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**PAKISTAN**

# ENERGY POLICY PROJECT - II

## MONTHLY PROGRESS REPORT

MAY 2012



**May 2012**

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# USAID/PAKISTAN: ENERGY POLICY PROJECT (EPP)

Monthly Report: May 2012

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## ACRONYMS

ADB	Asian Development Bank
AEAI	Advanced Engineering Associates International
AEDB	Alternate Energy Development Board
CCGT	Combined Cycle Gas Turbine
CPGCL	Central Power Generation Company, Ltd
CPPA	Central Power Purchasing Agency
DISCO	Distribution Company
ECC	Economic Coordination Committee
EPP	Energy Policy Project
FARA	Fixed Amount Reimbursable Agreement
FESCO	Faisalabad Electric Supply Company
FODP	Friends of Democratic Pakistan
GE	General Electric
GENCO	Generation Company
GOP	Government of Pakistan
GTPS	Guddu Thermal Power Station
GZDP	Gomal Zam Dam Project
IESCO	Islamabad Electricity Supply Company
IPP	Independent Power Producer
JTPS	Jamshoro Thermal Power Station
KESC	Karachi Electricity Supply Company
LESCO	Lahore Electricity Supply Company
LNG	Liquefied Natural
MOF	Ministry of Finance
MPNR	Ministry of Petroleum and Natural Resources
MTPS	Muzaffargarh Thermal Power Station
MWP	Ministry of Water and Power
MW	Megawatt, unit of electrical power, 1 million watts,
NEPRA	National Electric Power Regulatory Authority
NPCC	National Power Control Center
NTDC	National Transmission and Despatch Company
PC	Planning Commission
PDP	Power Distribution Program

PEPCO	Pakistan Electric Power Company
PSRP	Power Sector Reform Program
SOP	Standard Operating Procedure
T&D	Transmission and Distribution
USAID	United States Agency for International Development
WAPDA	Water and Power Development Authority

# PROGRAM OVERVIEW

USAID's Energy Policy Project (EPP) supports the jointly agreed upon interests of USAID and the GOP in power generation, transmission, and related policy reform activities. Current key activities include providing monitoring and implementation support to the following six signature energy projects, announced by the Secretary of State, Hillary Clinton:

- Four repair and maintenance projects (3 GENCOs and Tarbela. Total Funding \$70.731075 million)
- Two multipurpose dam completion projects (Gomal Zam and Satpara, Total funding \$66 million)

These projects, when completed, will add more than 863 MW to Pakistan's generation capacity. As of May 2012, a total of 439 MW have been added to Pakistan's grid.

Project	Planned MW Gains per FARA	Expected Gains	MW added (as of 31 May2012)
Muzaffargarh	165	475	280
Jamshoro	95	150	25
Guddu	55	75	-
Tarbela	80	128	128
Gomal Zam	17.4	17.4	-
Satpara	17.66	17.66	6
<b>Total</b>	<b>430.06</b>	<b>863.06</b>	<b>439</b>

EPP is providing technical support to the Ministry of Water and Power (MWP) for identifying and selecting new generation and transmission projects. Examples include import of electricity from Central Asian Republics to Pakistan through Afghanistan, providing analytical support for projects such as Step I Due Diligence for Diamer Basha, Kurram Tangi, Warsak and Mangla Dam Projects and issues related to these candidate projects.

EPP is also supporting generation & transmission related studies and the policy reform activities assigned by USAID, development of GENCO and NTDC business plans, and developing policies/procedures for the National Power Control Center and advisory services at MWP and the Planning Commission (Energy Wing), Ministry of Finance, etc.

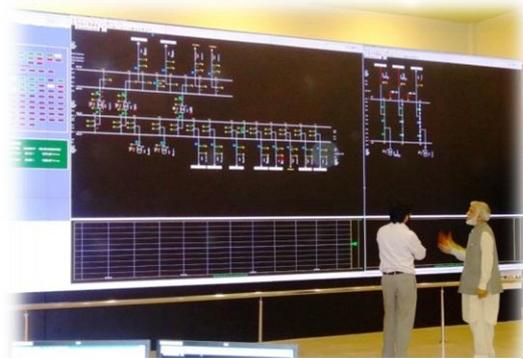
**Staffing:** Contractor's level of effort is comprised of 85% Pakistani and 15% international staff.

**Location:** All Provinces and Federally Administered Tribal Areas

**Total USAID Funding:** \$ 134.121 million - FARAS  
\$ 14.893 million - EPP Phase II



USAID holding discussion with CEO, GHCL



EPP staff visiting NPCC

## PROJECT ACTIVITIES



Tarbela Unit 3 winding in progress



Gomal Zam Transmission line towers stringing in progress

# COMPONENT I: PROJECT MONITORING & IMPLEMENTATION

The Energy Policy Project is providing monitoring and implementation support for the six signature projects announced by the Secretary of State Hillary Clinton. The projects comprise of rehabilitation of three thermal power plants (Muzaffargarh, Guddu and Jamshoro), and one hydropower plant, Tarbela dam; and completion of construction of two new multipurpose dams (Gomal Zam Dam and Satpara Dam). The total USG funding is \$136.731 million (per revised agreements) and the estimated gains are up to 863 MW. As of May 2012, 439 MW have been added to the national grid.

EPP is also coordinating with the GOP implementing partners, GENCOs and WAPDA, in designing the projects and continuously supporting the implementation of a broad range of projects' activities, which include:

- Dedicated technical experts assigned to thermal and hydro projects (Jamshoro, Guddu, Muzaffargarh, Tarbela, Satpara and Gomal Zam)
- Regular monitoring visits to project sites for verifying deliverables/milestones, checking quality of procured equipment & completed construction work
- Verifying megawatts added through rehabilitation or new construction
- Supporting implementing partners in designing work schedules, adherence & compliance with Agreement terms & conditions, opening of accounts, reimbursement of invoices, ensuring environmental compliance with EMMPs, and support resolution of issues during implementation
- Compliance certification with construction specifications and/or technical standards of equipment as per the Agreement
- Compiling monitoring & tracking reports (financial disbursements and technical progress)

## HYDROPOWER PLANTS

With a total funding of \$82.5 million a total of up to 163MW are estimated to be added through the rehabilitation of Tarbela hydropower plant and completion of two multipurpose dams, Satpara and Gomal Zam.

A baseline condition of the dams is tabulated below. For Satpara and Gomal Zam the baseline at the time of signing of agreement was zero.

Tarbela Units under Rehabilitation	Baseline at the time of FARA signing		Baseline at shut down for replacement	
	Capacity (MW)	MW gains	Capacity (MW)	MW gains
Unit 1	185	10	185	10
Unit 3	185	10	185	10
Unit 4	135	60	87	108
	<b>505</b>	<b>80</b>	<b>457</b>	<b>128</b>

### *Rehabilitation of Tarbela Hydropower Plant under FARA:*

Replacement of unit-3 Class F insulation winding was completed on May 25 along with testing and commission under manufacturer's supervision. With this replacement another 10MW capacity gain has been added at Tarbela power station. Therefore, a total of 128 MW capacity has been achieved with installation of new Class F insulation windings at Unit 1, 3 & 4. Spare Seals & Guides for Relief and Bypass Valves on Turbine Side at Units 1-10 have already been installed. Procurement of digital governors and SCADA system is under progress.

