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ENERGY POLICY PROJECT - II MONTHLY PROGRESS REPORT

AUGUST 2012



August 2012

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USAID/PAKISTAN: ENERGY POLICY PROJECT (EPP)

Monthly Report: August 2012

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ACRONYMS

AEAI	Advanced Engineering Associates International
AGPR	Accountant General of Pakistan
CAREC	Central Asia Regional Economic Cooperation
CAR	Central Asian Republic
CCGT	Combined Cycle Gas Turbine
CDWP	Central Development Working Party
CEO	Chief Executive Officer
CPGCL	Central Power Generation Company, Ltd
CPPA	Central Power Purchasing Agency
DISCO	Distribution Company
ECC	Economic Coordination Committee
ECNEC	Executive Committee of the National Economic Council
EPP	Energy Policy Project
FARA	Fixed Amount Reimbursable Agreement
GE	General Electric
GENCO	Generation Company
GOP	Government of Pakistan
GTPS	Guddu Thermal Power Station
GZDP	Gomal Zam Dam Project
IPP	Independent Power Producer
JTPS	Jamshoro Thermal Power Station
KESC	Karachi Electricity Supply Company
LESCO	Lahore Electricity Supply Company
LNG	Liquefied Natural Gas
LPF	Liquefied Petroleum Gas
MOF	Ministry of Finance
MPNR	Ministry of Petroleum and Natural Resources
MTPS	Muzaffargarh Thermal Power Station
MW	Megawatt, unit of electrical power, 1 million watts,
MWH	Montgomery Watson Harza
MWP	Ministry of Water and Power
NPCC	National Power Control Center
NTDC	National Transmission and Despatch Company
NWA	North Waziristan Agency
PA	Political Agent

PC	Planning Commission
PDP	Power Distribution Program
PESCO	Peshawar Electricity Supply Company
PIRS	Performance Indicator Reference Sheets
PO	Purchase Order
PSDP	Public Sector Development Programme
PSO	Pakistan State Oil
PSRP	Power Sector Reform Program
SBP	State Bank of Pakistan
TOR	Terms of Reference
ToU	Time of Use
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 Government of Pakistan in power generation and transmission and related policy reform activities. Current key activities include providing monitoring and implementation support to the following six signature energy projects, announced by Secretary of State, Hillary Clinton:

- Four repair and maintenance projects (3 GENCOs and Tarbela. Total Funding \$70.73 million)
- Two multipurpose dam completion projects (Gomal Zam and Satpara, Total funding \$66 million)

When completed, these projects, will add more than 863 MW to Pakistan's generation capacity. As of August 2012, a total of 439 MW have been added to Pakistan's electricity grid through USAID funding.

Project	Planned MW Gains per FARA	Expected Gains	MW added (as of 31 July 2012)
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
Total	430.06	863.06	439

EPP also is providing technical support to the Ministry of Water and Power (MWP) to identify and select new generation and transmission projects. Examples include potential imports of electricity from the Central Asian Republics to Pakistan through Afghanistan; providing analytical support for projects such as Step I & II Due Diligence for Kurram Tangi and Mangla Dam Projects; and issues related to these projects.

In addition, EPP is supporting generation & transmission related studies and policy reform activities assigned by USAID. These include developing GENCO and NTDC business plans; developing policies/procedures for the National Power Control Center; and advisory services at MWP and the Planning Commission (Energy Wing), Ministry of Finance, and Ministry of Petroleum and Natural Resources (MPNR).

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: \$ 136.731 million for six signature energy projects
\$ 14.893 million EPP Phase II



PROJECT ACTIVITIES



COMPONENT I: PROJECT MONITORING & IMPLEMENTATION

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

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

- Dedicated technical experts assigned to thermal and hydro projects (Jamshoro, Guddu, Muzaffargarh, Tarbela, Satpara and Gomal Zam).
- Regular monitoring visits to project sites to verify deliverables/milestones, and checking quality of procured equipment & completed construction work.
- Verifying megawatts added through rehabilitation or new construction.
- Provide support to implementing partners in designing work schedules, adherence & compliance with agreement terms & conditions, opening of accounts, reimbursement of invoices, ensuring environmental compliance with EMMPs, and supporting resolution of issues during implementation.
- Certify compliance 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, as much as 163MW of generation is 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 available generating capacity at the time of signing of the 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
	505	80	457	128

Rehabilitation of Tarbela Hydropower Plant under FARA:

Rehabilitation work under the Tarbela FARA is anticipated to go beyond the completion date of December 2012 due to the delay in procurement of two items, as discussed below. As requested by EPP, WAPDA has provided a detailed reasoning for the delay and requested for an extension in the FARA completion date:

(1) The Digital Governors were shop tested by WAPDA Engineers at GE Works, USA and are scheduled for shipment in October 2012. The installation and commissioning of the Digital Governors on Units 1 – 10 is scheduled to be commenced in the lean water period between Nov 2012 to June 2013, subject to the availability of shutdown. Therefore, this activity is anticipated to be completed in June 2013;

(2)The SCADA System was awarded to ABB Sweden in August 2012 with a completion period of 14 months. Therefore, the testing and commissioning of this activity is scheduled to be completed in October 2013.

