



**USAID** | **PAKISTAN**  
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# ENERGY POLICY PROGRAM QUARTERLY PROGRESS REPORT

JANUARY – MARCH 2013



March 2013

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# USAID/PAKISTAN: ENERGY POLICY PROGRAM (EPP)

Quarterly Report: October - March 2013

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# Acronyms

ADB	Asian Development Bank
AEAI	Advanced Engineering Associates International
CPGCL	Central Power Generation Company, Ltd
CPPA	Central Power Purchasing Agency
DISCO	Distribution Company
ECC	Economic Coordination Committee
EMMP	Environmental Monitoring and Mitigation Plan
EPP	Energy Policy Program
FARA	Fixed Amount Reimbursable Agreement
FESCO	Faisalabad Electric Supply Company
GE	General Electric
GENCO	Generation Company
GOP	Government of Pakistan
GS	Grid Station
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 Gas
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
PSRP	Power Sector Reform Program
SOP	Standard Operating Procedure
SS	Sub Station
T&D	Transmission and Distribution
USAID	United States Agency for International Development
WAPDA	Water and Power Development Authority

# Executive Summary

The Energy Policy Program (EPP) is a multiyear USAID funded initiative to increase power generation, decrease losses and increase cost recovery in Pakistan's power sector by working with selected energy infrastructure; and facilitating GOP reform efforts with technical assistance and new technology. EPP is designed to support the joint goals of the U.S. Government (USG) and the Government of Pakistan. The general framework for the EPP work plan is guided by several documents: USG Energy Strategy for Pakistan, the GOP's Power Sector Reform Program (PSRP), the Integrated Energy Sector Recovery Report and the Friends of a Democratic Pakistan Report.

Advanced Engineering Associates Inc. (AEAI) began implementation of EPP in 2008, with a focus on strengthening the GOP's institutional framework for the energy sector. In 2009, EPP's mandate expanded beyond policy to assist USAID in financing and accelerating the completion of specific projects to help overcome power shortages, and to strengthen the power sector through structural reforms and improved corporate governance. Phase I of the Energy Policy Program was completed in Feb 2012. In March 2012, AEAJ started work on the EPP Phase II under a new contract. The scope of work of EPP Phase II was modified in October 2012 to include power transmission in the project SOW

EPP is structured into four interrelated sets of program activities:

## Component I - Monitoring and support of Project Implementation

EPP is providing monitoring and implementation support for the following six signature energy projects, announced by Secretary of State, Hillary Clinton:

- Four repair and maintenance projects (3 GENCOs and Tarbela.)
- Two multipurpose dam completion projects (Gomal Zam and Satpara)

When completed, these projects will add more than 863 MW to Pakistan's generation capacity. As of March 2013, a total of 856 MW have been added to Pakistan's electricity grid.

## Component II – Advice and Support of Energy Sector Policy Reform

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 providing technical expertise on the LNG import program. Component II supports policy reform and provides advisory services at Ministry of Water and Power (MWP), Planning Commission (Energy Wing), Ministry of Finance (MOF), Ministry of Petroleum and Natural Resources (MPNR).

## Component III – New Projects, Planning and Development

EPP conducts and prepares due diligence reports on new projects being considered for USG support, in order to provide detailed information on the projects, reduce USG risks, and set a basis for creating Project Implementation Agreements for selected projects.

## Component IV – Power Transmission

EPP is focusing on strengthening the transmission network and on capacity building and institutional strengthening of power sector entities involved in transmission, namely, National Transmission and Distribution Company (NTDC) and distribution companies (DISCOs).

## Summary of G2G Projects: Rehabilitation and Construction of Hydro and Thermal Power Plants

Projects	USG Funding (million)	Amount Paid to GOP (million)	Completion Date	MW Gains/Benefits	
				Target per G2G Agreement	Achieved ( As of Mar 31, 2013)
Tarbela Rehabilitation	\$16.50	\$13.95	12/31/13	128 MW	128 MW
Jamshoro Rehabilitation	\$19.33	\$14.89	03/31/14	150 MW	235 MW
Guddu Rehabilitation	\$19.12	\$15.51	12/31/13	75 MW	Equipment installation to start from May 2013
Muzaffargarh Rehabilitation	\$15.78	\$10.13	12/31/13	475 MW	480 MW
Gomal Zam Multi-Purpose Dam	\$45.00	\$41.60	9/30/13	17.4 MW 1.14 million acre ft. water storage; 191,000 acres land to be irrigated	Dam, powerhouse, switchyard and transmission line are complete. Power generation expected in May 2013
Satpara Multi-Purpose Dam	\$26.00	\$21.49	4/30/13	17.6 MW 0.09 million acre ft. water storage; 15,500 acres land to be irrigated, 3.1 million gallons/day drinking water	13.8 MW Dam and two powerhouses are complete. Irrigation system near completion. Additional 3.8 MW expected by end April 2013
<b>Total</b>	<b>\$141.73</b>	<b>\$117.57*</b>		<b>863 MW</b>	<b>856.8 MW</b>

\*Out of \$117.57 million, about \$5.0 million processed in March 2013, and \$0.33 million will be disbursed after the PIL Amendment

## PROGRAM COMPONENT I:

# Monitoring and Support of Project Implementation

EPP is providing monitoring and implementation support for the six signature projects announced by the 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 completion of two new multipurpose dams (Gomal Zam Dam and Satpara Dam). Total USG funding is \$141.731 million (per revised agreements) and the estimated gains are up to 863 MW.

