been made indicate the shortfall in generating capacity is caused primarily by inadequate investment in power during an aggressive industrialization period with consumption reportedly increasing at a rate of over 20% annually. Other contributing factors identified include: lack of conservation efforts, heavily subsidized tariffs for domestic and agricultural tubewell customers, inadequate load management, excessive transmission and distribution losses, maintenance problems, and the seasonal nature of hydroelectric plant capacity due to irrigation draw downs of reservoirs. Also listed are constraints to solutions such as lack of financing, loss of electricity through theft, need for improved maintenance and organizational concerns within WAPDA.

While all of these elements are cited as factors in the inadequate and unreliable power supply, there does not seem to be full appreciation for the degree each contributes to the problem. It is possible that focused and well coordinated attention to each of these elements could contribute significantly, and in a cost effective manner, to efforts to overcome the power generation capacity shortfall.

## INITIAL FACTORS

Reference to various reports confirms a general opinion that, in addition to any program to increase capacity, firm decisions should be made regarding corrective measures addressing the "other contributing factors". If system reliability and efficiency remain issues, these other factors would be unfortunate handicaps to the value of adding generating capacity.

Implicit in improving the system and its operation is the need for a restructuring of the WAPDA organization. It is generally recognized that the operation has grown in size and complexity and can no longer be effectively managed in a structure designed for an initially much smaller and simpler operation. Of particular importance are the restoration of WAPDA's autonomy and the restructuring of the power generation and transmission functions as a decentralized wing within WAPDA.

A number of projects are already addressing some of these issues. Examples are: the World Bank and USAID supported thermal power plant efficiency improvement project; the USAID and Asian Development Bank assisted efforts to reduce distribution system losses and theft; the USAID supported power distribution improvement program under which a consolidated and potentially detachable power distribution wing is being established in WAPDA; and substantial training assistance to power distribution employees. The new power distribution wing is to be organized along the lines of a large private utility in the United States (American Electric Power).

Early government review and approval of these programs to improve the operation of WAPDA is vital. All other programs and projects will be significantly more effective with a well structured and functioning WAPDA organization.

## AN APPROACH

The present generating system includes hydro, one nuclear plant and conventional thermal plants burning natural gas and imported coal and oil. It seems logical that sometime in the future, when capacity has increased to meet demand, the mix of power plants should include additions in each of these categories for economical and fuel availability reasons. Also, serious consideration is being given to the indigenous supply of fuels such as coal and low BTU gas

In considering what would be the most appropriate next addition it does not appear that future system mix is an important determining factor. However, because of the criticality of timing, neither hydro nor nuclear should be a first priority in the early resolution of the load shedding condition. This is not to say that hydro in particular is not a high priority for early attention. Because of the potential for low cost electricity and the required long planning cycle, hydro should be an immediate target for attention. Further analysis of this alternative is included in a separate section later in this report. (Page 8).

Also it should be noted that if timing did evolve as the essential issue, replication of the GUDDU gas turbine plant could be a high priority.

The most important issue is quite likely concerned with financing.

What projects will attract the necessary funds.

The approach suggested in addressing the power sector problem in Pakistan is to review projects that can attract funds and to investigate sources of an methods for obtaining such moneys.

### SOURCES OF FUNDS

Funding of energy sector projects in Pakistan can come from one or a combination of several sources. The amount of financing or grants required indicate it may necessitate a combination of these sources to meet the ambitious goal of eliminating the load shedding problem and meeting future demand growth projections.

The type of projects and the economics involved will determine the attractiveness to these sources. A study of the aims and purposes of these sources is essential in determining the most probable approaches.

The sources are:

The World Bank  
The Asian Development Bank  
The U.S. Eximbank & other countries Eximbanks  
The U.S. and other countries AID programs  
Suppliers Credits  
Private Investors (Pakistan)  
Private Investors (Outside)

## Domestic Sources of Energy

### Natural Gas

Indigenous natural gas should be developed further. Other uses (feed stock and heating) plus the cost and time for development may mitigate against using this product as a fuel for extensive electric power generation. None-the-less, this source should be thoroughly investigated.

Replication of the GUDDU gas turbine combined cycle plant could be a viable approach to early addition of capacity. Again, a commitment to the present and future use of natural gas must be subjected to careful and complete analysis.

It appears that the long term value of developing additional natural gas supplies encourages early review of this potential even though it does not represent a crucial issue in addressing a primary concern of this report, meeting the deadline for resolving the load shedding problem.

### Coal

The development of the Lakhra coal field as fuel for electric power generation has been under study for some time. Feasibility studies were completed in 1986. WAPDA has issued an RFP requesting proposals for private sector participation in the development of the Lakhra coal mines.

If the proposals indicate the coal can be delivered to a power plant at an acceptable cost, it should be a serious consideration. Some thought also has been given to including a power plant in the package. In any case potential investors will want assurances of firm supply needs and prices for either coal or electricity.

Studies indicate the 30 year supply of coal could sustain an electric generating plant of 500MW.

With USAID assistance, considerable investigation, both technical and economical, has already been made to the methods for burning this sub-bituminous/lignite coal in conventional steam power plants. The potential for using the coal in boilers designed to use fluidized bed technology is also being investigated. The U.S. Trade Development Program is providing funds to conduct a test burn of Lakhra coal using this technology.

## Hydro

This report and recommendations are intended primarily to address the load shedding problem. Hydro projects have not been considered as contributing to solutions that would meet the stated time goal because of the length of planning and construction time.

However, when considering the total energy growth question, hydro projects represent highly desirable solutions because of promising cost/kw. This fact, plus lengthy planning and construction times and complicating factors such as resettlement, and political and province concerns encourage a high priority on the list of things to do soon.

Although this investigation did not include in-depth evaluation of various hydro approaches, a program to develop large hydro projects should receive early attention.

## Privatization

Elsewhere in this report reference is made to privatization as a means to lessen the financial burden to the government on energy projects. This approach is logical and conforms to the expressed desire of government leaders to promote such programs. In addition, WAPDA management has expressed interest, citing in addition to financing concerns, that such programs could very well expose advanced technical and managerial expertise to the system. WAPDA has initiated plans to form a group lead by a senior engineer that would provide assistance to the private sector and inform WAPDA employees on the status and effect such programs will have on the organization.