Under Amendment-I of the Tarbela FARA the completion date of the project was revised to December 31, 2012. Of the \$16.5 million USG funding committed for Tarbela, total disbursement as of August 2012 is \$11,249,917.

The current status of 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	2,849,917	Installation of windings completed on May 25, 2012. 100% amount-less spares-has been reimbursed. WAPDA has placed PO for the spares.
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		SCADA System was awarded in early August 2012 with a completion period of 14 months. Therefore, the testing and commissioning of this activity is scheduled to be completed in October 2013
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		Digital Governors were inspected by WAPDA Engineers at GE, USA and are scheduled for shipment in October 2012(the initial delivery date was August 2012). The installation and commissioning of the Digital Governors on Units 1 – 10 is anticipated to be completed in June 2013
7	1-10	Replacement of Worn out Station Drainage & Dewatering Pumps, Units 1-10	400,000		Installation completed on all units.

LINE ITEM #	UNIT #	WORK ITEM DESCRIPTION	AMOUNT (USD)	CLAIMS SUBMITTED (USD)	PRESENT STATUS
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.
Total			16,500,000	11,249,917	

Gomal Zam Multipurpose Dam under Activity Agreement:

Work on the Gomal Zam Dam was slowed down due to the abduction of eight WAPDA employees assigned to the project and high security risk in the area. The stringing of transmission towers could not progress beyond 95% completion status due to the prevalent security situation.

Main dam and spillway concrete and related works along with mechanical testing of dam fixtures are 100 % complete. Hydropower and switchyard components are 98 % complete.

Filling of the reservoir started with the closure of the diversion tunnel, and the water level has increased to 717 meters. Final testing and commissioning is dependent on the completion of the switchyard, transmission line, and filling of reservoir to a normal operating level of 743 meters. However, the completion of Gomal Zam Dam Powerhouse and switchyard may be delayed due to WAPDA's inability to make payments to its own contractors¹ and also due to high security risk in FATA.

Amendment No. 1 to the Activity Agreement revised the completion date of the project (including the irrigation component) to September 30, 2013. Of the \$40 million USG funding committed for Gomal Zam (energy component), total disbursement as of August 2012 is \$36,589,000.

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

LINE ITEM #	WORK ITEM DESCRIPTION	COMPLETION STATUS	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 & Spillways, Concrete & 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 & related works	50%	1.0	1.0	Work Completed. Claim of 1.0 million reimbursed.

¹ These are different payments to be made by WAPDA to its contractors and not related with payments under the Activity Agreement/FARA
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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 Aug 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, Testing, & Placement in Commercial Operation	100% by Aug 30, 2012	1.991		Final testing depends upon completion of transmission line, switchyard and availability of water.
Total			\$40	\$36.589	

Satpara Multipurpose Dam under Activity Agreement:

Work under the Satpara Activity Agreement is progressing steadily. The dam and power house 1 & 2 are 100% complete and the irrigation system is 99.9% complete. The overall civil, electrical and mechanical works at power house 3 & 4 is 70% complete. The expected completion date for units 3 & 4 is April 30, 2013 as per the agreement completion date.

WAPDA has requested USAID to approve reduction in the length of Right Distributory-I canal² due to land acquisition issues. EPP conducted a financial and technical assessment on the implications of curtailing the length of the canal system and submitted it to USAID. The assessment highlights that the proposed reduction will reduce the project cost by USD 0.379 million³, however it will also reduce the irrigated land by 6% (14,600 acres) subsequently reduces the project's targeted number of beneficiaries. A decision in this regard is awaited from USAID.

Of the \$26 million USG funding committed for Satpara, total disbursement as of August 2012 is \$21,485,700.

The status of Satpara Activity Agreement is tabulated below:

LINE ITEM #	WORK ITEM DESCRIPTION	COMPLETION STATUS	AGREEMENT AMOUNT (USD - Million)	CLAIMS SUBMITTED (USD- Million)	PRESENT STATUS
1.	Civil Works for Dam & Power House 1 & 2	94%	4.500	4.500	Work Completed. Claim of 4.5 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.