## HYDROPOWER PLANTS

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

During the reporting quarter, follow up visits were made to the three hydropower projects by EPP subcontractor for the implementation of and compliance with the EMMP. Observations made by the subcontractor have been submitted to USAID, and shared with WAPDA for necessary corrective action.

### Achievements in the Quarter

#### A. Rehabilitation of Tarbela Hydropower Plant under FARA:

On March 5, a high level USAID delegation led by U.S. Ambassador Richard Olson, along with Chairman WAPDA Syed Raghbir Shah visited the Tarbela dam and announced completion of major rehabilitation work which has supported the addition of 128MW to the national grid.

The remaining rehabilitation work, i.e., procurement and installation of digital governors at units and SCADA system, is underway and will add to reliability and sustainability to the Tarbela power plant.

During the reporting period WAPDA submitted a request for additional funding of \$25 million to USAID for procurement of equipment that will help reduce outages at Tarbela and add 20MW to the plant's capacity. In a visit to the Tarbela Power Station in March, EPP team assessed the condition of the equipment for which additional funding has been requested by WAPDA.



“The United States understands that Pakistan is facing an energy crisis and we are committed to doing our part. The work completed here at Tarbela contributes enough electricity to supply to two million consumers, and helps provide relief to those suffering from extensive power shortages.”

Ambassador Olson at Tarbela Dam, Mar 5, 2013

The draft PIL, Activity Agreement and Initial Environmental Examination (IEE) on the additional funding have been submitted to USAID for review.

Total disbursement made to WAPDA as of March 2013, is \$13,949,917 out of the total obligated amount of \$16,500,000. Annex-I captures the current status of the Tarbela FARA.

### B. Satpara Multipurpose Dam under Activity Agreement

The power generation capacity at Satpara Dam Project was enhanced by 7.8 MW. The project is now capable of generating 13.8 MW through powerhouse 1 and 2. Work on power house 3 & 4 is progressing as per schedule; the project is expected to be completion date in April 2013. A progress monitoring visit to the project site was undertaken jointly by EPP and WAPDA.



Chief Minister GB, Chairman WAPDA and Senior Program Manager USAID at the stakeholders meeting to discuss implementation issues of the Satpara Dam Project

During the reporting quarter, a series of meetings were held between USAID, EPP, WAPDA and Chief Minister Gilgit-Baltistan regarding land acquisition and compensation issues and completion of the remaining portion of the irrigation canal. On the remaining portion of DR-I, WAPDA agreed to pay the compensation of the land as per decision by the Deputy Commissioner Satpara, and complete the remaining works on priority basis. In the meeting it was decided to form

a steering committee, comprising of representatives from Govt. of Gilgit Baltistan, WAPDA and USAID to monitor and inspect the quality of ongoing work,

Total disbursement made to WAPDA as of March 2013, is \$21,485,700. Annex-II captures the current status of the Satpara Activity Agreement.

### C. Gomal Zam Multipurpose Dam under Activity Agreement

The project is in final stages of completion; main dam and spillway concrete and related works along with mechanical testing of dam fixtures are 100% complete. Hydropower and switchyard components are also complete and pre-commissioning tests are in progress. The transmission line towers have been erected and interconnection with the switchyard is underway that will enable the power plant to transmit electricity in South Waziristan and KPK.

EPP conducted a field visit to Gomal Zam Multipurpose Dam Project in March to monitor the progress at site and identify main reasons for delay in the commissioning of the powerhouse, switchyard and transmission line. The field visit was important as it relates to expediting the completion of project under the USAID funding.

Project progress has been slowed down due to security issues and WAPDA's inability to make outstanding payments of \$10 million to its contractors. The outstanding payments were partially settled by WAPDA. To expedite completion of the project and support WAPDA in clearing the outstanding invoices, an additional funding of \$5 million was approved by USAID. The revised payment schedule and increased agreement amount of \$45 million were incorporated in the Activity Agreement under Amendment no. 4 that was signed on March 18, 2013.

Total disbursement made to WAPDA as of March 2013 is \$41,589,000<sup>1</sup>. Annex-III captures the current status of the Gomal Zam Activity Agreement.



Inside view of power house at the Gomal Zam Dam

## THERMAL POWER PLANTS

With total funding of \$54.23 million, as much as 700MW are estimated to be restored through the rehabilitation of three thermal power plants, which will benefit more than 10.8 million individuals.

### Achievements in the Quarter

**D. Rehabilitation of Muzaffargarh Thermal Power Station (MTPS) under Activity Agreement:** During the quarter, USAID Energy Office Director Melissa Knight visited the Muzaffargarh Thermal Power Station and reviewed the ongoing progress under the activity agreement. The rehabilitation work to date has resulted in 480 MW of capacity restoration at the plant which exceeds the project objectives; with the rehabilitation of Unit 5 and 6, 150 MW of power generation capacity was restored at MTPS in the reporting period.