WAPDA claims of \$ 50,000 for installation of Spare Seals & Guides for Relief and Bypass Valves on Turbine Side at Units 1-10 and \$ 250,000 for the completion of Training were verified and disbursed to WAPDA's account in the reporting month.

Amendment-I of the Tarbela FARA, revised the completion date to December 31, 2012. Out of the \$16.5 million assistance amount committed for Tarbela, total disbursement as of May 2012 is \$10,879,917.

The schedule of status for the Tarbela FARA is tabulated below:

LINE ITEM #	UNIT #	WORK ITEM DESCRIPTION	AMOUNT (USD)	CLAIMS SUBMITTED (USD)	PRESENT STATUS
1	4	Replacement of Damaged Generator Stator Windings with Class F Insulation Windings, Unit#4	3,700,000	3,700,000	Work completed and 100% amount reimbursed
2	3	Replacement of Damaged Generator Stator Windings with Class F Insulation Windings, Unit#3	3,700,000	2,479,917	Installation of winding completed on May 25, 2012. WAPDA will place PO for the spares soon. 90% amount less spares amount has been reimbursed. WAPDA will submit the invoice of remaining 10% amount in first week of June.
3	1	Replacement of Damaged Generator Stator Windings with Class F Insulation Windings, Unit#1	3,700,000	3,700,000	Work completed and 100% amount reimbursed
4	1-14	Upgrading of the SCADA System, Units 1-14	1,000,000		New SCADA system is under manufacturing with ABB and shipment is expected in October 2012
5	1-10	Spare Seals & Guides for Relief & Bypass Valves on Turbine Side, Units 1-10	500,000	500,000	Installation completed on all units. 100% amount has been disbursed to WAPDA.
6	1-10	Replacement of Electromechanical Governors by Digital Ones, Unit 1-10	3,000,000		Governors are scheduled to be shipped from GE USA in June 2012
7	1-10	Replacement of Worn out Station Drainage & Dewatering Pumps, Units 1-10	400,000		New Station Drainage Pumps received at Tarbela and installation is in progress
8		Training	500,000	500,000	20 engineers from Tarbela power station have completed training on O & M in Switzerland. 100% amount disbursed to WAPDA.
<b>Total Allocated Amount</b>			<b>16,500,000</b>	<b>10,879,917</b>	

***Gomal Zam Multipurpose Dam under Activity Agreement:***

The installation of transmission line towers is in progress; towers have been installed over a distance of 54 km (95% completion achieved) starting from the Tank Grid station to the powerhouse. Main Dam and Spillway concrete and related works along with mechanical

testing of dam fixtures are 100 % complete. Hydropower and Switchyard component is 98 % complete.

The reservoir filling started with the closure of the diversion tunnel, and the water level has gone up to 715 meters in the reservoir. The final testing and commissioning is dependent on reservoir filling up to normal operating level of 743 meters which is expected in Aug-Sep 2012.

An inspection visit to Gomal Zam Multipurpose Dam Project was conducted from May 28 to May 31, 2012 along with Auditor from OIG office. During visit meetings were held with all key WAPDA officers, Management Consultants officers, FWO, the EPC contractor and Sino Hydro, sub-contractor for Main dam, Power House and Switchyard and PESCO, the transmission line contractor. Also consultant engineers at site were interviewed to verify the compliance with the technical specifications and standards. Site photographs were taken for records.

Amendment No. 1 to the Activity Agreement, revised the completion date of energy portion to September 30, 2012. From the \$40 million assistance amount committed for Gomal Zam, the total disbursement as of May 2012 is \$36,589,000.

The schedule of status for the Gomal Zam Activity Agreement is tabulated below:

LINE ITEM #	WORK ITEM DESCRIPTION	% COMPLETION & DATES as per AGREEMENT	AMOUNT ( USD-Million)	CLAIMS SUBMITTED ( USD Million)	PRESENT STATUS
1.	Main Dam, Spillways Concrete & Related Works	88%	19.171	19.171	Work Completed. Claim of 19.171 million reimbursed
2.	Hydropower & Switchgear Component	90%	0.757	0.757	Work Completed. Claim of 0.757 million reimbursed.
3	Main Dam and Spillways Concrete & Related Works	91%	5.125	5.125	Work Completed. Claim of 5.125 million reimbursed.
4.	Main Dam and Spillways Concrete and Related Works	100%	5.125	5.125	Work Completed. Claim of 5.125 million reimbursed.
5.	Hydropower & Switchgear Component	50% of remaining 10% works by Dec 9, 2011	0.920	0.920	Work Completed. Claim of 0.920 million reimbursed.
5a.	Hydropower & Switchgear Component	100% by Jun 30, 2012	0.920		98% completed
6.	132kV Transmission Line and related works	50%	1.0	1.0	Work Completed. Claim of 1.0 million reimbursed.
7.	132kV Transmission Line and related works	50% of remaining 10% works by Dec 9, 2011	0.5	0.5	Work Completed. Claim of 0.5 million reimbursed.
7a.	132kV Transmission Line and related works	100% by Apr 30, 2012	0.5		95% Completed. Expected to complete in June 2012
8a.	Completion of Mechanical testing of Dam fixture	100%	2.0	2.0	Work Completed. Claim of 2.0 million reimbursed.
8b.	Completion of Project - Filling of Reservoir, Testing, & Placement in Commercial Operation	50% by Dec 9, 2011	1.991	1.991	Work Completed. Claim of 1.991 million reimbursed.
8c.	Completion of Project - Filling of Reservoir,	100% by Aug 30, 2012	1.991		On schedule. Final testing depends upon water availability

Testing, & Placement in Commercial Operation				
<b>Total Allocated Amount</b>	<b>40</b>	<b>36.589</b>		

## Gomal Zam Dam: A symbol of success for USAID

The Energy Policy Project team visited the **Gomal Zam Multipurpose Dam** at Khajuri Kach, South Waziristan to monitor the construction progress and facilitate USAID’s lead auditor in carrying out an audit of the project.

With a funding of USD 40 million USAID is supporting the completion of the dam, electricity transmission lines and the hydropower plant. Upon completion the project will supply 17.4 megawatts of power to 25,000 households of the region and irrigate 163,000 acres of farmland in Khyber Pakhtunkhwa Province, benefiting approximately 30,000 households.



View of Gomal Zam Dam reservoir

Work on the site is progressing steadily despite the fragile security atmosphere. Construction of the Main Dam is 100% complete with 73 meters being added to the dam’s height through UDSAID

funding. Stringing of 199 transmission towers with 132 KV line in progress from Tank Grid Station to Gomal Zam Power House is ongoing. Water level in the reservoir have risen to 715 meters with a total water storage of 89 meters, which is being used for irrigation releases and providing flood protection since early 2011.



Transmission towers from Gomal Zam Power House

**Satpara Multipurpose Dam under Activity Agreement:**

The dam and power house 1 & 2 are 100 % complete and irrigation system is 99% complete. The construction activities were suspended at site due to law and order situation in Skardu, and also due to shortage of cement and other construction material due to closure of Karakoram Highway. Completion of irrigation system was extended from April 30, 2012 to June 30, 2012 by USAID after reviewing WAPDA's request.