² Total length of the canal is 56 km and WAPDA is requesting a reduction of 11,291 feet in length (6% of the total length of the canal)

³ The amount is based on the cost of land at the time of signing of the contract in 2004 and is not a reflection of the current price of the land (which might be higher or lower than this)

LINE ITEM #	WORK ITEM DESCRIPTION	COMPLETION STATUS	AGREEMENT AMOUNT (USD - Million)	CLAIMS SUBMITTED (USD- Million)	PRESENT STATUS
4.	Civil, Electrical and Mechanical Work for Power Houses 3 & 4	100% by Apr 30, 2013	3.681		70% work completed and on schedule
5.	Irrigation System	78 %	2.530	2.530	Work Completed. Claim of 2.53 million reimbursed
6.	Irrigation System	89 %	2.282	2.282	Work Completed. Claim of 2.282 million reimbursed
7.	Irrigation System	90 % by Dec 09, 2011	2.0538	2.0538	Work Completed. Claim of 2.0538 million reimbursed
7a.	Irrigation System	100% by Jun 30, 2012	0.2282		99.9% work completed
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 0.4 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 Jun 30, 2012	0.2124		Milestone 99.9% complete
Total (million)			\$26.00	\$21.4857	

THERMAL POWER PLANTS

With a total funding of \$54.231 million, a total of up to 700MW are estimated to be restored through the rehabilitation of three thermal power plants. The baseline condition of these plants at the time of signing of the FARA was 315 MW; however due to further deration of the plants' operating capacity, estimated gains were 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
	1620	315	1390	700

Rehabilitation of Muzaffargarh TPS under Activity Agreement:

The rehabilitation/replacement work to date has resulted in 280MW of capacity being restored out of total estimated gains of 475 MW. After rehabilitation of the boiler super heater tubes at units 1, 2 & 3, 230 MW of capacity has been restored and with the replacement of air pre-heater elements (intermediate and cold end) at unit 4, another 50MW was added.

For the remaining equipment, delays were anticipated in the procurement process due to the GENCO's weak financial standing and inability to pay on time through a letter of credit. EPP staff worked with USAID and the GENCO to redefine the reimbursement process and revise the FARA to facilitate the GENCO in making timely payments. A new Activity Agreement and implementation letter were signed in April providing the GENCO with sufficient funds to make timely payments to the vendors. The completion date per the revised activity agreement is June 30, 2013.

Based on the revised payment process, payments will be made to the GENCO at the time of opening of the L/C to ensure supply of sufficient funds to the GENCO. A total of USD 3.18 million has been disbursed to the GENCO under the revised payment process, effective from April 2012.

On August 7, 2012, a meeting was held with USAID to discuss the megawatts gains. An update version of the MW gain sheet was submitted to USAID. EPP also informed USAID that NPGCL intends to purchase Computerized Maintenance Management System (CMMS) through local competitive bidding.

As of August 2012, a total of \$ 7,648,888 has been disbursed to the GENCO. The status of MTPS Activity Agreement is tabulated on the next page:

LINE ITEM NO.	UNIT NO.	WORK ITEM DESCRIPTION	AGREEMENT 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. 100% Claim reimbursed from USAID
2	1- 4	Special Cooling Water Treatment.	\$187,440			Tender opened for the fourth time on 26.06.2012 but no firm participated. It will be tendered again on 11.09.2012.
3	1-6	Use of Fuel Oil Additive as done on Unit-4 (450 Tons).	\$921,225			Re-Tendered and opened in March 2012. Evaluation completed and file is under process for CEO approval.
4	1,2&3	Replacement of Cold layer element for RAH (2 sets)	\$170,000	\$170,000		Material received and installed at site. 100% Claim reimbursed from USAID
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 was 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 September 2012. Claim for 100% Payment (\$184,245) reimbursed by USAID.
7	3	D.C. Storage batteries (01 Set).	\$60,000	\$60,000		Material received and installed at site. 100% Claim reimbursed from USAID
8	1,2&3	220Kv circuit breaker SF6 type (06 No).	\$337,605			LC established on 03.08.2012 and claim lodged but there is some problem in specification. NPGCL will provide the justification for it.
9	4	Re-blading of LP. Rotor (LP Turbine Rotor blades of row (6&7), pins & locking device).	\$787,035			PO issued and LC opened on 02.02.2012. Claim for 100% Payment (\$787,035) received but the claim was turned down because one item in PO was not included in the PIL. NPGCL will retender the dropped item and then file the claim again.
10	4	Air Pre-Heater Elements (Intermediate and Cold) 02 sets	\$255,000		\$255,000	Material received and installed at site. Claim for 100% Payment (\$255,000) reimbursed by USAID.
11	4	Up-grading of AVR System (01 set).	\$249,210			PO issued on 20.07.2012. Request to release cash for foreign exchange.
12	4	Replacing UPS 1&2. (01 set).	\$62,835			LOI issued on 25.05.2012. Request to release cash for foreign exchange.
13	4	DEH (01 set).	\$319,500			Approved for Retendering due to high rate. Retender is expected to be opened on 18.09.2012.
14	4	Up-grading of FSSS System (01 set).	\$138,450			Approved for Retendering due to high rate. Retender is expected to be opened on 18.09.2012.
15	4	Up-grading of TSI system BNC 3300 or equivalent (Turbine Supervisory	\$266,250			Approved for Retendering due to high rate. Retender is expected to be opened on 18.09.2012.