Inspection of rehabilitated work at MTPS

EPP provided support to the GENCO in preparing a revision to the PIL, so as to help expedite the payment of reimbursement claims held up due to deviations from the agreement's technical specifications. In this regard, EPP along with USAID visited the plant and held meetings with the management for preparing a technical assessment on the amendments requested in the PIL. The revised PIL is expected to be signed in April.

The visiting team also inspected the major equipment delivered at the plant, and

<sup>1</sup> EPP certified claims of \$41,589,000; out of which \$5,000,000 is in process of reimbursement with USAID

verified the 150MW gains.

For implementation of the EMMP, a follow up visit was made to MTPS by EPP subcontracted firm. Observations made by the visiting team were shared with the MTPS management for necessary corrective action and submitted to USAID for review.

The total amount disbursed to the GOP as of March 2013 is \$ 10,133,001<sup>2</sup>. Annex IV provide the detailed status of the MTPS Activity Agreement.

#### E. Rehabilitation of Jamshoro Thermal Power Station (JTPS) under Activity Agreement:

With the commissioning of economizers at Unit 3 and 4, 140 MW were restored in the plant's power generation capacity leading to a total gain of 235 MW through USAID funded rehabilitation.

Two inspection and monitoring visits were made to the Jamshoro Thermal Power Station inspect the arrival and installation of equipment, and verify the MW gains. During the visit, discussions were held with JTPS management for making an amendment to the PIL, to accommodate a revision in the technical specifications. On February 6, 2013 the PIL amendment was signed formalizing the revised technical specifications.

For implementation of the EMMP, a follow up visit was made to JTPS by EPP subcontracted firm. Observations made by the visiting team were shared with the JTPS management for necessary corrective action and submitted to USAID for review.

An amendment No. 1 to the Activity Agreement revised the project completion date to March 31, 2014 and obligated the incremental funding to cover the insurance and freight. The total amount disbursed to the GOP as of March 2013 is \$14,892,825. Annex V tabulates the status of JTPS Activity Agreement.

#### F. Rehabilitation of Guddu Thermal Power Station (GTPS) under Activity Agreement:

Following the agreement between Guddu and GE, procurement of equipment of the uprate is in process and the equipment is expected to arrive on site in April.

The total gains expected after rehabilitation are about 75MW.

EPP is carrying out regular follow-up with GTPS for the opening of a letter of credit for the Services Agreement with GE of \$ 1,826,000. GTPS has initiated negotiations with local banks for opening of the L/C.

Guddu submitted a request to USAID for allowing procurement of item (Torque Converter) from the balance amount left after the Activity Agreement procurement. EPP has requested Guddu to provide a detailed justification and implications on uprate program, which will be submitted to USAID after EPP's review and recommendations.

The total amount disbursed as of March 2013 is \$15,512,790. Annex VI provides details on the Guddu TPS Activity Agreement.

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<sup>2</sup> EPP certified claims of \$10,133,001; out of which \$337,605 will be disbursed after the PIL Amendment

## GENCOS PERFORMANCE EFFICIENCY IMPROVEMENT PROGRAM (PEI)

### Heat Rates Testing and Equipment:

Upon GENCO Holding Company Limited's request for support in performing heat rate tests of the GENCOs in order to obtain a revised tariff from NEPRA, EPP initiated work on the activity in October 2012. The activity is being carried out in phases:

#### Phase I - Conduct heat rate tests which would require calibration of existing equipment

- Calibration of meters

EPP procured the services of SGS for the calibration of meters at the three GENCOs, following formal concurrence from Genco Holding Company Limited (GHCL) and GM Thermal. SGS initiated the calibration of the flow meters in March, 80% of the JTSP meters have been calibrated at the SGS facility in Karachi. A joint visit was carried out by EPP and JTSP to inspect the ongoing calibration.

- Heat rate and dependable capacity testing

As per USAID directives, EPP sought bids from four international firms for conducting the heat rate test, however, only one firm submitted the proposal and others declined due to the unrest security situation in Pakistan.

Based on the response from international vendors and recommendation of the CEO (GHCL) to use local procurement to avoid time delays, EPP facilitated meeting between GM Thermal and potential local vendor for the heat rate tests. EPP has submitted an approval request to USAID based on local sole source procurement and is awaiting feedback

#### Phase II - Installation of new equipment (flow meters)

Expression of Interest (EOI) were received from two firms for the procurement of flow meters

### Performance Monitoring and Capacity Building of the GENCOs and Hydros:

#### GENCOs:

EPP performance monitoring expert conducted O & M training needs assessment at the GENCOs. The TORs for the training were finalized with consensus of GHCL/GENCO and an RFP issued for procurement of services of a Training Service Provider (TSP). The proposal received is under evaluation

#### Hydros:

EPP finalized the TORs in consultation with WAPDA and floated the RFP to three companies. It is anticipated that the training for Hydro and thermal will be carried out in three separate batches about 20 engineers each and will start from April-May 2013.