There does seem to be a commitment by government leaders and upper management levels of WAPDA to the idea of privatization. It is clear however, from several reports and a review of the experience of some private sector ventures, that improvements in, and better understanding of, procedures and regulations is needed. This report is not intended to offer specific recommendations concerning changes, but only to identify that it is critical that this issue be addressed. There is definitely a requirement for both the government and WAPDA to investigate private sector immediate and long-term needs and perspectives when considering investments.

It is vital to address those concerns already expressed by companies seriously considering investments in power generation. It is also important to anticipate and develop strategies acceptable to the private sector for dealing with the kinds of problems it is reasonable to assume will be confronted over the life of private power plants.

## II RECOMMENDATIONS

Since financing and investment seem to be the controlling issues in the development of the energy sector in Pakistan, it is recommended that steps be taken to immediately address these matters.

This report is intended to review the potential for involvement by the United States Government and U.S. companies. Therefore, these recommendations address the issue by stressing a cooperative effort by Pakistan and the U.S. in overcoming the severe shortage of electric power generating capacity being experienced in Pakistan.

1. The United States Agency for International development has supported assistance programs in Pakistan totalling \$ 1.6 billion over the past six years.(1982 -1988). The power sector has received 20% of this amount. In recognition of the importance of energy development in Pakistan USAID proposes to continue budgeting similar amounts over the next six years (1988 - 1993)

Current USAID assisted power projects are listed in the addenda to this report.

IT IS RECOMMENDED THAT A MEETING OF APPROPRIATE PAKISTAN GOVERNMENT AGENCIES BE CONVENED AS SOON AS POSSIBLE TO REVIEW WITH U.S. OFFICIALS ALL USAID POWER SECTOR PROGRAMS UNDER CONSIDERATION.

The purpose of this meeting will be to identify issues that impact the approval or progress of these programs and decide what steps can be taken to encourage early resolution.

2. With better understanding and agreement on priorities and scope of projects, it will be of value to involve all interested parties of both governments and private sectors in an information and problem review program.

IT IS RECOMMENDED THAT THE PAKISTAN AND U.S. GOVERNMENTS JOINTLY CONVENE A POWER SECTOR TECHNICAL AND INVESTMENT WORKSHOP TO DISCUSS TOPICES OF COMMON INTERESTS.

Participants from the Pakistan side would be representatives from:

Planning Commission  
Ministry of Water and Power  
Ministry of Industries  
WAPDA  
KESC  
Chamber of Commerce

Participants of the United States Government would be representatives from:

The Department of Commerce  
USAID/Pakistan and AID/Washington  
OPIC  
TDP  
Eximbank  
Embassy Econ Section  
Embassy Senior Commercial Office

Invitations would also be sent to U.S. companies interested in energy projects as well as Pakistani companies desiring partnerships with U.S. companies.

A two-day workshop would focus on potential projects, investment opportunities, Pakistan government procedures and regulations and WAPDA procurement procedures. Items that might be included on the agenda of the proposed two day Pakistan-American workshop are:

1. The importance of electric power to the economic and social development of Pakistan..
2. Future power investment requirements of Pakistan.
3. Already identified and potential projects.
4. Current and projected retail electricity tariffs in Pakistan.

5. Current GOP policy regarding private sector participation in power sector development and the status of its implementation.
6. General fiscal and regulatory rules and regulations that apply to all private sector investments in Pakistan, and
7. Private sector concerns and suggestions regarding ways to enhance the prospects and accelerate private sector investments in the power sector.

If the Government of Pakistan is in agreement with these recommendations, the USG will prepare a detailed agenda for review and begin consultations with other participants including U.S. government agencies, U.S. industry and the World and Asian Development Banks.

#### IV CONCLUDING REMARKS

The extremely cooperative attitude and unhesitating contribution by all agencies of both governments have made this report possible. This condition also encourages the potential that, working together, resolution of the power generating problems of load shedding and capacity growth in Pakistan is very possible, technically and financially.

JRP  
February, 1987

**ADDENDUM**

CURRENT USAID ASSISTED POWER PROJECTS IN PAKISTAN, MARCH 1987

JAMSHORO THERMAL POWER PLANT EXPANSION (UNITS 5, 6 AND 7):

Description:

Installation of 3 units of 300 MW each generating capacity at Jamshoro where already 3 units of 210 MW each and one unit of 250 MW are being installed.

GUDDU COMBINED CYCLE POWER PLANT (UNITS 5 AND 6)

Description:

Development of surface and underground coal deposits at Lakhra which are reported to have very high sulphur content, and construct a coal fired power station at Jamshoro to generate 300 MW which ultimately would be increased to 700 MW. This power station will also use furnace oil. A railway line from Lakhra to Jamshoro would also be put up for transportation of coal from the mines to the power station.

WAPDA VII (GENERATION, REHABILITATION PROJECT)

Description:

The project covers rehabilitation consisting of overhauls, modifications and additions at six existing steam stations, converting the existing twelve combustion turbine units to combined cycle facilities and other work to improve the reliability and efficiency of its thermal generation facilities.

POSSIBLE PROJECTS UNDER POST '87 PROGRAM

- Lakhra coal mine and power project
- Private power generation and distribution
- Large scale hydro or thermal plant

## BIBLIOGRAPHY

- IBRD report on Pakistan Energy Sector loan dated May 1985
- Executive-Summary of Rehabilitation of Pakistan's Existing Thermal Power Plants for WAPDA and KESC - prepared by Stone and Webster Engineering Corporation - October 1985
- WAPDA's Generation Development Program (FY 1986-FY 1996)-ADB Tenth Power Loan
- Background Paper on Energy Policy and Institutional Reform-USAID/Pakistan - January 1986
- Background Paper on Energy Policy and Institutional Reform Office of Energy and Environment - USAID/Islamabad - January 1986
- WAPDA, Power Development Plan for Elimination of Load Shedding by January 1990 - March 1986
- Private Power Generation, Regional Policy Analysis Initiative; Opportunities, Impediments and Policy Issues in Pakistan - a report prepared by USAID - June 1986
- Lakhra Coal Mine and Power Generation Feasibility Study - four separate studies awarded to Gilbert/Commonwealth, John T. Boyd Co., ESE Corporation and ICF, Inc. - June 1986.
- Pakistan - (a paper on Pakistan's power sector) prepared by Combustion Engineering, Inc. - August 1986
- Lakhra Coal Mine and Power Generation Project - The Climate for Private Sector Investment in Pakistan - Bank of America August 1986
- Pakistan Country Briefing - personal briefing and briefing book-James Johnston and Stan Bilinski, Office of South Asia
- Status of active power generation projects in Pakistan - FCS Karachi - October 1986
- Private Sector Participation in Lakhra Coal Mine Development (Pakistan) - a Request For Proposal issued by WAPDA - January 1987