The overall progress of civil works at power house 3 & 4 is 62 % and Electro-Mechanical works is 60 %. The expected completion date of Unit 3 & 4 is April 30, 2013 as per the Agreement completion date. From the \$26 million assistance amount committed for Satpara, the total disbursement as of May 2012 is \$21,485,700.

The schedule of status for the Satpara Activity Agreement is tabulated below:

LINE ITEM #	WORK ITEM DESCRIPTION	% COMPLETION & DATES as per AGREEMENT	AMOUNT ( USD - Million)	CLAIMS SUBMITTED ( USD- Million)	PRESENT STATUS
1.	Civil Works for Dam and Power House 1 & 2	94%	4.500	4.500	Work Completed. Claim of 4.500 million reimbursed.
2.	Civil Works for Dam and Power House 1 & 2	100%	1.877	1.877	Work Completed. Claim of 1.877 million reimbursed.
3.	Civil, Electrical and Mechanical Work for Power Houses 3 & 4	50%	5.846	5.846	Work Completed. Claim of 5.846 million reimbursed.
4.	Civil, Electrical and Mechanical Work for Power Houses 3 & 4	100% by April 30, 2013	3.681		62% works completed and is on schedule
5.	Irrigation System	78 %	2.530	2.530	Work Completed. Claim of 2.530 million reimbursed
6.	Irrigation System	89 %	2.282	2.282	Work Completed. Claim of 2.282 million reimbursed
7.	Irrigation System	90 % by December 09, 2011	2.0538	2.0538	Work Completed. Claim of 2.0538 million reimbursed
7a.	Irrigation System	100% by June 30, 2012	0.2282		99% work completed and expected to complete in June 2012.
8.	Consultancy Services for Satpara Dam	81%	0.0853	0.0853	Work Completed. Claim of 0.0853 million reimbursed
9.	Consultancy Services for Satpara Dam	90%	0.400	0.400	Work Completed. Claim of 0.400 million reimbursed
10.	Consultancy Services for Satpara Dam	100% by Apr 30, 2013	0.390		Ongoing till end of project
11.	Completion of Project, with Testing & Placement in Commercial Operation (less PH 3 & 4)	90% by Dec 09, 2011	1.9116	1.9116	Work Completed. Claim of 1.9116 million reimbursed by USAID.
11a.	Completion of Project, with Testing & Placement in Commercial Operation (less PH 3 & 4)	100% by June 30, 2012	0.2124		In progress
<b>Total Allocated Amount</b>			<b>26.00</b>	<b>21.4857</b>	

## THERMAL POWER PLANTS

With a total funding of \$54.312 million (revised from \$52 million per Activity Agreement), a total of up to 700MW are estimated to be restored through the rehabilitation of three thermal power plants. The baseline condition at the time of signing of FARA was 315 MW; however due to further deration in plants operational capacity the estimated gains have increased to 700 MW.

Thermal Plants under Rehabilitation	Baseline at the time of FARA signing		Present Operational Baseline	
	Capacity (MW)	MW gains	Capacity (MW)	MW gains
Muzaffargarh TPS	835	165	690	475
Jamshoro TPS	560	95	500	150
Guddu TPS	225	55	200	75
	<b>1620</b>	<b>315</b>	<b>1390</b>	<b>700</b>

### *Rehabilitation of Muzaffargarh TPS under Activity Agreement:*

280MW capacity has been restored with the rehabilitation/replacement works out of the total estimated gains of 475 MW. After rehabilitation of boiler super heater tubes at Unit 1, 2 & 3, 230MW capacity has been restored and with replacement of air pre-heater elements (Intermediate and cold end) at Unit 4 another 50MW were added.

For the remaining equipment delays were anticipated in the procurement process due to the GENCO weak financial standing to pay on time through a letter of credit. Therefore, EPP experts worked with USAID in redefining the reimbursement process and revising the FARA to facilitate the GENCO in making timely payments. A new Activity Agreement and implementation letter was signed in April allowing GENCO to have necessary funding available for making timely payments to the vendors. The completion date per the revised activity agreement is June 30, 2013.

Under the revised agreement nine claims of \$3,969,721 were received from the GENCO. Two claims of \$1,023,998 do not conform with specifications in the PIL, therefore further justification is requested from the GENCO for USIAD to consider and make a decision. The request for the remaining 2,945,723 has been submitted to USAID/ENR for approval and further processing. In addition to this, \$4,872,500 has already been disbursed under the original FARA.

The schedule of status for the MTPS Activity Agreement is tabulated below:

LINE ITEM NO.	UNIT NO.	WORK ITEM DESCRIPTION	TOTAL AMOUNT	CLAIMS SUBMITTED ON THE BASIS OF OLD FARA	CLAIMS SUBMITTED ON THE BASIS OF NEW PIL	PRESENT STATUS
1	1,2&3	Rehabilitation of Boiler super heater tubes to overcome failure of tubes	\$4,080,000	\$4,080,000		Material received and installed at site. <b>100% Claim reimbursed from USAID</b>
2	1- 4	Special Cooling Water Treatment.	\$187,440			Re-Tendered second time and opened in April 2012. Bid Evaluation is in process
3	1-6	Use of Fuel Oil Additive as done on Unit-4 (450 Tons).	\$921,225			Re-Tendered and opened in March 2012. Bid Evaluation is in process
4	1,2&3	Replacement of Cold layer element for RAH (2 sets)	\$170,000	\$170,000		Material received and installed at site. <b>100% Claim reimbursed from USAID</b>
5	1,2&3	Modification of Excitation system (3 set)	\$191,700			Tender opened in April 2012 and Bid Evaluation is in process
6	1,2&3	Electric motors for C.T. Fan (02 No) and for GRC fan. (01 No).	\$184,245		\$184,245*	PO has been issued on 23.09. 2011 for electric motors while LC opened on 02.02 2012 for GRC fan. Material is expected to reach at site in August 2012. <b>Claim for 100% Payment (\$184,245) submitted to USAID ENR.</b>
7	3	D.C. Storage batteries (01 Set).	\$60,000	\$60,000		Material received and installed at site. <b>100% Claim reimbursed from USAID</b>
8	1,2&3	220Kv circuit breaker SF6 type (06 No).	\$337,605			PO issued and LC is in process
9	4	Re-blading of LP. Rotor (LP Turbine Rotor blades of row (6&7), pins & locking device).	\$787,035		\$787,035**	PO issued and LC opened on 02.02.2012 Claim for 100% Payment (\$787,035) is under consideration because one item in PO was dropped from PIL. NPGCL will send the justification for it.
10	4	Air Pre-Heater Elements (Intermediate and Cold) 02 sets	\$255,000		\$255,000*	Material received and installed at site. <b>Claim for 100% Payment (\$255,000) received and submitted to USAID ENR on May 25, 2012</b>
11	4	Up-gradation of AVR System (01 set).	\$249,210			Tender opened and Bid evaluation is on going
12	4	Changing of UPS 1&2. (01 set).	\$62,835			Tender opened and Bid Evaluation is ongoing
13	4	DEH (01 set).	\$319,500			Re-Tender will be opened soon.
14	4	Up-gradation of FSSS System (01 set).	\$138,450			Tender opened and bid submission is in process
15	4	Up-gradation of TSI system BNC 3300 or equivalent (Turbine	\$266,250			Tender opened in May 2012 and is under evaluation