## PROGRAM COMPONENT 2:

# Advice and Support of Energy Sector Reform

## SUPPORT TO MINISTRY OF WATER AND POWER

### Activities in the Quarter

**Analysis of Generation and Distribution figures for fourth quarter of Calendar Years 2010, 11 and 12**  
Upon the request of Secretary Water and Power a detailed analysis of generation, transmission and financial impacts of the fourth quarter of Year 2010, 2011 and 2012 was conducted to compare performance over a 3 year period. A comprehensive presentation has been made to the Secretary and senior management at the Ministry. The Secretary has requested a follow-up presentation to analyze the past trends and performance.

### Hydro Power Development Fund

A paper regarding the financing proposals and management structure for Hydro Power Development Fund was submitted to Special Secretary Water and Power. In a meeting held on January 1, 2013 with the Special Secretary Water and Power the paper was discussed in detail. The paper has been circulated by Ministry of Water and Power with a request to related stakeholders for their views/ comments.

### Public Private Partnership in Small Hydro Projects

Upon the directives of Additional Secretary, MWP a project brief was developed encompassing the present scenario in hydel generation, the costs for small hydro generation and the existing public private partnerships in hydro generation.

### Power System Integrated Model

On USAID's directive, EPP is leading the development of an integrated power sector model to capture the existing circular debt and subsidy situation in the sector, to assist in advising key policy decisions regarding tariffs, subsidies and generation mix. Following a transparent procurement process, Hagler Bailly was selected as the consultancy firm to develop the financial integrated model. A kick-off meeting was held between USAID, EPP and Hagler Bailey team to discuss the way forward.

### WAPDA bundling

On the request of MWP, EPP conducted an analysis on the pros and cons on the restructuring of the power sector. EPP collected and compiled examples from various countries, highlighting the various stages completed under power sector reforms. The analysis explained that Pakistan's sectoral reforms are currently in the intermediate phase and if reforms were followed through to the end, Pakistan's power structure would be under the multi-buyer model.

On March 19, 2013, MWP issued orders for restructuring of the power sector by bringing all power sector entities under the coordination of WAPDA. Under MWP's directive, the DISCOs were to retain the working capital from the collections from consumers, prior to passing on the remaining balance to CPPA. Previously, the DISCOs received funds for their Distribution Margin based on the

rationalization of their working capital requirements after directly transferring all collections to CPPA. EPP was requested to conduct an analysis on the pros and cons of this new methodology.

#### Other tasks:

On directives of the Joint Secretary MWP, EPP undertook the following tasks:

- Reviewed and provided legal comments on the power policies and electricity acts of Pakistan
- Initiated data collection for developing a financial analytical model on key DISCO statistics such as units sold, collection, and line losses. Currently, data is being gathered to conduct this analysis.

## SUPPORT TO MINISTRY OF FINANCE

### Activities in the Quarter

Tasks undertaken by EPP seconded staff at the Ministry of Finance, Corporate Finance Wing (CFW), includes the following:

- Assisted the Corporate Finance (CF) Wing in drafting briefs on:
  - LESCO's Tariff Determination by NEPRA for the financial year 2012-13.
  - Meeting of sub-committee of the Senate Committee on Water and Power held on March 21, 2013.
  - Payment of subsidy to Karachi Electricity Supply Company (KESC) for the Standing Committee of National Assembly on Water and Power.
- Provided assistance in drafting comments on:
  - Summary submitted by Ministry of Water and Power proposing amendments in Hydro Power Generation Policy.
  - Draft Financial Proposals / Management Structure proposed by Ministry of Water and Power for Hydro Power Development Fund.
  - Summary submitted by Ministry of Petroleum and Natural Resources regarding installation of LPG Air Mix Plant by Sui Southern Gas Company Limited (SSGCL).
  - ECC summary by Ministry of Petroleum and Natural Resources regarding Marginal/ Stranded Gas Field – Gas Pricing Criteria and Guidelines 2013.
  - Draft summary for ECC submitted by Ministry of Petroleum and Natural Resources proposing some amendments in Petroleum Policy 2007-09 and 2012.
  - Summary submitted by Ministry of Water and Power regarding Time of Use (TOU) Metering Tariff.
  - Draft mechanism/ procedure for utilization of Gas Infrastructure Development.
  - Draft summary regarding amendment in Petroleum Policy-2012 submitted by Ministry of Petroleum and Natural Resources.
  - Draft summary for financing arrangement of Nandipur Project submitted by Ministry of Water and Power.
  - Summary regarding diversion of gas from old fertilizer plant of ENGRO to its new fertilizer plant.
  - Working paper for the second meeting of the committee constituted by the ECC to resolve the issue of reduction in capacity payment to IPPs during Feb-May 2011, owing to Gas Supply Curtailment by SNGPL.