POWER PROJECTS

STATUS REPORTS

prepared by

James Winkelman  
Senior Commercial Officer  
US/FCS Pakistan  
February 1987

Foreign Commercial Service  
American Consulate General  
Karachi, Pakistan

PROJECT:

TARBELA HYDRO ELECTRIC POWER EXTENSION UNITS 11 TO 14

DESCRIPTION:

Installation of four units of 432 MW each generating capacity at Tunnel No.3 of Tarbela Hydro Electric Power Station along with necessary equipment for 500 KV switchyard extension. This will increase installed capacity of the station by 1730 MW and will perform a pivotal role in meeting the power demand at cheap rates.

CONTACT:

Lt. General Safdar Butt, Chairman  
Pakistan Water and Power Development Authority (WAPDA)  
WAPDA House  
Shahrah-e-Qaid-e-Azam  
Lahore  
Phone: 211811 and 322233      Telex: 44869 WAPDA PK

COST AND FINANCING:

Total Cost	USDOLS	666 MILLION
Foreign Exchange Cost	USDOLS	303 MILLION

Financing: Project being jointly financed by Asian Development Bank, CIDA and KFW

CURRENT STATUS:

This project for which reasibility was done by CHAS T. MAIN of USA and MESPAK of Pakistan is at a standstill at this moment. Bids for this were opened sometime back and for civil work Daelim Industrial and Hyundai of Korea were reported as two lowest bidders. However the original contractors on earlier phases, Dillingham of USA who were reportedly fourth lowest and 30 per cent more expensive than the lowest, have made a representation to WAPDA to re-evaluate the bids which would show that their bids cover the total works while others have only quoted for minimum work with clauses to increase cost later.

At this moment decision taken by WAPDA Chairman stands as:

Civil Works:	Hyundai	ADB Finance
Generators :	Brown Boveri & Co.	KFW Finance
Turbines :	Dominion Bridge	CIDA Finance

Foreign Commercial Service  
American Consulate General  
Karachi, Pakistan

PROJECT:

MANGLA HYDRO-ELECTRIC POWER STATION EXTENSION UNITS 9 AND 10

DESCRIPTION:

Addition of two units of 100 MW each generating capacity on the fifth tunnel at Mangla Hydro Electric Power Station to meet the increasing power demand on the system. This will increase installed capacity at Mangla from 800 MW to 1000 MW. These two units would help in meeting power demand during peak hours throughout the year.

CONTACT:

Lt. General Safdar Butt, Chairman  
Pakistan Water and Power Development Authority (WAPDA)  
WAPDA House  
Shahrah-e-Qaid-e-Azam  
Lahore  
Phone: 211811 and 322233                      Telex: 44869 WAPDA PK

COST AND FINANCING:

Total Cost	USDOLS 84.24 MILLION
Foreign Exchange Cost	USDOLS 44.00 MILLION

Financing: A protocol for credit financing of the foreign exchange component of the project has been agreed between the Governments of Pakistan and Czechoslovakia.

CURRENT STATUS:

Work on this expected to commence soon with SKODA of Czechoslovakia as the major supplier.

Foreign Commercial Service  
American Consulate General  
Karachi, Pakistan

PROJECT:

KOHALA HYDRO ELECTRIC PROJECT

DESCRIPTION:

Construction of a barrage and two power tunnels on the Jehlum River north of Muzaffarabad and installation of generators with a capacity, ultimately of 600 MW and ancillary facilities.

CONTACT:

Lt. General Safdar Butt, Chairman  
Pakistan Water and Power Development Authority (WAPDA)  
WAPDA House  
Shahrah-e-Qaid-e-Azam  
Lahore  
Phone: 211811 and 322233                      TELEX: 44869 WAPDA PK

COST AND FINANCING:

Total Cost	USDOLS 750 MILLION
Foreign Exchange Cost	USDOLS 302 MILLION

Financing: Though this project was presented to Pakistan Consortium for assistance no financing has been lined up so far.

CURRENT STATUS:

A prefeasibility for this project has been completed under French Technical Assistance. This project is presently regarded as a strong candidate for the next five year plan 1988-1993.

PROJECT:

LOW HEAD HYDRO ELECTRIC POWER AT BARRAGES AND CANAL FALLS

DESCRIPTION:

Setting up of Low Head Hydro Power Station at the existing canal systems along the right bank of river Indus. The estimated aggregate total potential at ten identified sites will be around 600 MW.

CONTACT:

Lt. General Safdar Butt, Chairman  
Pakistan Water and Power Development Authority (WAPDA)  
WAPDA House  
Shahrah-e-Qaid-e-Azam  
Lahore  
Phone: 211811 and 322233      Telex: 44869 WAPDA PK

COST AND FINANCING:

Total Cost	USDOLS	141 MILLION
Foreign Exchange Cost	USDOLS	37.5 MILLION

Financing: Financing of foreign exchange component of this project has not been arranged so far.

CURRENT STATUS:

Negotiations for a technology transfer package with GTZ of West Germany are in advanced stages. German experts have carried out a study which reveals a measured potential of 600 MW on existing canal systems. This project is open and firms who could arrange attractive financial package with their offers stand a good chance.

Foreign Commercial Service  
American Consulate General  
Karachi, Pakistan.

PROJECT:

KALABAGH DAM PROJECT

DESCRIPTION:

Construction of an earthfill dam 81 meters in height and a hydroelectric power plant to generate ultimately 3600 MW on Indus river just below its confluence with the Soan, and ancillary infrastructure.