LINE ITEM NO.	UNIT NO.	WORK ITEM DESCRIPTION	TOTAL AMOUNT	CLAIMS SUBMITTED ON THE BASIS OF OLD FARA	CLAIMS SUBMITTED ON THE BASIS OF NEW PIL	PRESENT STATUS
		Supervisory Instrument) (01 set).				
16	1-6	Training and software/hardware cost for CMMS and off-line efficiency monitoring system. All Units	\$1,000,000			Technical offer opened in Feb 2012 and is under technical evaluation
17	5&6	I.D. Fan Rotor/Impeller along with Housing and Dampers (04 Set).	\$625,000	\$562,500		Consignment received on 26.02.2011 and installed partially at unit 5. <b>90% claim (\$562,500) reimbursed by USAID</b>
18	5&6	Air Pre heater Elements Hot end, intermediate & cold end layers along with seals for both units (04 Set).	\$639,000			Tender opened and Bid Evaluation is on going
19	5&6	Procurement of G.R.C. Fan Impeller/Rotor (01 Set).	\$33,548		\$33,548*	Po issued and LC opened on 27.01.2012 <b>Claim for 100% payment (\$33,548) submitted to USAID ENR.</b>
20	5&6	Procurement of Cooling Tower Fan Gear Box & its parts. (06 No. gear box).	\$236,963		\$236,963**	PO issued and LC opened on 27.01.2012 Claim for 100% payment (\$236,963) is under consideration because quantities of three items are different from PIL. NPGCL send the justification for it.
21	5&6	Economizer Tubes for both Units (02 Sets)	\$2,130,000		\$2,130,000*	Po issued and LC opened on 05.04.2012 <b>Claim for 100% Payment (\$2,130,000) submitted to USAID ENR.</b>
22	5&6	IP Turbine Rotor (01 No).	\$641,130			LOI issued in May 2012.
23	5&6	Replacement of Damaged Exhaust flue gas ducts of material Russian Grade Steel sheets (50 M.T), Plate Type Heat Exchanger for Inner Water Cooling System of Generator and Motor for Starting Oil Pump (Vertical) Units 5-6	\$287,550			Tender opened and is under evaluation
24	5&6	Conversion of Boiler Ignition System from Natural Gas to HSD/Furnace Oil	\$277,965			Tenders opened and evaluation is in process. But it is proposed to be dropped
25	5&6	Repair of winding and stator of Generators and testing	\$319,500			Tender will open in June 2012
26	5&6	Hydraulic coupling of Boiler Feed Water Pumps (01 No).	\$63,900			Tender opened and file sent for re- evaluation on 1.2.2012. But it is proposed to be dropped.
27	5&6	Modification of Excitation System	\$166,140			Tender opened and is under evaluation
28	5&6	Procurement of 0.4KV Motors for	\$10,650		10,650*	PO issued and LC opened in April 2012

LINE ITEM NO.	UNIT NO.	WORK ITEM DESCRIPTION	TOTAL AMOUNT	CLAIMS SUBMITTED ON THE BASIS OF OLD FARA	CLAIMS SUBMITTED ON THE BASIS OF NEW PIL	PRESENT STATUS
		Cooling Towers Fan and APH 02				<b>Claim for 100% payment (\$10,650) submitted to USAID</b>
29	5&6	Procurement of 6.6KV Motor for C.W. Pumps, CP, ID Fan, FD Fan & BF Pumps (05 No).	\$162,945		\$162,945*	Po issued and LC opened in April 2012 <b>Claim for 100% payment (\$162,945) submitted to USAID</b>
30	5&6	Procurement of 6.6/0.4KV Breaker (5 No. 6KV breaker, 18Nos. 0.4Kv Breakers).	\$295,005			PO issued and request to establish LC has been made. Claim for 100% payment (\$295,005) received but LC was missing.
31	5&6	Protection Relay for Generators.	\$29,820			Tenders opened and LOI issued on 24.02.2012
32	5&6	MK Breakers, Seal Oil Coolers, PMG	\$169,335		\$169,335*	Consignment received at site. <b>Claim for 100% payment (\$169,335) received and submitted to USAID on May 29, 2012</b>
33	5&6	Supply, Installation, Commissioning & Testing of complete distributed control system (DCS) including field equipment like sensors, transmitter & actuators etc. for turbine governing system DEH-III and Boiler Turbine Auto regulation system YEWPACK-II	\$213,000			Retendered and bid evaluation is in process. But it is proposed to be dropped.
34	5&6	Rehabilitation of Furnace safety Supervisory System (FSSS) including Furnace camera, flame monitoring & ignition system	\$266,250			Demand sent to GM Thermal for administration approval of MD. But it is proposed to be dropped.
<b>Total Amount</b>			<b>\$15,778,195</b>	<b>\$ 4,872,500</b>	<b>\$ 3,969,721</b>	

Amount Reimbursed so far = **US\$ 4,872,500**

\*Claims submitted to USAID/ENR = US\$ 2,945,723

\*\*Claims that deviate from PIL specifications and require justification from NPGCL = US\$ 1,023,998

**Summary by Status as of May 31, 2012**

Description	Numbers	Amount
Material Received at Site	6	\$ 5,359,335
LC opened and material is awaited	7	\$ 3,545,385
PO issued and LC is awaited	2	\$ 632,610
Performance Bond received and PO is awaited	-	-
LOI Issued and Performance Bond is awaited	2	\$ 670,950
Tender opened and in process	15	\$ 4,984,165
Tender Awaited	2	\$ 585,750
<b>Total PIL Line Items</b>	<b>34</b>	<b>\$ 15,778,195</b>

*Rehabilitation of Jamshoro TPS under Activity Agreement:*

Two FARA items (Air Pre-heater elements and seals at Unit-I and Autoburner Control System) have been replaced which added a total of 25 MW.

For the remaining equipment delays were anticipated in the procurement process due to the GENCO weak financial standing to pay on time through a letter of credit. Therefore, EPP experts worked with USAID in redefining the reimbursement process and revising the FARA to facilitate the GENCO in making timely payments. A new Activity Agreement and implementation letter was signed in April allowing GENCOs to have necessary funding available for making timely payments to the vendors. The completion date per the revised activity agreement is June 30, 2013.

Under the revised activity agreement, JPCL submitted 9 claims for \$7,872,377; however one claim equivalent to \$3,195,000 does not qualify for reimbursement at this point under the terms and conditions of PIL since its Letter of Credit has not been established. Therefore, the remaining 8 claims qualifying for reimbursement total to \$ 4,677,377. EPP submitted 4 claims amounting to \$3,468,975 on May 9-10, 2012 to USAID/ENR for approval and further processing.

The remaining four claims of \$1,208,402 deviated from the specifications mentioned in the PIL and have been submitted with observations to USAID/ENR for decision. In addition to this, \$2,545,000 has already been disbursed under the original FARA.