- Proposal submitted by Ministry of Water and Power to extend timelines for submission of TDS claims by the Distribution Companies/ Ministry of Water and Power, to Ministry of Finance from 10th of each month to 15th of each month
  - Draft summary proposing more incentives for BYCO Oil Refinery was examined and necessary assistance was provided to C.F. Wing to formulate their views/ comments on the summary.
  - Proposed amendments in the Hydro Power Policy prepared by PPIB/ Ministry of Water and Power keeping in view the Hydro Power Policies of other countries
  - Draft summary for ECC for providing loan to Sui Northern Gas Pipeline Company Limited (SNGPL) to finance the project for supply of gas to various towns and villages submitted by Ministry of Petroleum and Natural Resources.
  - Draft summary for ECC for proposing amendments in the Hydropower Generation Policy submitted by Ministry of Water and Power.
  - Various clauses of the draft regulations on upfront tariff for coal based projects on imported/ local coal submitted by National Electronic Power Authority (NEPRA)
- Briefed the Adviser to Ministry of Water and Power Raja Raza Arshad regarding Circular Debt Issue.
  - Assisted Corporate Finance Wing of Ministry of Finance to examine the Concept Paper sent by Ministry of Water and Power regarding Financial Proposals and Management Structure for proposed Hydro Power Development Fund.

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

### Activities in the Quarter

#### Circular Debt:

During the reporting period, EPP jointly worked with the USAID Power Distribution Program to review the Circular Debt report and incorporate the feedback proposed by Planning Commission and USAID. The finalized CDR was co-publishing by USAID and PC in a ceremony held in Islamabad on March 26, 2013.

#### LNG Imports

EPP continued coordination with QED Gas (LNG Consulting Company and SSGCL on the consultancy services for LNG import. The QED team from United Kingdom visited Islamabad and presented the technical evaluation of the integrated LNG project to the SSGCL Board and ECC Committee. EPP facilitated meetings between USAID, SSGCL and QED to review the evaluation process and relevant project details. QED submitted the progress report for the period Dec 2012 to Feb 2013.

Three delivery orders were initiated with QED Gas however an amendment of Delivery Order 2 was drafted and is under discussion with QED. Delivery Order 1 and 3 were completed; invoice for delivery order 1 has been submitted to USAID. Delivery Order-4 was finalized in coordination with QED and SSGCL and is under execution

Bids for the integrated LNG project were opened and technical evaluation is in progress. QED conducted an inspection of the site at Karachi.

However, under a Supreme Court decision, a stay order was issued for the LNG import project.

### Shale Gas

LMKR submitted its proposal on the provision of consultancy services on shale gas. Upon review of the proposal, EPP requested LMKR for detailed information on the level of effort (LOE) and the commercial offer. A response from LMKR is awaited.

### Oil Refining & Marketing policy:

Following EPP's discussions with the Minister of Petroleum and Natural Resources, DG Refineries and Financial Advisor MPNR on the revision of Refinery Pricing Formula, the proposal regarding revision of Refinery Pricing was finalized by MPNR and approved by ECC.

### General Support to Planning Commission

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

a) Prepared briefs on:

- i. Allai Khwar Hydrel Power Project.
- ii. Jinnah Hydrel Power Project.
- iii. Model Petroleum Concession Agreement 5MW Hunza, 10 MW Hanzil, 20MW Tormik-II, 30MW Ghowari Ghanche Hydrel Power Projects.
- iv. Tariff Differential Subsidy Break-up at Existing Determined and Notified Tariffs of the DISCOs.
- v. Working paper on Private Power & Infrastructure Board (PPIB) for its annual meeting on February 15th, 2013.
- vi. Restructuring plan of Energy Wing of Planning Commission.
- vii. Factual situation of subsidy given to tube well connections and comments on proposal of flat rate billing to the tube well connections

b) Prepared comments of Planning Commission on:

- i. Incentives for Re-location of Oil Refineries,
- ii. Policy Guidelines to OGRA under Section-21 of OGRA Ordinance,
- iii. Acquisition and Rehabilitation of DHA Cogen Ltd.,
- iv. Gas Allocation from new sources (Amended version of summary),
- v. Summary to ECC on
- vi. Summary to ECC on
- vii. Achievements of present government in the fields of Economic Development, PSDP Programme, Project Monitoring and Evaluation
- viii. Allocation of gas from Latif Field
- ix. Summaries for the ECC:
  - Diversion of Gas from ENGRO's base plant to new plant.
  - Formulation For Fixation Of Ex-Refinery Pricing Of High Speed Diesel (HSD)
  - Incentives For Re-Location Of Oil Refineries
  - Guidelines For Renewal Of CNG Marketing License