CONTACT:

Lt. General Safdar Butt, Chairman  
Pakistan Water and Power Development Authority (WAPDA)  
WAPDA House  
Shahrah-e-Qaid-e-Azam  
Lahore  
Phone: 211811 and 322233                      Telex: 44869 WAPDA PK

COST AND FINANCING:

Total Cost:                                      USDOLS 4,750 MILLION  
Foreign Exchange Cost                      USDOLS 2,750 MILLION

Financing: Pakistan government has received following possible commitments for financing of this project dependent upon final consultant studies and a final GOP decision on whether to proceed with the project:

World Bank:	USDOLS 700 MILLION
Asian Dev. Bank	USDOLS 700 MILLION
OPEC Countries	USDOLS 500 MILLION
Germany, Japan & Others	USDOLS 750 MILLION

CURRENT STATUS:

While the preparation of the project is approved by ECNEC under the PC-2, the project has not been approved so far. By December 1986 final decision on the project is expected. NESPAK are the local consultants on this job while Binie and Partners, Preece Cardew and Rider are foreign consultants.

Foreign Commercial Service  
American Consulate General  
Karachi, Pakistan

PROJECT:

BIN QASIM THERMAL POWER STATION - UNIT 3 & 4

DESCRIPTION:

The project comprises of setting up of two steam turbine units of 200 MW each at Bin Qasim near Karachi and of 220 KV lines to carry power from units 3 and 4 to Pipri West Grid Station, reinforcement of existing 220 KV transmission line from Pipri West Station to Baldia Grid Station, extension of Pipri West Grid Station, extension at KDA No. 33 Grid Stations and extension at Baldia Grid Station.

CONTACT:

Mr. Arshad Bokhari, Managing Director, Karachi Electric Supply Corporation (KESC), Almal House, Abdullah Haroon Road, Karachi  
Phone: 515473-516711 Cable: UTILITIES

COST AND FINANCING:

Total Cost	USDOLS 340 MILLION
Foreign Exchange Cost	USDOLS 172 MILLION

Financing: The executing agency asked the bidders to arrange for credit and as a result Ansaldo of Italy arranged for Italian State credit while Deutsche Babcock arranged for KfW credit.

CURRENT STATUS:

Ansaldo and Deutsche Babcock are the main contractors working for this project. Letters of credit will be opened this month and the project is expected to be completed in 35 months.

Foreign Commercial Service  
American Consulate General  
Karachi, Pakistan

PROJECT:

BIN QASIM THERMAL POWER STATION - UNIT 5

This project is an extension of Bin Qasim units 3 and 4. The project requires setting up of a 200 MW Steam turbine at Bin Qasim and ancillary transmission work.

CONTACT:

Mr. Arshad Bokhari, Managing Director, Karachi Electric Supply Corporation (KESC), Almal House, Abdullah Haroon Road, Karachi  
Phone: 515473-516711 Cable: UTILITIES

COST AND FINANCING:

Total Cost	USDOLS 170 MILLION
Foreign Exchange Cost	USDOLS 86 MILLION

Financing: Japanese credit is expected which would be tied to Japanese manufacturers.

CURRENT STATUS:

Bids for this are being considered and a decision is expected by end of 1986. Marubeni/Hitachi are strong contenders on this project.

Foreign Commercial Service  
American Consulate General  
Karachi, Pakistan

PROJECT:

JAMSHORO OIL FIRED POWER STATION (UNIT 1)

DESCRIPTION:

Setting up of one thermal unit of 250 MW generating capacity along with ancillary work at Jamshoro, keeping in view future requirements of industrial and agricultural sector.

CONTACT:

Lt. General Safdar Butt, Chairman  
Pakistan Water and Power Development Authority (WAPDA)  
WAPDA House  
Shahrah-e-Qaid-e-Azam  
Lahore  
Phone: 211811 and 322233                      Telex: 44869 WAPDA PK

COST AND FIN:

Total Cost:	USDOLS 226 MILLION
Foreign Exchange Cost	USDOLS 132 MILLIONS

Financing: Negotiations for Japanese loan with OECF have been finalized.

CURRENT STATUS:

This project is being given out to Mitsubishi of Japan and expected to be commissioned in 1989.

Foreign Commercial Service  
American Consulate General  
Karachi, Pakistan.

PROJECT:

JAMSHORO OIL FIRED POWER STATION (UNITS 2, 3 AND 4)

DESCRIPTION:

Setting up of 3 thermal units of 210 MW each generating capacity alongwith necessary 220 KV sub station at Jamshoro to provide much needed thermal support to hydel oriented generation and also to meet the increasing power requirements of the integrated grid system. Furnace oil will be used as fuel which would be transported from Karachi refinery.

CONTACT:

Lt. General Safdar Butt, Chairman  
Pakistan Water and Power Development Authority (WAPDA)  
WAPDA House  
Shahrah-e-Qaid-e-Azam  
Lahore  
Phone: 211811 and 322233                      Telex: 44869 WAPDA PK

COST AND FINANCING:

Total Cost	USDOLS 320 MILLION
Foreign Exchange Cost	USDOLS 142.5 MILLION

Financing: Through Japanese loan on which Japanese, Korean and Chinese firms eligible to participate.

CURRENT STATUS:

Chinese who quoted way below others have been given the contract for this project. Work on this has commenced and the Chinese contractors have been offered early completion bonus if these are completed by 1990

PROJECT:

JAMSHORO THERMAL POWER PLANT EXPANSION (UNITS 5, 6 AND 7)

DESCRIPTION:

This expansion is part of Phase II of the Jamshoro Oil-fired Power Station Project.

Work Involved: It involves the installation of 3 conventional, steam cycle 300 oil-fired generating units, giving the Jamshoro Generation Complex a total capacity of 1780MW. The fuel oil supply for Phases I and II is to be imported at Karachi, and transported to Jamshoro through a pipeline built as part of Phase II.

Services & Equipment Required: Services - Consultancy services for (A) design and engineering; and (B) construction management. Equipment - 3 conventional steam cycle 300 generating units and accessories and related equipment.