LINE ITEM NO.	UNIT NO.	WORK ITEM DESCRIPTION	AGREEMENT AMOUNT	CLAIMS SUBMITTED ON THE BASIS OF OLD FARA	CLAIMS SUBMITTED ON THE BASIS OF NEW PIL	PRESENT STATUS
		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 but it is now be retendered.
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. 90% claim (\$562,500) reimbursed by USAID
18	5&6	Air Pre heater Elements Hot end, intermediate & cold end layers along with seals for both units (04 Set).	\$639,000			PO issued on 20.07.2012. Request to release cash for foreign exchange.
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. Material received at site on 16.07.2012. Claim for 100% payment (\$33,548) reimbursed by USAID.
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. Material received on site on 27.08.2012. Claim for 100% payment (\$236,963) with justification from NPGCL submitted to USAID ENR.
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. Material is expected to reach at site in the first week of September. Claim for 100% Payment (\$2,130,000) reimbursed by USAID.
22	5&6	IP Turbine Rotor (01 No).	\$641,130			PO issued on 14.06.2012. Request to release foreign exchange.
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 LOI issued on 28.05.2012. PO issued on 29.06.2012. Request to release foreign exchange.
24	5&6	Conversion of Boiler Ignition System from Natural Gas to HSD/Furnace Oil	\$277,965			Tenders opened and evaluation completed. LOI to be issued.
25	5&6	Repair of winding and stator of Generators and testing	\$319,500			Draft tender documents sent to GM office on 06.08.2012.
26	5&6	Hydraulic coupling of Boiler Feed Water Pumps (01 No).	\$63,900			Tender opened but only one firm participated and rate quoted by the firm is ten times higher than the estimated cost.
27	5&6	Modification of Excitation System	\$166,140			Tender opened and is under evaluation

LINE ITEM NO.	UNIT NO.	WORK ITEM DESCRIPTION	AGREEMENT AMOUNT	CLAIMS SUBMITTED ON THE BASIS OF OLD FARA	CLAIMS SUBMITTED ON THE BASIS OF NEW PIL	PRESENT STATUS
28	5&6	Procurement of 0.4KV Motors for Cooling Towers Fan and APH 02	\$10,650		10,650	PO issued and LC opened in April 2012. Material received at site on 10.08.2012. Claim for 100% payment (\$10,650) reimbursed by USAID.
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. Claim for 100% payment (\$162,945) reimbursed by USAID.
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 of second PO was missing and has not been opened yet.
31	5&6	Protection Relay for Generators.	\$29,820			Tenders opened and LOI issued on 24.02.2012. PO issued on 31.05.2012. Request to release foreign exchange.
32	5&6	MK Breakers, Seal Oil Coolers, PMG	\$169,335		\$169,335*	Consignment received at site. Claim for 100% payment (\$169,335) received and submitted to USAID on May 29, 2012
33	5&6	Supply, Installation, Commissioning & Testing of complete distributed control system (DCS) including field equipment such as sensors, transmitter & actuators etc. for turbine governing system DEH-III and Boiler Turbine Auto regulation system YEWPACK-II	\$213,000			Retendered and bid evaluation in process.
34	5&6	Rehabilitation of Furnace safety Supervisory System (FSSS) including Furnace camera, flame monitoring & ignition system	\$266,250			Tender opened and is under process.
Total			\$15,778,195	\$ 4,872,500	\$ 3,182,686	

Amount Reimbursed = **US\$ 7,648,888**

*Claims submitted to USAID/ENR and reimbursement in process = US\$ 406,298

Summary by Status as of August 31, 2012

Description	Number	Amount
Material Received at Site	9	\$ 5,640,496
LC opened and material is awaited	5	\$ 3,601,830
PO issued and LC is awaited	6	\$ 2,141,715
Performance Bond received and PO is awaited	-	-
LOI Issued and Performance Bond is awaited	1	\$ 62,835
Tender/Re-Tender opened and in process	7	\$ 2,100,180
Tender/Re-Tender Awaited	6	\$ 2,231,140
Total PIL Line Items	34	\$ 15,778,195

Rehabilitation of Jamshoro TPS under Activity Agreement:

During the reporting month, a joint monitoring visit was made by EPP and USAID to Jamshoro TPS to verify the progress of the rehabilitation work and inspected the equipment delivered to JTPS. Nine High Pressure (HP) heaters (for units 2, 3 and 4) were delivered to the power station on August 6. The related instrumentation, Controls and Protection System are scheduled to be shipped in September.