- Review Of Oil Marketing Companies (OMCs) And Dealer Margins
  - Proposal To Fulfill Engro Fertilizer Contractual Gas Allocation Obligation
  - Allocation Of Gas From Latif Field
  - Natural Gas Load Management
  - Gas Allocation from New Sources
  - Revision of Model Petroleum Concession Agreement (PCA)
  - Financing of Foreign Components of Neelum Jhelum Hydroelectric Power Project.
- c) Compiled presentations on:
- i. Current supply demand situation of Pakistan's power sector and upcoming capacity addition in the sector.
  - ii. Pakistan's energy supply and consumption for period of 2010-11.
  - iii. Power Generation in the country
  - iv. Tariff Differential Subsidy and Steps to gradually remove the subsidy
- d) Reviewed and finalized documents:
- i. ECC summary on Import of LNG Implementation
  - ii. Summary on Naltar-V hydel power project in Gilgit Baltistan
  - iii. Draft summary to OGRA on New Tariff Regime for Regulated Natural Gas Sector in Pakistan. Communicated with Directorate General of Gas & LGs at Ministry of Petroleum and Natural Resources to get updated data for the summary
  - iv. Presentation for Member Energy on PakistanPower's current woes and steps to improve the power sector, to be presented to State Minister for Finance and Planning & Development in Planning Commission.
  - v. Updated, finalized and circulated minutes of ECC meeting held on comments of Bidders on RFP for import of LNG.
  - vi. Drafted a note on current Circular Debt position and estimated addition during FY 2012-13.
- e) Communicated with MWP on establishment of ESCROW account for World Bank Loan for Tarbela-IV extension.
- f) Provided IT Support to Deputy Chairman and Member Energy office in the Planning Commission and took routine back-up of official data from office of Member Energy.

## SUPPORT TO NPCC

### Activities in the Quarter

EPP staff seconded at NPCC/NTDC performed the following tasks:

- a) Conducted a meeting with the General Manager NPCC and discussed steps to be undertaken to avoid major power system collapse in the country. On EPP's advice, NTDC is maintaining the frequency of the power system between 49.8-50 Hz to avoid system collapse and provide higher and necessary security and reliability to the system.
- b) Presented a summarized account of the Pakistan's power sector's capacity - Demand of electricity and current position of various constraints faced by the Power Sector, along with load shedding details, to a high level USG delegation at the US embassy.

- c) Carried out several meetings with GM NPCC to review the ongoing NPCC Upgrading project and explore avenues for expediting the project with USAID's assistance. Developed a Power Point presentation with estimates of weekly power demand and supply (estimated generation) for each month of the quarter, and for the next five months
- d) Prepared an analysis of daily data on generation and demand and dispatch patterns of generators for GENCOs and IPPs and for hydropower plants, for any possible improvement and advice to the MWP on the subject.

### Energy Sector Internship Program & Energy Seminars

Regular monitoring was conducted of the Energy Sector Internship Program ongoing at the JTPS, GTPS, and Lakhra Thermal Power Station in Sindh, and at NTDC and small hydro projects in KPK. Based on the interest shown by the power sector entities and educational institutes the Internship program was expanded to the Punjab and Balochistan provinces, during the reporting quarter. A total of 90 interns (76 male and 14 female) are working under the internship program,:

Organizations	Males	Females	Total Interns
JTPS	7	3	10
LTPS	13	3	16
Guddu	12	1	13
KPK	7		7
MTPS	14	3	17
NTDC Hyderabad		2	2
NTDC Dadu	1		1
NTDC Mardan	2		2
NTDC Peshawar	3		3
NTDC Muzaffargarh	3		3
NTDC Jamshoro	1		1
NTDC Sukkur	1		1
	76	14	90

EPP organized and facilitated an Internship Supervisors Workshop at its office premises in February to discuss the progress of the internship program and how the program can further be enhanced.

- **Sindh Chapter**  
3 university graduates (1 male and 2 female) started their internship at NTDC Hyderabad/Sukkur & Dadu on February 6, 2013.

Placement aptitude test and interviews for the Guddu Internship batch II were held at the Guddu Thermal Power Station on March 12, 2013. Out of 59 applications, 14 have been selected to start their internships in April.

A one-day recreational trip was organized at Mohenjodaro for the Guddu batch I & II interns for orientation of the new interns and strengthening of interaction among the interns.

- **Punjab Chapter**

The Punjab Chapter was launched in an official ceremony held at the Muzaffargarh Thermal Power Station on February 25, 2013, under which twenty university graduates (3 females and 17 males) were placed at MTPS and NTDC Muzaffargarh.

The internee aptitude test and interviews were conducted at Bahauddin Zakariya University Multan from January 2-4, 2013. A total of 277 candidates applied, out of which 95 potential candidates were shortlisted for interview. The applicants hail from Bahawalnagar, D G Khan, Hafizabad, Khanewal, Multan and Muzaffargarh.



Intern selected under Punjab Chapter along with USAID and EPP staff

- **Balochistan Chapter**

A total of 98 candidates (including 10 female graduates) sat for the recruitment test at Balochistan University of Information Technology, Engineering and Management Sciences (BUIETMS), Quetta on March 22nd, 2013. Shortlisting and evaluation of the interviewees is still in process.

### Energy Seminars

During the reporting quarter a series of seminars were conducted at various educational institutes to educate the youth about their current energy crisis condition and brief them about how they can lend a helping hand in this aspect:

- Seminar at the Bahauddin Zakariya University was attended by 190 students (74 male and 116 female)
- Interactive seminar conducted for 127 students (out of which 76 were females) on March 14, 2013 at the Degree College Guddu
- Seminar at Sardar Bahadur Khan Women's University, Balochistan on March 22, 2013 for an audience of 300 female students and 10 faculty members.