CONTACT:

Lt. General Ghulam Safdar Butt, Chairman  
Pakistan Water and Power Development Authority (WAPDA),  
WAPDA House, Shahrah-e-Quaid-e-Azam  
Lahore, Pakistan

Tel: 92/42/322233      Telex: 44869 WAPDA PK

Shakoor Ahmad Qureshi, General Manager (Thermal)  
Pakistan Water and Power Development Authority (WAPDA)  
WAPDA House, Shahrah-e-Quaid-e-Azam  
Lahore, Pakistan.

Tel: 92/42/213676      Telex: 44869 WAPDA PK

COST & FINANCING:

Total cost (Estimated):	USDOLS 885 Million
Foreign Exchange Cost (Estimated):	USDOLS 549 Million

Source and Mode of Financing: The World Bank with USDOLS 150 million as its contribution is expected to be the major donor agency. The balance is to be obtained from other donors, such as the Asian Development Bank & Investment Banks, concessionary loans, and supplier credit and possibly USAID. Up to 40 percent of the total required funds for Phase II are to be provided by WAPDA in local currency. Other sources will provide USDOLS 201 million in local currency.

EXPECTED TIME FRAME OF THE PROJECT:

Prequalification Deadline: Consultants have already been prequalified.  
Tender documents to be completed and issued by: (Expected) March 1987  
Closing of bids: No date yet. Normal practice is to allow 90 days from the issue of bids.

Expected Commencement: November 1987

Expected Completion : October 1991

CURRENT STATUS: WAPDA has already prequalified the following six consulting firms: Bechtel, Black and Veatch, Gilbert Commonwealth, Ebasco, Lahmeyer (W. Germany), and EWBANK, Preece and Cardew (UK). A final selection is expected to be made in two or three months. Bechtel, who prepared the prefeasibility and feasibility studies, which was financed by USAID is currently engaged in preparing packages for the contracting approach for Jamshoro as part of the feasibility study.

COMMENTS:

In our opinion this project offers an excellent opportunity for U.S. manufacturers.

Foreign Commercial Service  
American Consulate General  
Karachi, Pakistan.

PROJECT:

KOT ADDU 400 MW GAS TURBINE POWER STATION (UNITS 1 TO 4):

DESCRIPTION:

Installation of 400 MW Gas Turbine Power Station at Kot Addu alongwith sub-station facilities, to give the needed thermal support to hydel oriented generation and to meet the fast increasing demand for power.

CONTACT:

Lt. General Safdar Butt, Chairman  
Pakistan Water and Power Development Authority (WAPDA)  
WAPDA House  
Shahrah-e-Qaid-e-Aza  
Lahore  
Phone: 211811 and 322233                      Telex: 44869 WAPDA PK

COST AND FINANCING:

Total Cost	USDOLS 164.5 MILLION
Foreign Exchange Cos	USDOLS 85.5 MILLION

Financing: This project is being jointly financed by KfW  
(West Germany) and Italian government.

CURRENT STATUS:

Lahmeyer International of West Germany are consultants on this project and contract for supply and reaction turbines has been awarded to Fiat of Italy and Siemens of West Germany. This project was estimated to be commissioned in May 1986 but it is behind schedule.

Foreign Commercial Service  
American Consulate General  
Karachi, Pakistan

PROJECT:

KOT ADDU COMBINED CYCLE POWER PLANT (UNITS 5, 6 7 & 8)

DESCRIPTION:

Construction of a Combined Cycle Power Plant 4 x 100 MW at KOT ADDU. Work requires design engineering, construction, erection etc.

CONTACT:

Lt. General Safdar Butt, Chairman  
Pakistan Water and Power Development Authority (WAPDA)  
WAPDA House  
Shahrah-Oe-Qaid-e-Azam  
Lahore  
Phone: 211811 and 322233                      Telex: 44869 WAPDA PK

COST AND FINANCING:

Total Cost	USDOLS 175 MILLION
Foreign Exchange Cost	USDOLS 90 MILLION

Financing: World Bank committed USDOLS 90 million on this project to Government of Pakistan.

CURRENT STATUS:

Consultants on this project are NESPAK. Bids on this have been received and are being evaluated at this moment.

Foreign Commercial Service  
American Consulate General  
Karachi, Pakistan.

PROJECT:

MULTAN OIL FIRED POWER STATION (UNITS 1, 2 AND 3):

DESCRIPTION:

Construction of a 630 MW Steam Power Station, as an extension to Multan Power Plant. This 630 MW Power Station comprises 3 oil fired units of 210 MW each.

CONTACT:

Lt. General Safdar Butt, Chairman  
Pakistan Water and Power Development Authority (WAPDA)  
WAPDA House  
Shahrah-e-Qaid-e-Azam  
Lahore  
Phone: 211811 and 322233                      Telex: 44869 WAPDA PK

COST AND FINANCING:

Total Cost	USDOLS 302 MILLION
Foreign Exchange Cost	USDOLS 196 MILLION

Financing: A protocol for credit financing of the project has been negotiated between the Governments of Pakistan and USSR.

CURRENT STATUS:

TECHNOPROMEXPORT of USSR are doing detailed engineering work presently and final protocol is expected to be signed in March 1987 on this project.

Foreign Commercial Service  
American Consulate General  
Karachi, Pakistan

PROJECT:

THERMAL UNITS BASED ON IMPORTED COAL (2 X 500 MW)

DESCRIPTION:

Installation of 2 thermal units of 500 MW capacity of the power plant which will be based on imported coal. These units will be located near Karachi which has two seaports.

CONTACT:

Lt. General Safdar Butt, Chairman  
Pakistan Water and Power Development Authority (WAPDA)  
WAPDA House  
Shahrah-e-Qaid-e-Azam  
Lahore  
Phone: 211811 and 322233      Telex: 44869 WAPDA PK

Note: While the project is located near Karachi it would be handled by WAPDA because power generated by these units will be for non KESC consumption.

COST AND FINANCING:

Total Cost	USDOLS 1000 MILLION
Foreign Exchange Cost	USDOLS 500 MILLION

Financing: No financing so far has been committed. World Bank had financed the feasibility and for project also World Bank financing is a possibility.