USAID EPP team inspecting the old HP heaters at JTPS

At the time of visit, only unit #1 was operating at 50% load generating 125 MW; the remaining two units were shut down and one unit was on standby mode. JPCL CEO informed that due to non-supply of furnace oil the plant output is restricted to only 125 MW.

Delays were anticipated in the procurement process due to the GENCO's weak financial standing and inability to pay on time through a letter of credit. EPP staff worked with USAID and the GENCO to redefine the reimbursement process and revise the FARA to facilitate the GENCO in making timely payments. A new Activity Agreement and implementation letter were signed in April providing the GENCO with sufficient funds to make timely payments to the vendors. The completion date per the revised activity agreement is June 30, 2013.

Based on the revised payment process, payments will be made to the GENCO at the time of opening of the L/C to ensure supply of sufficient funds to the GENCO. A total of USD 7.19 million has been disbursed to the GENCO under the revised payment process, effective from April 2012.

As of August 2012, a total of \$ \$9,738,225 has been disbursed to the GENCO.



HP Heaters received at JTPS for units 2, 3 and 4

The status of the JTPS Activity Agreement is tabulated below:

LINE ITEM NO.	UNIT NO.	WORK ITEM DESCRIPTION	AGREEMENT 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			PO has been issued to M/S Howden Spain on 23.08.2012. Allocation of foreign exchange is awaited from WAPDA house Lahore.
2	1	Replacement of Final Super Heater Coils.	\$958,500			PO issued on 30.05.2012, Foreign Exchange allocation received on 9.08.2012. WAPDA's Resident Representative Karachi (RRK) is requested to establish the letter of credit.
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 completed. 100% Claims reimbursed by USAID.
4	1	Complete Rehabilitation of Cooling Towers.	\$500,000	\$450,000	\$50,000	Material received at Jamshoro. Installation completed. 100% claim reimbursed.
5	1	Up gradation / replacement of Auto Burner control system and Data Acquisition System.	\$300,000	\$300,000		Material received and installed at site. 100% Claim reimbursed by USAID.
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 participated in the tender. The case will be finalized in next week.
7	1	Soot Blower Spare Parts.	\$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. EPP observations/recommendations sent to USAID for decision.
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. 100% Amount (\$250,000) reimbursed by USAID.
9	1	Spares for Oil & HSD Burners & Igniters.	\$213,000			L/C Established on 28.12.2011 and material received at site but specifications mentioned in PO differs from PIL specifications. AEAI Observations/recommendations sent to USAID for decision.
10	1	Air Pre-heater Elements & Seal,	\$670,000	\$670,000		Material Installed at site amount reimbursed. 100% Claim (\$670,000) reimbursed by USAID.

11	1-4	Use of fuel oil additives to prevent slag formation and cooling water treatment chemicals to prevent scale buildup.	\$958,500			Tender was opened on: 17.02.2012. The case was sent to GM (Th.) for their expert opinion. It has been decided that fresh tender will be invited and opened by the office of GM Thermal Lahore.
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 reached at site on 07.08.2012. Claim for 100% Payment (#3,306,825) reimbursed by USAID.
13	2-4	Complete Rehabilitation of Cooling Towers.	\$718,875			L/C established on 27.06.2012, but it was not as per PIL specifications. Claim will be submitted after procuring the remaining items
14	2-4	Complete Rehabilitation of drain valves.	\$351,450			L/C Established on 28.12.2011. The material reached at site on 26.06.2012 but specifications mentioned in PO differ from PIL specifications. EPP observations/recommendations sent to USAID for decision.
15	2-4	Rehabilitation of soot blowing system.	\$702,900			LOI issued and Performance Bond received on 22.05.2012. PO issued on 30.05.2012. Foreign Exchange Allocation received on 31.07.2012. L/C is awaited.
16	2-4	Supply, installation and commissioning of complete economizers of three units	\$3,195,000		\$3,195,000	L/C has been established on 28.06.2012. Material is expected to reach site in September 2012. Claim for 100% Payment (\$3,195,000) reimbursed by USAID.
17	2	<p>a. Modification / Rehabilitation of Electro Hydraulic and Mechanical Hydraulic Governing system.</p> <p>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)</p> <p>c. Replacement of existing FSSS along with Furnace 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</p>	\$1,171,500			Tender opened on 17.07.2012 and technical bids are under evaluation.