## COMPONENT 3:

# New Projects, Planning and Development

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

### Mangla

EPP facilitated the visit of a high level USAID delegation, headed by Senator Robert Menendez to the Mangla Dam to review firsthand the contributions U.S. assistance funds are making to help alleviate Pakistan's energy crisis.

During the reporting period, EPP participated in a series of meetings with USAID and WAPDA to advise and assist in the identification and prioritization of activities for the Mangla Rehabilitation and Upgrade Project. The project milestones, Activity Agreement (AA) and scope of work, utilization options for the allocated budget for Mangla were discussed for inclusion in proposed Project Implementation Letter (PIL) for the project.

In response to an EOI published by WAPDA for replacing the generator and turbine at units 5 and 6 at Mangla, a huge number of applications were received. WAPDA is in the process of shortlisting the applicants in consultation with EPP.

### Kurram Tangi

EPP along with USAID conducted meetings with representatives FATA Secretariat (FS) and Frontier Works Organization, FWO (an Army affiliated civil works contractor) to discuss and resolve options for initiating implementation of the project in North Waziristan. Owing to the security and access issues related to project site, the project might be started under the Quick Impact Project (QIP) procedure earlier used by USAID and FATA Secretariat to implement construction and rehabilitation activities in the restive area.

An Environmental Scoping Session on the Kurram Tangi Dam Project was held at offices of Montgomery Watson Harza (MWH)<sup>3</sup> at the NESPAK building in Islamabad. Representatives from USAID, EPP, MWH and NESPAK attended the meeting.

EPP assisted USAID identify procurement plans and related cost information for the Kaitu Weir and associated irrigation canal and hydropower generation plant costs which are a part of the Kurram Tangi Dam project.

EPP also coordinated with WAPDA to match the indicated USAID funding level and the procurement limitations on FWO (Frontier Works Organization), the sole source construction contractor permitted under the Quick Impact Project (QIP) procedure for works in North Waziristan. The contracts have been split in five packages. The SOW and break up of cost estimated to be spent during 2013 and 2014 for all five packages were collected and reviewed by EPP.

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<sup>3</sup> consultants retained by USAID to conduct an Environmental Assessment of the project

On USAID's request, EPP provided an estimated budget and costing of \$40 million for constructing the 18 MW hydropower station fed by Kaitu Weir in North Waziristan.

#### Support to USAID on requests for new projects

EPP collected and provided needed information to USAID on all the hydropower projects currently under consideration at WAPDA. These include those under construction, being planned, ready for implementation and even some that are proposed in the near future. USAID is looking at options to consider in coming years. Information of projects locations, cost, schedules, source of funding and present status were included in the brief.

A brief was prepared for USAID describing and providing key information with a project status report on the 96MW Jinnah, the 72MW Khan Khwar, the 121MW Alai Khwar and the 130MW Dubair Khwar hydropower Projects.

To build the capacity of WAPDA staff in Operations and Maintenance practices, EPP sponsored the participation of four engineers to a workshop on "Operations, Management, Safety and Maintenance of Dams" held in Johannesburg, South Africa during March.

On USAID's request, EPP submitted a brief on the silting of the reservoir of Tarbela Dam.

Background information and comments were provided to USAID in response to a request regarding a news item about ADB views on resettlement laws and its withdrawal from the Diamer Basha Dam.

A brief was provided to USAID on the Neelum Jehlum hydropower project<sup>4</sup>. GOP has requested USAID to provide about \$100 million for the \$3 billion, 969MW project in AJK.

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<sup>4</sup> WAPDA had estimated cost of about \$1 Billion to construct the Neelum Jehlum hydropower Project. Foreign Exchange was to come from China EXIM Bank, the Abu Dhabi Fund and the Islamic Development Bank (IDB), while local costs were to be funded by a "NJ Surcharge" of Rs 0.10 per unit imposed on electric power customers of PEPCO by the Government. Owing to various reasons – change of sites, redesign of structures, lack of electric power, land disputes – the project has been delayed by about 2 years and cost estimates revised to almost \$3 Billion. About \$400 million have been spent to date. WAPDA is seriously short of funds for the project and their problems have been compounded by disputes between the Government and the two primary lending entities owing to reasons beyond WAPDA's control. The IDB has asked for resolution of project financing plan before committing further funds.

## COMPONENT 4:

# Transmission

### PESCO

- **Grid Reconfiguration**

EPP team made an inspection visit to 132 kV Nowshera Industrial Substation where 10/13 MVA Power Transformer (T-2) will be augmented/replaced by 20/26 MVA Power Transformer (already spared from 132 kV Peshawar Fort Substation).