The schedule of status for the JTPS Activity Agreement is tabulated below:

LINE ITEM NO.	UNIT NO.	WORK ITEM DESCRIPTION	TOTAL AMOUNT	CLAIMS SUBMITTED ON THE BASIS OF OLD FARA	CLAIMS SUBMITTED ON THE BASIS OF NEW PIL	PRESENT STATUS
1	1	Rehabilitation of Air Pre-heater Side A&B Rotor.	\$1,672,050			Tender opened on 29.02.2012, case was sent for approval to CEO (GHCL) being competent in this case who is of opinion that this tender may be re-invited to receive more competitive prices. Now Re-Tender will take place.
2	1	Replacement of Final Super Heater Coils.	\$958,500			LOI Issued on 19.04.2012 and Performance Bond received on 23.05.2012. PO will be issued after confirmation from bank.
3	1	Complete replacement of Flue Gas Duct & Air Pre-heater Bottom hoppers and F.D Fan duct up to steam coil Air Heater.	\$720,000	\$720,000		The consignment received at JPCL on 16.01.2012. Installation is in process. <b>Claims of \$720,000 reimbursed</b>
4	1	Complete Rehabilitation of Cooling Towers.	\$500,000	\$450,000		Material received at Jamshoro. Installation is completed. <b>90% claim (\$450,000) reimbursed. 10% Claim will be lodged shortly.</b>
5	1	Up gradation / replacement of Auto Burner control system and Data Acquisition System.	\$300,000	\$300,000		Material received and installed at site. <b>100% Claim (\$300,000) reimbursed by USAID.</b>
6	1	Hiring of services for major overhauling.	\$810,000			The tender opened on 20.02.2012. Only one firm M/s IED Ukraine through their local agent M/s Istil Karachi has participated in the tender, their offer is under evaluation.
7	1	Soot Blower Spare Parts.	\$117,150		\$117,150**	L/C opened on 28.12.2011. Material received at site on 12.05.2012 but specifications mentioned in PO are different from PIL specifications. <b>Claim for 100% Payment (\$117,150) submitted to USAID with observations as specifications mentioned in PO are different from PIL specifications.</b>
8	1	Tube Bundles of Steam Converter, unit#1	\$250,000	\$225,000	\$25,000*	Material received at site on 21.11.2011 and installed. <b>90% claim (\$225,000) reimbursed while 10% (\$25,000) claim submitted to USAID ENR.</b>
9	1	Spares for Oil & HSD Burners & Igniters.	\$213,000		\$213,000**	L/C Established on 28.12.2011 and material received at site but specifications mentioned in PO is different from

						PIL specifications. <b>Claim for 100% Payment (\$213,000) submitted to USAID with observations as specifications mentioned in PO are different from PIL specifications.</b>
10	1	Air Pre-heater Elements & Seal,	\$670,000	\$670,000		Material Installed at site amount reimbursed. <b>100% Claim (\$670,000) reimbursed by USAID.</b>
11	1-4	Use of fuel oil additives to prevent slag formation and cooling water treatment chemicals to prevent scale buildup.	\$958,500			Tender opened on 17.02.2012. Four companies have participated. Their bids are under evaluation process.
12	2-4	Replacement of H.P Heaters along with the valve and controllers including Rehabilitation of Instrument Control & Protection System.	\$3,306,825		\$3,306,825*	L/C Established on 30.09.2011. The material is expected to reach TPS up to July 2012. <b>Claim for 100% Payment (#3,306,825) submitted to USAID ENR.</b>
13	2-4	Complete Rehabilitation of Cooling Towers.	\$718,875			P.O No. ICB-21/11/JFOB-25/1432-35 placed on 01.02.2012 but L/C is awaited.
14	2-4	Complete Rehabilitation of drain valves.	\$351,450		\$351,450**	L.C Established on 28.12.2011. The material is expected to reach TPS up to 15.06.2012. <b>Claim for 100% Payment (\$351,450) submitted to USAID with observations as specifications mentioned in PO are different from PIL specifications.</b>
15	2-4	Rehabilitation of soot blowing system.	\$702,900			LOI issued and Performance Bond received on 22.05.2012. PO will be issued after confirmation from Bank.
16	2-4	Supply, installation and commissioning of complete economizers of three units	\$3,195,000			Tenders have been opened and the case is under evaluation process. Allocation of Foreign exchange is awaited. LC is not established yet. Claim for 100% Payment received but rejected as LC is not established yet.
17	2	a. Modification / Rehabilitation of Electro Hydraulic and Mechanical Hydraulic Governing system. b. Replacement of Data Acquisition System (DAS-100), Auto Regulation System (MZ-III) and Temperature Scanners for Generator Winding Temperature, Super Heater/Re- Heater Temperature, Boiler Drum Metal Temperature, F.D, I.D Fan motor Temperature, Boiler Feed Pump Temperatures with latest Distributed Control System (DCS) c. Replacement of existing FSSS along with Furnace	\$1,171,500			Tender is being Re-invited in the instruction received from CEO (GHCL)

		Flame Monitoring on one unit. Replacement of Data Acquisition System (DAS-100), Auto Regulation System (MZ-III) and Temperature Scanners for Generator Winding Temperature, Super Heater/Re- Heater Temperature, Boiler Drum Metal Temperature, F.D, I.D Fan motor Temperature, Boiler Feed Pump Temperatures with latest Distributed Control System (DCS) d. Replacement of Turbine Vibration system with Vibro-Control-4000 Schenk or equivalent				
18	2	Procurement of Boiler Feed Pump Motor Complete.	\$117,150		\$117,150*	L/C was opened on 28.12.2011 and the equipment is expected to reach TPS up to 30.06.2012. <b>Claim for 100% Payment (\$117,150) submitted to USAID ENR.</b>
19	3	Replacement of Final Super Heater Coils.	\$958,500			PO issued on 24.05.2012 and now foreign exchange allocation is awaited.
20	3	Three-Way valve of Oil burner.	\$200,000	\$180,000	\$20,000*	Material received at JPCL on 23.11.2011 and is installed. <b>90% claim (\$180,000) reimbursed and 10% claim (\$20,000) submitted to USAID ENR.</b>
21	3	Spares for Overhauling of Turbine.	\$532,500		\$ 526,802**	Consignment reached at Jamshoro but specifications mentioned in PO are different from PIL specifications. <b>Claim for (\$526,802) submitted to USAID with observations as specifications mentioned in PO are different from PIL specifications.</b>
22	4	I.D Fan Impellers.	\$479,250			Purchase Order issued on 16.03.2012. Establishment of LC is awaited
23	1-4	Off-line Efficiency Monitoring system and training.	\$426,000			Tender will be Re-called due to not offering of required software.
		<b>Total Amount</b>	<b>\$19,329,150</b>	<b>\$ 2,545,000</b>	<b>\$ 4,677,377</b>	

Amount Reimbursed So far= **US\$ 2,545,000**

\*Claims submitted to USAID ENR with AEAI Certification= US\$ 3,468,975

\*\*Claims submitted to USAID/ENR with observations = US\$ 1,208,402

**Summary by Status as of May 31, 2012**

<b>Description</b>	<b>Numbers</b>	<b>Amount</b>
Material Received at Site	9	\$3,502,650
LC opened and material is awaited	3	\$3,775,425
PO issued and LC is awaited	4	\$5,351,625
Performance Bond received and PO is awaited	2	1,661,400
LOI Issued and Performance Bond is awaited	-	-
Tender/Re-Tender opened and in process	2	\$1,768,500
Re-Tender Awaited	3	\$3,269,550
<b>Total PIL Line Items</b>	<b>23</b>	<b>\$19,329,150</b>

### ***Rehabilitation of Guddu TPS under Activity Agreement:***

After a series of negotiations between GE and Guddu management regarding the upgrade/uprate of Block-I, one of the two General Electric Combined Cycle Plants (CCP), the parties are expected to reach an agreement. GE provided revised performance bank guarantee based on which the Guddu Management issued the Purchase and Service Orders. The final negotiations pertaining to the terms and conditions in the orders are underway. The uprate, upgrade and overhaul will increase the capacity of the plant by about 75 MW (higher than the earlier expected increase of 55 MW), improve its efficiency by about 3.4%, and improve the reliability of the system by upgrading the obsolete gas turbine and steam turbine control systems.