CURRENT STATUS:

Canadian firm Shawinigan Integ has just completed the pre-feasibility and WAPDA has pre-qualified six consultants for the feasibility study who will be issued terms of reference in November 1986. The prequalified consultants include Shawinigan of Canada, Black & Veatch and Ebasco of USA.

RFP for detailed feasibility study is expected to be issued in first week of December 1987, with award of feasibility expected by April 1987.

Tenders for the project will be floated toward the end of 1987. First unit of 250 MW is expected to be commissioned by 1993 and second unit sometime in 1994.

Six more similar units are being planned by WAPDA for the future.

ADDENDUM TO PROJECT #14 - COAL POWER PROJECT - WAPDA

Beginning 1993-94 WAPDA will need high quality thermal coal to run the thermal power units. First year requirement is 1.5 million tons which will gradually increase to 10 million tons per annum by year 2000, and may register additional increase in coming year. WAPDA envisages this requirement for about 40 years and wishes to initiate contacts now so that coal shipment should be executed in time to effect smooth running of the thermal units.

CONTACT

G. M. Ilias  
Chief Engineer (CPP)  
WAPDA, WAPDA House 192  
Sharah-e-Quaid-e-Azam  
Lahore, Pakistan  
Tel: 92-42-311004  
Telex: 44869 WAPDA PK

Prospective suppliers of coal when contacting WAPDA on this supply project should furnish to Mr. Ilias details on their mining activities, annual sales, export potentials, and the name of U.S. Harbor through which they would handle the export of coal to WAPDA. Also give some details re Harbor's capacity to accommodate large ships upto 150,000 tons DWT fitted with coal out-loading facilities, etc...

WAPDA also wishes that contents of this cable may be conveyed to the following, if USDOC and DOS have no objection:

Consolidation Coal Co., Consol Plaza, 1800 Washington road,  
Pittsburgh, Pa. 15241 - Tel: 412-331-4000; Telex: TWX-866247.

Drummond Coal Co. Inc., 101 Walston Bridge Road, Jasper, AL  
35501; Tel: 205-387-0501

A.T. Massey Coal Co. Inc., 4-N 4th St., Richmond, Va 23219  
Tel: 804-788-1800; Telex: 710-956-0157 (AASCO-RCH) and TWX-827430.

Jim Walter Resources, 3300 1st Avenue. N, Birmingham, AL 35283;  
Tel: 202-254-7000; Telex: 910-651-3789 (JwR HINS).

Foreign Commercial Service  
American Consulate General  
Karachi, Pakistan

PROJECT:

GUDDU COMBINED CYCLE POWER PLANT (UNITS 5 AND 6)

DESCRIPTION:

Installation of two additional gas turbines of 150 MW at the Guddu 450 MW power plant which is nearing completion with General Electric of USA as major contractor. These additional turbines would be added to support WAPDA's program "End of loadshedding by 1990".

CONTACT:

Lt. General Safdar Butt, Chairman  
Pakistan Water and Power Development Authority (WAPDA)  
WAPDA House  
Shahrah-e-Qaid-e-Azam  
Lahore  
Phone: 211811 and 322233      Telex: 44869 WAPDA PK

COST AND FINANCING:

Total Cost	USDOLS 112 MILLION
Foreign Exchange Cost	USDOLS 76 MILLION

Financing: While the original 450 MW power plant was financed by USAID and Asian Development Bank, the financing of these two new units has not been discussed so far with any agency. USAID financing on this project is under consideration.

CURRENT STATUS:

NESPAK, who are WAPDA's consultants are looking at the studies under which orders may be placed during 1987 and commissioning by February 1989.

Foreign Commercial Service  
American Consulate General  
Karachi, Pakistan

PROJECT:

70 MW POWER STATION NEAR QUETTA

DESCRIPTION:

Setting up of a small power station by private sector entrepreneur based on his coal mines near Quetta with a capacity of 35 MW which could be extended upto 70 MW

CONTACT:

Mr. Bakhtiar Saeed, General Manager (Power Division)  
Siemens Pakistan Engineering Co. Ltd.  
Illaco House  
Abdullah Haroon Road  
Karachi  
Tel: 516061-10 & 523021-30

COST AND FINANCING:

Total Cost	USDOLS 67.20 MILLION
Foreign Exchange Cost	USDOLS 38.52 MILLION

Financing: While local cost will be met by Regional Development Finance Corporation (RDFC) and the local sponsor, the foreign exchange cost will be raised as long term loans from foreign sources and as equity investment.

CURRENT STATUS:

Siemens of West Germany and Foster Wheeler of UK have entered into a joint venture agreement with the Pakistani investor with Siemens holding 11.17 per cent equity, Foster Wheeler 11.33 per cent equity while Pakistani investors will hold 77.5 per cent equity. USAID may also provide some portion of financing on this project.

Foreign Commercial Service  
American Consulate General  
Karachi, Pakistan.

PROJECT:

120 MW DIESEL GENERATING POWER STATION AT HUB CHOWKI

DESCRIPTION:

The private sector has been asked by KESC to give proposals for setting up power generation at Hub Chowki, near Karachi with generating capacity of 120 MW. KESC will buy power from private sector to be fed into their transmission lines.

CONTACT:

Mr. Arshad Bokhari, Managing Director, Karachi Electric Supply Corporation (KESC), Aimal House, Abdullah Haroon Road, Karachi  
Phone: 515473, 516711      Cable: UTILITIES

COST & FINANCING:

Total Cost	USDOLS 76.6 MILLION
Foreign exchange cost	USDOLS 53.2 MILLION

Financing: All bids must have arrangements of financial package to back the purchase.

CURRENT STATUS:

Bids from thirteen proposers are being evaluated by KESC presently.

Foreign Commercial Service  
American Consulate General  
Karachi, Pakistan

PROJECT:

LAKHRA COAL MINE & COAL FIRED POWER STATION, JAMSHORO

DESCRIPTION:

Development of surface and underground coal deposits at Lakhra which are reported to have very high sulphur content, and construct a coal fired power station at Lakhra to generate up to 500 MW under conventional boilers. Final power plant size will depend on mining approach and coal costs.