		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 reached site. Claim for 100% Payment (\$117,150) reimbursed by USAID.
19	3	Replacement of Final Super Heater Coils.	\$958,500			PO issued on 24.05.2012. Foreign Exchange Allocation received on 31.07.2012. L/C 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. 100% Amount has been reimbursed by USAID.
21	3	Spares for Overhauling of Turbine.	\$532,500			Consignment reached Jamshoro but specifications mentioned in PO are different from PIL specifications. AEAI Observations/recommendations sent to USAID for decision.
22	4	I.D Fan Impellers.	\$479,250		\$479,250	Purchase Order issued on 16.03.2012. LC established on 28.06.2012. Claim for 100% Payment (\$479,250) reimbursed by USAID.
23	1-4	Off-line Efficiency Monitoring system and training.	\$426,000			Tender opened on 29.05.2012 and bids are under evaluation.
		Total	\$19,329,150	\$ 2,545,000	\$7,193,225	

Amount Reimbursed= **US\$ 9,738,225**

Summary by Status as of August 31, 2012

Description	Number	Amount
Material Received at Site	12	\$7,278,075
LC opened and material is awaited	3	\$4,393,125
PO issued and LC is awaited	4	\$4,291,950
Performance Bond received and PO is awaited	-	-
LOI Issued and Performance Bond is awaited		
Tender/Re-Tender opened and in process	3	\$2,407,500
Re-Tender Awaited	1	958,500
Total PIL Line Items	23	\$19,329,150

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), an agreement was reached in April 2012. Following the agreement, GE shared an itemized price list as required under the purchase order (PO).

Since June 2012, Guddu management has making efforts to establish a letter of credit and also streamline the foreign currency account/assignment account per the instructions from the State Bank of Pakistan (SBP). After a lengthy process of getting approvals from MOF, MWP, Accountant General of Pakistan (AGPR) and SBP, GTPS opened an account in the designated bank at Sukkur which was not activated as that specific branch was not authorized to deal in foreign currency.

Subsequently, Guddu management is again working to open an assignment account at an authorized branch of SBN's designated bank. The process is time consuming and EPP is facilitating Guddu management to expedite matter. In this regard, EPP senior management held a meeting with Joint Secretary Ministry of Finance and requested MOF to take up the issue of the L/C with State Bank of and assist in a quick resolution of the problem. EPP has also requested MWP to issue a letter required by SBP for granting approval to Guddu to open an assignment account.

A new Activity Agreement and implementation letter were signed in April 2012 with a total funding of USD 19,123,730. The completion date was revised to June 30, 2013.

COMPONENT 2: POLICY AND REFORM

SUPPORT TO GOVERNANCE AND REFORM TEAM (GRT), MWP

EPP is supporting the Ministry of Water and Power in implementing 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 Program (PDP).

During the reporting month, an EPP team led by the Chief of Party held a series of meetings with the newly appointed Special Secretary and Additional Secretary at the Ministry of Water and Power. The agenda of the meetings was to provide orientation to the Special Secretary on EPP and USAID initiatives in the energy sector. The Special Secretary was briefed about the EPP scope of work, facilitation being provided to GOP power sector entities, and the project successes achievements.

The Special Secretary was introduced to the EPP seconded staff working at the Ministry and was informed of the various assignments being undertaken by them. During the meet a decision was made to appoint three EPP experts as members of the monitoring, coordination and finance unit managed by the Special Secretary. Also, discussions were held on issues related to generation, transmission and CPPA and how EPP and MWP can collaborate further to alleviate the energy crisis.

Upon Secretary MWP's request, a presentation on regional electricity and power markets was developed and shared with him.

The Chief of Party also held a meeting with the Joint Secretary, Ministry of Finance to review and discuss EPP's activities supporting MWP in areas of generation, transmission and finance.

Performance Indicators Report

Upon the Special Secretary, MWP's request, EPP developed an analysis on the key performance indicators for DISCOS and the identified the areas which could be worked upon to reduce losses. Based on the analysis a case study was prepared on LESCO and submitted to MWP.

Payables Report

EPP prepared an overview of the updated payables for the entities within the power sector, which was submitted to MWP.

Power Holding Company

A report highlighting the different financing facilities used by the Power Sector through the Power Holding Company was prepared and submitted to MWP. (NOTE: is this accurate?)

SUPPORT TO MINISTRY OF FINANCE

EPP held a meeting with the Secretary Finance to provide an update on the work being carried by EPP on various assignments. Discussions were also held on the payables and receivables of the CPPA.

Tariff Differential Subsidy Audit

Upon the request of Ministry of Finance, EPP assisted the Corporate Finance Wing (CFW) in preparing the Terms of Reference (TOR) for the planned Tariff Differential Subsidy.

SUPPORT TO PLANNING COMMISSION & MINISTRY OF PETROLEUM & NATURAL RESOURCES

Circular Debt

During the reporting month, EPP provided support to finalize the paper on 'Power Sector Circular Debt- History and Current Situation'. The paper, which is being drafted in collaboration with the USAID Power Distribution Program, comprises of a comprehensive study of circular debt – including the primary and secondary causes for the rising amount of circular debt and a circular debt calculation work book.