A new Activity Agreement and implementation letter was signed in April allowing GENCO to have necessary funding available for making timely payments to the vendors. The completion date per the revised activity agreement is June 30, 2013 with a total funding of USD 19,242,420.

### **GENCOs Activity Agreements: USAID's focus on Thermal Power Generation**

During May, EPP and USAID paid strong emphasis on the three thermal power station rehabilitation activity agreements. A series of meetings were held between USAID, EPP, USAID Assessment Strengthening Program (ASP-AiD), CEOs of GENCOs and CEO of GENCO Holding Company. During the meetings, discussions revolved around the technical, financial, and training aspects of the GENCOs activity agreements.

A framework was developed for monitoring the progress of the activity agreements and resolution of any issues faced in the implementation of the agreements. It was mutually agreed upon that a working group comprising of USAID, ASP-AiD and EPP will meet on fortnightly basis to review and discuss the GENCOs progress. USAID assigned specific project managers to each of the GENCOs for facilitating the implementation of the activity agreement.

In the meeting it was also decided that EPP and ASP-AiD will collaborate in building the capacity of GENCO management and staff to develop work plans for the agreements and track progress.



# COMPONENT 2: POLICY AND REFORM

## SUPPORT TO GOVERNANCE AND REFORM TEAM (GRT), MWP

EPP is supporting the Ministry of Water and Power to implement the GOP's Power Sector Reform Program (PSRP) in generation, transmission, fuels, policy and finance. GRT support is jointly performed with the USAID funded Power Distribution Improvement Program (PDIP).

### *Policy:*

#### **Energy Efficiency (Institutional Strengthening/Capacity Building):**

- **Background:** Energy Efficiency (EE) has long been neglected by the GOP. A draft bill has been moved to the Council of Common Interests and the GOP is moving to make ENERCON the foundation of the APEX EE body.
- **Challenge:** In the past ENERCON had lacked significant government support and remained mostly a project driven entity. ENERCON management had been unsuccessful in staffing the sanctioned positions. Of the eight sanctioned technical positions, only one of them is filled and that even on deputation. The challenge is to begin staffing ENERCON and moving beyond a purely project driven organization while at the same time developing an organizational blue print for the new APEX EE body and an organizational transformation plan.

- **Product:** EPP has provided a series of first steps to rebuild ENERCON.

- **Result:** Upon MWP's consent to recruit internally for ENERCON as MWP/WAPDA/PEPCO/DISCO employees can be transferred without any higher approvals, the Additional Secretary Water and Power has been deputed as the Managing Director Enercon. The search for the remaining positions is underway.

EPP held an introductory meeting with the newly appointed MD of Enercon and discussed the various

options available for energy conservation. EPP advised the MD Enercon on the modus operandi to develop a policy to phase out incandescent light bulbs for initiating the Energy Efficiency drive in Pakistan.



Meeting with MD Enercon

#### **Renewable Energy Policy:**

- **Background:** Given the looming energy crisis in the country, it is need of the hour to explore and utilize other sources of energy, especially renewable energy sources. Pakistan has enormous potential in power generation through renewable energy resources such as wind, solar, geo-thermal and bio-fuel energy.

- **Challenge:** The country has been majorly been using traditional methods of power generation – hydel and thermal for meeting its energy needs. Developing awareness in the general public and the government decision makers about the use and benefits of renewable energy will take a considerable amount of time
- **Product:** Upon MWP's request EPP is collaborating with the Alternative Energy Development Board (AEDB) to develop a medium-term and small-scale renewable energy policies for the country.
- **Result:** EPP conducted a series of meetings with AEDB, holding discussions on the renewable energy sources and how they can be put to use and drafting a framework for the policy for the country, with a focus on institutional roles/responsibilities and policy.
- **Regional Experiences in Energy**  
Upon MWP's request, EPP developed a report on the Turkish Power Sector and presented to the Additional Secretary.
- **Financial Modeling at CPPA**
- During the reporting month EPP analyzed the financial information gathering and modeling process at CPPA. In this regard, EPP held meetings with the CPPA Treasury Department at WAPDA House, Lahore. The current methodologies used at CPPA were evaluated and results shared with MWP. EPP is working towards improving the data-entry process at CPPA and to bridge the communication gap between MWP and CPPA

## SUPPORT TO MINISTRY OF FINANCE

### Tariff Differential Subsidy and Tariff Reform

- **Background:** GOP with MOF as the executing agency has been directed to reduce all subsidies in the energy sector as a part of fiscal discipline and rationalization. MOF is looking into ways to make the subsidy provisioning more targeted to the lower income households.
- **Challenge:** Tariff differential subsidies that are currently being provided to the distribution companies are amounting to unaffordable sums. This outlay has become increasingly burdensome for GOP to bear. The current tariff and subsidy mechanism is providing electricity at a discounted rate to all users, which is resulting in larger than needed outlays of funds and deepening of the circular debt crisis.
- **Product:** EPP collected information on the subsidy in the power sector and carried out detailed analysis
- **Result:** EPP held a meeting with the Additional Secretary (Budget) regarding targeted subsidy in the power sector and briefed the AS about the financial impact of the across-the-board subsidy being provided by the GOP to the power sector.

EPP provided assistance to the Corporate Finance Wing, Ministry of Finance on various policy issues relating to the power sector, and provided necessary data to the Corporate Finance Wing regarding installed/dependable capacity of GENCOs/ IPPs and their fuel monthly requirements.

During the reporting month EPP held a meeting with the Second Secretary and Economic Specialist from U.S. Embassy and briefed about the issues of the power sector particularly delay in payment to IPPs.

## SUPPORT TO PLANNING COMMISSION & MINISTRY OF PETROLEUM & NATURAL RESOURCES

### Circular Debt

- **Background:** To resolve the looming Circular Debt problem, Deputy Chairman Planning Commission requested to conduct a comprehensive study on Circular Debt, emphasizing on the amount of subsidy paid, where it is adjusted and proposing recommendations.
- **Challenge:** Circular debt is a major cause of the prevalent energy crisis in the country. The challenge is to find the main causes of circular debt and propose solutions that will have immediate results and alleviate the situation.
- **Product:** In collaboration with USAID Power Distribution Program EPP drafted a paper on 'Power Sector Circular Debt- History and Current Situation'
- **Result:** For compilation of the paper, Planning Commission and MOF's assistance was sought in the collection of data from NPCC/CPPA. Meetings were held with Member (Energy), Planning Commission in which the scope of the paper was discussed and issues highlighted in accessing the relevant data. Despite efforts from Planning Commission as well as by the Ministry of Finance, relevant data could not be obtained from CPPA. Based on the available data, the first draft of the paper on Circular Debt was shared with the USAID Energy Office for review.