CONTACT:

Lt. General Safdar Butt, Chairman  
Pakistan Water and Power Development Authority (WAPDA)  
WAPDA House  
Shahrah-e-Qaid-e-Azam  
Lahore  
Phone: 211811 and 322233      Telex: 44869 WAPDA PK

COST AND FINANCING:

Total Cost	USDOLS 1,720 MILLION
Foreign Exchange Cost	USDOLS 586 MILLION

Financing: Possible financing from USAID, World Bank and Asian Development Bank is dependent on the private sector coal supply proposals to be solicited in late 1986.

CURRENT STATUS:

Planning Commission of GOP is working at revised feasibility of the project. Various pre-feasibility and feasibilities have been carried out by John T. Boyd Co., Gilbert Commonwealth International, Stone & Webster, JICA, Environmental Sciences and Engineering, Combustion Engineering and others. The GOP is also looking into the possibility of small 50 MW power stations in the Lakhra area based on Fluidised Bed Boilers.

USAID Interim Report dated 10/15/85 is available.

Foreign Commercial Service  
American Consulate General  
Karachi, Pakistan

PROJECT:

WAPDA VII (GENERATION, REHABILITATION PROJECT)

DESCRIPTION:

The project covers rehabilitation consisting of overhauls, modifications and additions at six existing steam stations, converting some combustion turbine units to combined cycle facilities and other work to improve the reliability and efficiency of its thermal generation facilities.

CONTACT:

Lt. General Safdar Butt, Chairman  
Pakistan Water and Power Development Authority (WAPDA)  
WAPDA House  
Shahrah-e-Qaid-e-Azam  
Lahore  
Phone: 211811 and 322233      Telex: 44869 WAPDA PK

COST AND FINANCE:

Total Cost	USDOLS 164.8 MILLION
Foreign Exchange Cost	USDOLS 116.3 MILLION

Financing: World Bank is appraising on loan of USDOLS 70 million for this project. GOP has requested USAID financing for some power plant commodities.

CURRENT STATUS:

The feasibility study was financed by USAID. Consultants are to be appointed by end 1986 and Ministry of Planning is preparing a PC-1 for clearance by ECNEC, before the project is cleared for implementation.

Foreign Commercial Service  
American Consulate General  
Karachi, Pakistan

PROJECT:

EXPANSION OF KESC TRANSMISSION AND DISTRIBUTION NETWORK

DESCRIPTION:

Establishment of a new Grid Station to absorb the power generated by Bin Qasim Units at Pipri and to augment the existing Grid Stations alongwith the allied transmission line facilities.

CONTACT:

Mr. Arshad Bokhari, Managing Director  
Karachi Electric Supply Corporation (KESC)  
Almai House, Abdullah Haroon Road  
Karachi

Phone: 515473, 516711

Cable: UTILITIES

COST & FINANCING:

Total Cost	USDOLS 202.7 MILLION
Foreign Exchange Cost	USDOLS 91.5 MILLION

Financing: World Bank financing will be negotiated.

CURRENT STATUS:

Initial plans of the project prepared by KESC are now being revised at the Ministry of Planning. GOP.

Foreign Commercial Service  
American Consulate General  
Karachi, Pakistan

PROJECT:

220/500 KV LUDEWALLA-DAUDKHEL TRANSMISSION LINE PROJECT

DESCRIPTION:

This project has been designed to meet the future loads and over the excessive voltage drops in Sargodha, Daudkhel load centers which are being fed through 132 KV double circuit transmission line. The project envisages setting up of a 500 KV Ludewalla-Daudkhel transmission line. This line is also expected to transmit power from proposed Kalabagh and Chashma power stations

CONTACT:

Gen. Safdar Butt, Chairman  
Water and Power Development Authority

COST AND FINANCING:

Total Cost:	USDOLS 65 million
Foreign Exchange Cost:	USDOLS 29 million

Financing - This is an ongoing project that was started in 1985 and has had mainly World Bank funding. This year Pakistan consortium has provided a loan of US 3.5 million which Saudi fund provided USDOLS 6.5 million.

CURRENT STATUS:

The work of transmission is underway while from time to time tenders are floated for related equipment and additional work.

Foreign Commercial Service  
American Consulate General  
Karachi, Pakistan

PROJECT:

WAPDA TENTH POWER SECTOR PROJECT

DESCRIPTION

Part A - Distribution Rehabilitation/System Loss Reduction.

---

1. Rehabilitation of 250 to 300 overloaded II KV feeders
2. Power factor correction in the II KV and low voltage system of WAPDA thru capacitor installation
3. Associated training of WAPDA personnel

Part B - Generation and Transmission

---

Currently envisaged subprojects include

- a. Mangla Hydropower Units 9 and 10 (2 x 100 MW)
- b. Ludewala-Daudkhel 500 KV transmission line
- c. Chashma low-head hydel power station (200 MW)
- d. Guddu Combustion Turbines Units (2 x 100 MW)
- e. Secondary transmission and grid stations

Services and equipment required: Consultants for formulation of the subproject and expediting co-financing arrangements will be recruited by WAPDA while USAID financed consultants currently working with WAPDA will assist WAPDA in carrying out Part A of the project. Procurement of equipment will be made by WAPDA in accordance with ADB's guidelines for procurement.

CONTACT

Lt. Gen. Safdar Butt, Chairman  
Water and Development Authority  
718 WAPDA House  
Lahora, Pakistan

Phone: (92+42) 211 811/322233  
Telex: 44869 WAPDA PK

Mr. Arshad Bakhari, Managing Director  
Karachi Electric Supply Corporation (KESC)  
Aimai House, Abdullah Haroon Road  
Karachi, Pakistan

Phone: (92+21) 515 473/516711  
Telex: 25601 KESCO PK

COST AND FINANCING

Total Cost: USDOLS 1 268.61 million  
Foreign Exchange Cost: USDOLS 530.64 million

Asian Development Bank approved a loan of 150 million on December 18, 1986. Others multilateral credits, bilateral credits, export credits and supplier credits will be arranged by Government of Pakistan.

Expected Completion: For technical assistance - June 1988  
For the Project - Dec. 1991

CURRENT STATUS

Interested consultants and contractors should establish contact with the executing agencies for further details.