LNG Imports:

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

- a. Participated in meetings of the newly appointed LNG Committee and internal follow-up meetings with Additional Secretary and Secretary MPNR regarding the revised project structure for LNG imports.
- b. Participated in other internal group discussions with Additional Secretary (AS) MPNR and Directorate General (DG) Gas and provided inputs for analysis of issues, options and follow-up.

Following USAID's approval to acquire LNG consulting services for the Ministry of Petroleum, EPP held a meeting with the Additional Secretary, Ministry of Petroleum and shared the TORs of the consulting services to be included in the Request for Proposal (RFP) document.

During the month the procurement process for hiring LNG consulting services was initiated. EPP invited Expression of Interest (EOI) from various companies and issued the RFP to 4 interested parties.

Oil Refining & Marketing policy:

EPP participated in a meeting with the Minister and Secretary MPNR and held discussions with the Director General, Oil (DG Oil) regarding the scope of the oil refining and marketing policy. A follow up meeting was held with DG Oil in which the initial draft policy was reviewed. A revised draft was prepared after incorporating the comments.

Shale Gas

EPP held a meeting with the Secretary, MPNR in which he expressed MPNR's renewed interest in USAID support for shale gas which had been on hold. A follow-up meeting led by EPP Chief of Party was held at the Energy House with the Director General, Shale. Discussions were held on the USAID support for shale gas and the future course of action.

• General Support to Planning Commission

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

- a) Compiled a brief for the Prime Minister on the Neelum Jhelum Hydroelectric Project covering all aspects of the project, such as updated cost of the project, source of financing, funds allocation from PSDP (Public Sector Development Programme), current status, and considerations by the CDWP (Central Development Working Party) and ECNEC (Executive Committee of the National Economic Council).
- b) Updated and modified a summary for the ECC on the Time of Use (ToU) tariff metering system.

- c) Developed comments of the Planning Commission on the following summaries:
 - Adjustment of petroleum prices on weekly basis;
 - Delayed payments to IPPs;
 - Import of furnace oil by PSO under term contract;
 - Allocation of gas to fertilizer plants from alternate sources; and
 - Marketing of LPG in the country

- d) Prepared a presentation focusing on import of LNG into country mainly for power generation.

SUPPORT TO NTDC/NPCC UNDER POWER SECTOR REFORM PROGRAM

An EPP staff member seconded to NPCC as an Advisor undertook the following assignments during the month:

- a. Presented a briefing to the Federal Minister on a restoration package for the power sector. Participants of the meeting included Secretary, Special Secretary and Additional Secretary, MWP.
- b. Developed a Power Point presentation with estimates of power demand and supply (estimated generation) for each week of August, and for the next four months (September, October, November and December) to be presented to the Prime Minister.
- c. Prepared an analysis of daily data on generation and demand and dispatch patterns of generators for GENCOs and IPPs and for hydropower plants.
- d. As convener of the Energy management committee, held a series of meetings with the Federal Minister, Water and Power regarding power position and overall performance of the power sector, and held discussions on necessary improvements.
- e. Participated in two meetings of National Assembly and Senate committees, where discussions were held on load management and power position. Also apprised the committees of the efforts being undertaken to improve the position.

Import of Power:

EPP Transmission Expert along with Director USAID Energy Office attended the CAREC Energy Sector Donor meeting in Istanbul held on August 27 to 28, 2012. During the meeting, discussions were held on CASA-1000 and imports of other powers from CAR countries to Afghanistan and Pakistan.

DISCOs Transmission Coordination / Model DISCO Task Team

EPP transmission experts visited the Peshawar Electricity Distribution Company (PESCO) on August 31, along with the USAID Power Distribution Program's transmission team to discuss the transmission and operational issues and problems being faced by PESCO. Meetings were held with PESCO Board, Chief Executive Office and senior management.

COMMUNICATIONS, COORDINATION AND GENERAL SUPPORT TO USAID

- Upon the request of USAID Energy Office, EPP met with a Japanese delegation. The delegation comprised of senior management of Mitsui, a Japanese conglomerate working in energy, social infrastructure and other areas. The agenda of the meeting was to discuss the possibilities of investing in Pakistan and the risks associated with foreign investments.
- EPP held meetings with USAID and discussed the project activities matrix and possible amendments to the existing EPP Contract.
- During the reporting month, EPP focused on finalization and launch of the internship program. In this regard, EPP team held several meetings with various power sector entities and academic institutes and discussed the modalities of the EPP internship program, as detailed below:
 - Director General HR, NTDC, Lahore
 - CEO Lakhra Thermal Power Station, Lakhra
 - CEO Jamshoro Thermal Power Station, Jamshoro
 - Vice Chancellor Sindh University, Jamshoro
 - Electra Consultants, Peshawar
 - Iqra National University, Peshawar
 - University of Engineering & Technology, Peshawar
 - Institute of Management Sciences, Peshawar
- Worked on the Performance Indicator Reference Sheets (PIRS) regarding the indicators for the PMP results framework for EPP. The draft PIRS was shared with USAID for review.
- Attended a training session on PakInfo organized by USAID. During the training, guidance was provided on how to enter the following information on the PakInfo website:
 - Major Project Activities, including providing geographical locations (Province, District, Tehsil or Geospatial Coordinates).
 - Mission Results Framework Indicators.
 - Project Estimated Spending at the District Level.