### Solar Tube wells:

EPP provided support to the Planning Commission in designing and implementing a project on the use of solar tube wells in the country. EPP expert coordinated with PC in carrying out the project financials and also provided policy advised on the process.

### LNG Imports:

EPP expert seconded at MNPR was fully dedicated to providing technical support to the LNG Import Program. The activities undertaken during the reporting period are as follows:

- a. Participated in a series of internal group meetings at MPNR and provided inputs for analysis of issues, follow-up and recommendations.
- b. Provided inputs on expected developments in LNG markets and pricing.
- c. Presented the LNG proposal to industry stakeholders with participation of Secretary MPNR, DG Gas staff and OGRA.
- d. Supported MPNR and DG Gas staff in developing revised documents/presentations for the ECC
- e. Participated in the ECC meeting held at the Prime Minister's Secretariat to review the MPNR proposal for initiating LNG process. It was agreed upon in the meeting to constitute a high level LNG Committee to review and finalize the LNG imports proposal.

- f. Supported MPNR and DG gas staff in developed documents/presentations for the LNG committee and participated in the meeting of the LNG Committee.

- **Gas Allocations for the Power Sector**

EPP provided support preparing a draft presentation for Planning Commission regarding gas allocations to the power sector.

- **ECC Summary**

EPP provided support in drafting a summary on 'Offloading Energy Sector Projects from Public Sector Development Programme'.

- **Downstream Oil Policy:**

Upon MPNR's nomination EPP expert was made a member of a Committee to draft a refining policy and ex-refinery pricing mechanism. EPP held discussion on the scope and conceptualization of the policy with the Financial Advisor MPNR.

- **Shale Gas:**

During the reporting month EPP followed up with LMKR regarding the options for implementing their proposal for the Shale Gas consultant. *(Note: The subject is on hold pending further clarity from MPNR)*

- **General Support to MPNR**

EPP prepared draft Scope of Work (SOWs) for hiring of an LNG Consulting Company and E&P support (including Shale Gas). (Note: in view of MPNR's time constraint and urgency, it is proceeding with the process to recruit the services of an international LNG Consulting Company to provide immediate support in preparation of Request for Proposal, bid evaluations and activities related to the competitive bidding process for LNG imports).

- **General Support to Planning Commission**

EPP staff seconded at the Planning Commission provided support to the Planning Commission as follows:

- Served a focal point of contact in conducting discussions with Asian Development Bank for their assistance in Development of Pakistan Integrated Energy Model.
  - Developed an action items arising out of the meeting held in response to notices of default served by IPPs.
  - Compiled presentation on allocation of natural gas in different sectors in Pakistan and its Impact on Power Sector.
  - Prepared a presentation on Energy Sector of Pakistan to be presented at the Sustainable Development Policy Institute by Member Energy.
- 
- A delegation comprising of senior management of USAID Mission, USAID Energy office and the Energy Policy Project participated in a high level meeting held at MPNR with the Minister MPNR to discuss potential USAID assistance to MPNR. Various options for enhanced USAID assistance were explored and discussed upon.

### Improving Energy Supply:

- **Background:** Economic dispatch is an important tool for Pakistan and a requirement of the Power Purchase Agreements. It has not been instituted very often for a variety of reasons. Even a limited form of Economic Dispatch can improve the situation and reduce cost. Currently NPCC is not using an Economic Dispatch model capable of representing all the restriction of the Pakistani Electric System, the operational decisions are being taken by different people leading to different result for the same conditions. With the use of a customized Economic Dispatch model, NPCC will be able to reduce the generation cost by at least 0.3%.
- **Challenge:** Fuel supply curtailment, lack of maintenance and lack of proper planning tools and skilled staff at NPCC to implement an economic dispatch program.
- **Product:** EPP is undertaking a Study of Evaluation of Economic Dispatch by analyzing NPCC procedures, developing a gap analysis of what is required for economic dispatch and developing standard operating procedures. Based on NPCC's existing Dispatch pattern and the hydroelectricity generation of certain volume of GWH as required under the existing model of Economic Dispatch and analysis was prepared and shared with MWP. However the analysis was not an exact and true depiction of the situation as it was only based on a single day's data. Efforts are underway to obtain additional data. The basic objective of EPP is to determine the optimal hourly production scheduling for each generator minimizing the total operation cost of supply for a given demand.
- **Result:** MWP has approved the work, given it priority and data has been requested from the NPCC. Meetings were held with MWP and NPCC for obtaining the data and reminder requests have been sent to NPCC and it is expected that the data will be shared with EPP shortly.

### Transmission:

- **Standard Operation Procedures for NPCC:**

First draft of the Standard Operating Procedures (SOP) for National Power Control Center (NPCC) is 97% complete. The internal review process of the drafted SOPs continued during the reporting month. After incorporating the suggestions/remarks of NPCC, the first batch of 14 SOPS was submitted to NPCC.

- **Contingency Plan for NPCC:**

EPP is also developing a contingency plan for NPCC which will act as the backup procedures in the wake of an emergency. The Contingency Plan will serve as a guide line and encapsulate prior agreed actions to be taken and set procedures to be activated in response to the identified emergencies ranging from relatively mild that can be locally contained, to catastrophic requiring moving to a backup offsite facility to ensure safety of assets and employees; and continued availability of essential services.

The first draft has been completed. Internal review of the document is complete and feedback from various stakeholders is awaited before finalizing the final draft.

- **Induction Training Manual (Orientation & Operations) for NPCC:**

Induction Training Manual (Orientation & Operations) for NPCC's new recruits and the existing operators is being developed. The first draft is expected to be ready by July 2012.

- **DISCOs Transmission Coordination**

Upon USAID's directive to focus on the transmission network of DISCOs, EPP and Power Distribution Program held a kick-off meeting and discussed modalities and framework for reviewing the 132 KV related transmission activities of the distribution companies.

## NTDC BUSINESS PLAN

A collaborative approach was adopted in finalizing the Business Plan. NTDC senior managers (COO of CPPA, GM Planning, and others) provided detailed commentary and held a series of meetings with EPP to discuss the documents and incorporate NTDC's feedback and recommendations.

As a result of interaction with EPP, Planning Department of NTDC overhauled its technical assessment and its near-term capital program. Also in areas of HR, managing the 132 kV networks, and with regards to CPPA, many changes were recommended by NTDC. NTDC has recommended additional in-depth technical assistance in performance audits, benchmarking, and learning about best practices applicable to NTDC.

The draft NTDC Business Plan was shared with USAID and MWP for review. After incorporating the comments of USAID and MWP, the Business Plan was submitted to the NTDC senior management for review.

To facilitate implementation of the Business Plan, EPP held meetings with Joint Secretary and Deputy Secretary MWP to discuss the Transmission System Review.

## COMMUNICATIONS, COORDINATION AND GENERAL SUPPORT TO USAID

- EPP facilitated USAID's Contracting Office Staff in developing an understanding of the FARA procurement process and the monitoring and verification process adopted by EPP.
- EPP participated in a workshop held on 'Gender Equity and Women's Empowerment' at the US embassy.

- Provided support to USAID in compiling event briefers for visits to Gomal Zam and Satpara Dams. However, the visits were postponed by USAID due to unforeseen circumstances.
  