Foreign Commercial Service  
American Consulate General  
Karachi, Pakistan

PROJECT

CHASMA NUCLEAR POWER PLANT

DESCRIPTION

The project involves construction of a light water nuclear power plant to generate some 937 MW at Chasma, North of Dera Ismail Khan in NWFP.

Services and equipment required: Consultancy, civil engineering services and procurement of necessary equipment will be required.

CONTACT

Dr. Munir Ahmed Khan, Chairman  
Pakistan Atomic Energy Commission  
P. O. Box 1114  
Islamabad, Pakistan

Phone: (92+51) 828 040  
Telex: 5725 ATCOM PK

COST AND FINANCING

Total Cost: USDOLS 1,750 million  
Foreign Exchange Cost: USDOLS 1,500 million

No financing has been committed so far by any financing agency.

CURRENT STATUS

Tenders were issued in 1982 but no satisfactory response was received. The project at this moment is in cold storage but could be revived if Pakistan agrees to comply with various safeguards of non-proliferation. West Germany and France have shown interest in this project.

Foreign Commercial Service  
American Consulate General  
Karachi, Pakistan

PROJECT

FLUIDISED BED BOILER POWER PLANTS BASED ON LAKHRA COAL

DESCRIPTION

This project involves the setting up of two 50 MW power plants with Fluidised Bed Boilers based on Lakhra coal which has a very high sulphur content.

Services and equipment required: Consultancy, Engineering, Construction, Mining Services together with 4 fluidised bed boilers of 25 MW each and ancillary equipment.

CONTACT

Mr. Ilyas, General Manager, Coal Power Projects  
WAPDA  
WAPDA House, Shahrah-e-Quaid-e-Azam  
Lahore, Pakistan

Phone: (92+42) 213 676/322 233  
Telex: 44869 WAPDA PK

COST AND FINANCING

Cost estimates not available till response to RFP on supply of coal is received from the private sector.

EXPECTED TIME FRAME OF THE PROJECT

Pre-qualification deadline: Completed for supply of coal  
Expected Commencement: Early 1988  
Expected completion: Late 1989

CURRENT STATUS

Initially it was decided that the private sector would set up two plants of fluidized bed boilers at Lakhra and proposals have been taken from Habibullah Mines, Dawood Group and Pakland. However, in December 1986 WAPDA has put an RFP for the supply of Lakhra coal from the private sector while specifying clearly that these plants would be put up by WAPDA.

Foreign Commercial Service  
American Consulate General  
Karachi, Pakistan

PROJECT

LAKHRA COAL MINING PROJECT

DESCRIPTION

The project envisages the setting up of modern mining operation for the development of coal mines at lakhra which reportedly have 120 million tons of lignite deposits over an area of 142.5 square miles which is located 125 miles north east of Karachi.

Services & Equipment required: General Mining Contractors and consultant services will be needed plus following equipment:

1. Stripping Machinery for surface mines
2. Underground Machinery
3. Surface Machinery

CONTACT

Mr: Izharul Haque, Secretary  
Ministry of Petroleum and Natural Resources  
Govt. of Pakistan  
Islamabad  
Phone (92+51) 821220

COST AND FINANCING

Total Cost USDOLS 482  
Foreign Exchange Cost estimates not available (roughly 60%)

Cost breakdown: Surface Mines USDOLS 451.4 million  
Underground Mines USDOLS 13.7 million  
Common Facilities USDOLS 17.8 million

While no firm commitment has been made by any financing agency, however, subject to the costs that are being worked out for coal there are many donor agencies who have shown willingness to extend credits.

Dates for mining operation not available.

44

CURRENT STATUS

The following Companies are among the prequalified firms for the mining and supply of coal.

1. Peabody Coal Corporation
2. North American Coal Corporation
3. Westar of USA
4. Ebasco of USA
5. Dawood Group of Pakistan
6. Amin Group, Pakistan
7. Habib Group of Companies, Pakistan
8. Habibullah Mines, Pakistan
9. Indus Mines, Pakistan
10. Iqbal Mines

Request for proposals for the supply of coal has been put out by WAPDA earlier this year.

47

Foreign Commercial Service  
American Consulate General  
Karachi, Pakistan

PROJECT:

SECOND 220 KV GUDDU-SIBI-QUETTA TRANSMISSION LINE

DESCRIPTION:

Construction of 447 Kilometers of 220 KV Transmission Line alongwith installation of necessary sub station facilities at Guddu-Sibi and Quetta.

CONTACT:

Lt. General Safdar Butt, Chairman  
Pakistan Water and Power Development Authority (WAPDA)  
WAPDA House  
Shahrah-e-Qaid-e-Azam  
Lahore  
Phone: 211811 and 322233                      Telex: 44869 WAPDA PK

COST AND FINANCING:

Total Cost	USDOLS 63 MILLION
Foreign Exchange Cost	USDOLS 25 MILLION

Financing: Financing has not been lined up so far and WAPDA may ask for suppliers credit.

CURRENT STATUS:

PC-1 is under preparation and bids are expected to be put out early next year.

Foreign Commercial Service  
American Consulate General  
Karachi, Pakistan

PROJECT:

70 MW POWER STATION NEAR QUETTA

DESCRIPTION:

Setting up of a small power station by private sector entrepreneur based on his coal mines near Quetta with a capacity of 35 MW which could be extended upto 70 MW

CONTACT:

Mr. Bakhtiar Saeed, General Manager (Power Division)  
Siemens Pakistan Engineering Co. Ltd.  
Illaco House  
Abdullah Haroon Road  
Karachi  
Tel: 516061-10 & 523021-30

COST AND FINANCING:

Total Cost	USDOLS 67.20 MILLION
Foreign Exchange Cost	USDOLS 38.52 MILLION

Financing: While local cost will be met by Regional Development Finance Corporation (RDFC) and the local sponsor, the foreign exchange cost will be raised as long term loans from foreign sources and as equity investment.

CURRENT STATUS:

Siemens of West Germany and Foster Wheeler of UK have entered into a joint venture agreement with the Pakistani investor with Siemens holding 11.17 per cent equity, Foster Wheeler 11.33 per cent equity while Pakistani investors will hold 77.5 per cent equity. USAID may also provide some portion of financing on this project.