COMPONENT 3: NEW PROJECTS, PLANNING & DEVELOPMENT

During the month of August, EPP continued its support to USAID in its efforts to determine funding levels and schedules for new projects.

The list of candidate projects for USAID funding which have been identified by WAPDA, and reviewed by EPP includes:

- | | |
|--------------------------------------|---|
| 1) 4,500 MW Diamer 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 Go | \$268 Million project needs \$107 Million |
| 10) 4,320 MW Dassu | not currently under consideration |

In 2011, Step I Due Diligence was completed by EPP for the first four (4) projects listed above and reports were submitted to USAID. Following USAID's approval, EPP initiated work on Step II Due Diligence⁴ for the Kurram Tangi and Mangla projects.

During the reporting month, a series of meeting were held with WAPDA and related stakeholders for undertaking the Step II Due Diligence for the Kurram Tangi and Mangla projects. Detailed discussions were held with WAPDA and their Consultants on the projects:

Kurram Tangi

In August, EPP conducted meetings with senior WAPDA officials and their consultant, Mott Macdonald Pakistan (MMP) in Lahore and Islamabad to seek an update on project progress and discuss issues pertaining to the potential funding of the project by USAID. Participants from WAPDA included General Manager (Planning & Development), General Manager (North), Member Water, General Manager (Hydel) Operations, and General Manager (Hydel) Development.

⁴ Due Diligence of USAID identified projects is carried to reduce USG risks and develop project implementation agreements. Due Diligence is carried out in 2 steps. Step I focuses on gathering and analyzing existing project documents to develop a strong basic understanding of the project and its status, including cost estimates and schedules. Step I serves as a basis for a tentative USG decision to support or not support the respective project.

Step II involves gathering and analysis of additional information regarding a project, including validation of cost estimates from Step I. It recommends the type and level of USG support and identifies when the support is required and recommends the mechanism through which the support should be provided.

During the meetings, technical and operational issues related to construction of the Kurram Tangi Dam were highlighted. The primary issue raised was the lack of security, which denies access to site and makes it impossible to gain credible technical information. Other issues identified were the apparent lack of information related to hydrology of the Kaitu River and the design review report by MMP. Issues raised in the meeting emphasized the result of the Rapid Environmental Assessment commissioned by USAID, which indicates a need to undertake serious investigative studies at the site. However, due to the volatile security situation in North Waziristan Agency (NWA,) the studies cannot be commissioned at this time.

EPP also held a meeting at the FATA Secretariat, Peshawar with the Secretary Security, Secretary Planning and Development and the Political Agent (PA) North Waziristan Agency to gather information needed to carry out Step II Due Diligence for the Kurram Tangi Project.

Mangla

A meeting was conducted with WAPDA and their consultant Montgomery Watson Harza (MWH), in Lahore to discuss the Step II Due Diligence for the Mangla Upgrade projects. EPP explained the requirements of USAID with reference to the procurement documents for the Mangla Upgrade Project. The procurement documents are being prepared by MWH/WAPDA and USAID has offered to provide guidance needed in the process.

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 were made to vendors during the month. Payroll and financial reconciliations were completed.

A variance analysis of utility cost being incurred in the main office and the guest house during the year, as compared to the previous year, was carried out. The reasons for the variations were identified and cost reduction techniques were suggested.

Procurement

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

The Energy Policy Project procurement policies and manual were reviewed and amended to ensure maximum compliance to USAID rules and regulations and to GOP procurement rules.

Market surveys for office products were conducted to assess whether opportunities for better price and quality were available.

A Request for Proposal (RFP) was issued for procuring consultancy services for the LNG Import program. Preliminary queries from interested bidders were compiled and detailed responses provided to all bidders.

Logistics

Logistical support was provided for 13 trips made by project staff. International travel for expats was arranged, and a process to obtain longer term visas for the expats was initiated.

Human Resources

One technical staff member was hired during the month to serve as a Senior Energy Expert.

IT

Staff performed trouble shooting for IT equipment in the EPP office and guest house and for operations at the ministries; all related matters were solved during the month. Additional IT activities include:

- Daily routine network and systems support to all project staff.
- Installation and Configuration of 28 Kaspersky Workstation license and 2 Business space Security Licenses.