- Following USAID's request for prioritizing the policy issues facing the energy sector, EPP and Power Distribution Program jointly developed an energy sector policy matrix and forward is to the Director, USAID Energy Office for review. The matrix focused on the selected problems, desired policy prescriptions, role of stakeholders and the resources required to move forward. The salient features included
  - Circular debt,
  - Insufficient Supply of Affordable Electricity,
  - Inefficient power sector operations and excessive sector energy losses,
  - Poor governance and management of public energy sector entities and
  - Excessive Peak Demand in Summer.

# COMPONENT 3: NEW PROJECTS, PLANNING & DEVELOPMENT

EPP continued its support to USAID Mission in their effort to determine funding levels and schedules for new projects.

The list of projects under investigation and review include:

- |                                      |                                                               |
|--------------------------------------|---------------------------------------------------------------|
| 1) 4,500 MW Diامر Basha              | – expected to cost around \$12 Billion                        |
| 2) 84 MW Kurram Tangi                | – expected to cost around \$700 Million                       |
| 3) Rehabilitation of 1,000 MW Mangla | – expected to cost around \$400 Million                       |
| 4) Rehabilitation of 240 MW Warsak   | – expected to cost around \$300 Million                       |
| 5) 96 MW Jinnah                      | – \$225 Million project has requested \$20 Million from USAID |
| 6) 121 MW Alai Khwar                 | – \$208 Million project has requested \$17 Million from USAID |
| 7) 72 MW Khan Khwar                  | – not currently under consideration                           |
| 8) 130 MW Duber Khwar                | - \$290 Million project has requested \$24 Million from USAID |
| 9) 106 MW Golan Gol                  | - \$268 Million project needs \$107 Million                   |
| 10) 4,320 MW Dassu                   | – not currently under consideration                           |

Step 1 Due Diligence has been completed for the first four (4) projects listed above by EPP in 2011 and reports submitted to USAID.

## Kurram Tangi

Rapid Environmental Assessment of the Kurram Tangi Dam Project was assigned by USAID to ELAN and their report is awaited.

USAID tasked EPP to review and evaluate possibility of initiating work on Kaitu Weir and affiliated works as part of the Kurram Tangi Dam Project. EPP provided a brief review, evaluation and budget to USAID for consideration. The proposal has to be discussed with WAPDA.

As part of ongoing Step 2 Due Diligence, EPP met with General Manager (North), WAPDA, and Consultants for the Kurram Tangi Dam Project on May, 2012 in WAPDA House to determine status of the Project Review Report in light of EPP comments conveyed to WAPDA on 23 November 2011.

Summary of findings follow:

**Design Review:** In November 2011, WAPDA commissioned Mott MacDonald of UK to review project design in association with Pakistan Engineering Services (PES). Consultants mobilized early 2012 and the design review is expected to be completed by June 2012. Bill of Quantities (BOQ) and Tender Documents are under preparation. Bids are scheduled to be

called from the three pre-qualified contractors by August 15, 2012 and Receipt of Bids is expected October 15, 2012. Award of Turn-Key Contract is expected by Jan 2013.

**EPP Recommendation:** Based on EPP recommendations, WAPDA revised the schedule and focus of expatriate consultant person-months from 30 to 41.5 months in 7 disciplines (Dam expert, tunneling expert, gate specialist, electrical and mechanical experts) to improve credibility of design review. The review of design will be completed by June 2012.

**Prequalified Contractors:** Bids will be invited from the following prequalified Contractors:  
M/ Descon Pakistan  
M/s Sambu-Sarco JV (Korea)  
M/s FWO- LIMAK JV of Turkey

**Security Situation:** Recently two major events occurred in the project area. (1) Bannu Jail was attacked in April and (2) The Assistant Political Agent for Mirali was murdered in his office after the Jirga early this month. As result the entire District Administration of Banu and Waziristan is being reshuffled. Land acquisition and other project activities are on hold. WAPDA is planning security arrangement similar to Gomal Zam project and the FWO may be given leading role for arranging and managing security of the project.

**Resettlement Action Plan:** WAPDA Resettlement Action Plan is under review as local Jirga is demanding cash compensation rather than settling displaced people in model villages. However, given the security unrest in the area, discussions are on hold for time being.

**Site Facilities:** Given the security situation, all access roads and contractor camp and colonies are proposed to be included in the main contract. The matter is under discussion and decision will be made prior to finalizing procurement documents. No site preparatory work is being done.

**Funding:** Situation is uncertain for the time being and no serious effort is being made till the design review report is completed and better estimate of cost is known.

#### Jinnah, Alai Khwar, Duber Khwar and Golan Gol

EPP continued providing vigorous and frequent advice and assistance to the Mission in addressing issues raised and to respond to queries for Congressional Notification seeking approval of use of funds for the four projects in keeping with the project financial highlights given above. EPP has collected PC Is for these projects and continues effort to update project status and recent estimated cost till completion of each project.

EPP participated in a high level meeting at WAPDA House Lahore to determine the next steps with regard to Mangla based on the conclusion and recommendation of the Consultant's Report.. EPP facilitated the meeting participants in agreeing upon a line of action to be put to the Chairman for approval.

During the reporting, EPP assisted the Mission in responding to several detailed queries regarding the Kurram Tangi and Mangla for a Congressional Notification, namely:

- Cost-benefit and environmental analysis of the subject projects,

- Oversight measures sought by GOP/WAPDA for monitoring the rehabilitation and construction work,
- Resettlement alternatives planned by GOP for the local families
- Efforts made by Govt. of Pakistan to prevent deforestation and other man-made disruption of the ecosystem
- Sedimentation of the reservoirs
- Durability and Storage Capacity of the reservoirs
- Costs for maintaining designed levels of efficiency and power generation

# ADMINISTRATION/MANAGEMENT: SUPPORT TO EPP

Administration is structured to support on-going and planned project activities while ensuring contractual compliance. Administration encompasses the following functions: Accounting/Finance, Human Resources, Procurement, Contracts, Logistics and IT. In implementing these functions, processes and policies are developed to ensure uniformity of efforts.

## *Accounting/Finance*

Miscellaneous payments have been made to the vendors during this month. Payroll and financial reconciliations completed.

## *Procurement*

During the reporting month office equipment/supplies, security equipment, and services were procured to support operations.

Health insurance policy of the EPP staff was renewed for the next year and necessary documentation regarding life insurance of the staff was completed

The procurement process for hiring of a consultancy firm for conducting a study on 'Economic Costs of Power Load Shedding to Pakistan' was initiated. Following laid out procurement procedures an RFP was issued, bids were evaluated, negotiations were held and the award was made in favor of Institute of Public Policy.

## *Logistics*

Provided logistical support for 6 trips made by project staff. Arranged international travel for expats. Continued follow up of the issuance of visa for expats during the month.

The hiring of an internal auditor is in process and the induction process for a new driver has been initiated.

For the residence of the expats, the search for suitable accommodation in Islamabad has been started.

## *IT*

Trouble shooting IT equipment in office and for operations at ministries; all related matters have been solved during this month. Additional IT Activities

1. Installation & Configuration of Network Color Laser Jet Printer and Fax machine at Ministry of Water and Power.
2. Procurement of Digital Camera for a mid-level Photography for EPP's media activities.
3. Complete Hardware Inventory Inspected by USAID official.