- **Power Transformer Program**

A purchase order was issued to Heavy Engineering Complex (HEC) for carrying out the repair on Shahi Bagh power transformer. EPP received proposal from HEC for the repair of two damaged power transformers:

- 20/16 MVA, 132/11 kV Jamrud Industrial Grid
- 15 MVA, 132/11 kV Battal Grid Station

Oil samples were collected from nine grid stations and sent to Pakistan WAPDA Foundation (PWF) for analysis. The grid stations are:

- 132 kV SS Peshawar Fort (2x PTF)
- 132 kV SS Peshawar City (3x PTF)
- 132 kV SS Peshawar Cantt (4x PTF)
- 132 kV SS Sakhi Chashma, Peshawar (2x PTF)
- 132 kV SS Dalazak (2x PTF)
- 132 kV SS Rehman Baba (4x PTF)
- 132 kV SS Peshawar Industrial (3x PTF)
- 132 kV SS Peshawar University (3x PTF)
- 132 kV SS Shahi Bagh (4x PTF)
- 132kV Grid Station (G.S) Swabi,
- 132kV G.S Dobian,
- 132kV G.S Ayub Medical Complex Abbottabad, and
- 132kV G.S Battle
- 132 kV GS Nowshera Industrial (2x PTF)
- 132 kV GS Mattani (4x PTF)
- 132 kV GS Hayatabad (2x PTF)
- 132 kV G.S Peshawar Fort
- 132 kV G.S D.I. Khan
- 132 kV G.S Sarai-Naurang
- 132KVG.S. Pabbi

The reports and recommendations are being reviewed by EPP's Transmission team.

A contract was issued to OCS services for the transportation of oil samples.

- **Transmission Technical Audit**  
EPP and PESCO jointly conducted technical audit of the following Peshawar division grid stations:
  - 132 kV SS Shahi Bagh
  - 132 kV SS Peshawar City
  - 132 kV SS Peshawar
  - 132 kV GS Pabbi
  - 132 KV GS Peshawar Cantt.
  - 132 kV GS Jamrud

The transmission team visited the 132 kV Grid Station Haripur and 132 kV Grid Station Mansehra to check the status of the installed 132 kV capacitor banks. The team supervised the dismantling and testing activity at the 132 KV G.S Jehangira Capacitor Bank.

At 132/11 KV Grid Station Peshawar University, the 24 MVAR 132 KV Capacitor Bank was restored to service on March 21, 2013.

- **Circuit Breaker Program**  
EPP received technical and financial proposals for the supply of circuit breakers. The proposals are under review.
- **RPC Study**  
The Reactive Power Compensation study is underway. EPP has engaged Power Planners International (PPI) to carry out this study. Capacitor/Inductor banks would be added at transmission facilities to compensate for reactive power (unproductive power) as per recommendations of study. Series of meetings were held with PESCO authorities (Mr. Abdul Latif Khan, Chief Engineer Operations; Mr. Aftab Sethi, Chief Engineer Project Management Unit; Mr. Niaz, Chief Engineer Grid Station Operations) and PPI to discuss procedures and data collection methods of study.
- **Linemen Program**  
The first phase of live line training was launched on January 28, 2013 for fifteen members of PESCO staff at the Tarbela training centre. The training extends over a period of fourteen weeks, comprising of classroom and hands on training.  
  
On January 29, 2013, EPP team visited Tarbela training Centre to examine training facilities. A detailed examination of facilities including Classrooms, Boarding & Lodging and Labs was carried out.
- **Transmission Maintenance Workshop**  
EPP held a meeting with the contractor regarding the design concept of the transmission workshop to be built at Rehman Baba Grid Station. Scope of Work (SOW) for procurement of equipment is being drafted.

- **Telemetry on all CDPs**

EPP reviewed the System diagram of PESCO's network was reviewed. 141 Energy Meters at 61 grid stations would be needed to be installed. System diagram, highlighting metering points, was prepared. Work was initiated on the installation of telemetry equipment at the PESCO office and the grid stations in its network:

- Three computer systems along with were installed at the offices of PESCO's Chief Executive Officer, Chief Operating Officer and Chief Engineer so that they can receive and monitor real time telemetry data,
- Telemetry system along with Data Concentrator Units (DCU) were installed at the following grid stations:
  - 132 kv SQD-6 circuit at Shabqadar Grid Station,
  - 132Kv DLZ-I circuit at Dalazak GS, and
  - 132 kV PCY-I circuit at Peshawar city GS.

#### Live Line

EPP visited Faisalabad Electric Supply Company (FESCO) and Gujranwala Electric Supply Company (GEPCO) to finalize the selection of crews for live line training. An inspection visit was made to Karachi to see the installation of trailers onto the 4x4 vehicles that EPP will be providing to the DISCOs for the Live Line crews.

#### Import of Power

The concept paper on Import of Power of Central Asian Republics was submitted to USAID for review and approval.

In this regard, EPP transmission experts led by the project COR visited Afghanistan from February 17-21, 2013. The purpose of the visit was to introduce the power import concept, develop consensus among stake holders and confirm the data collected during desk study for the Concept Paper. EPP focused on coordinating with USAID and NTDC for jointly reviewing, refining and finalizing the concept paper.

A series of coordination meetings were held with USAID to discuss the activity progress and provide brief on the contents of Concept Paper and refine it with USAID's consensus. In a meeting held on February 26, 2013 with EPP briefed USAID team led by Alex Their, Assistant of the Administrator Afghanistan and Pakistan on the contents of the Concept Paper and advantages of importing power from CAR countries.

#### NTDC

On January 31, 2013 EPP Chief of Party along with the Transmission Expert held a meeting with MD NTDC /Joint Secretary (Power), Muhammad Mussadiq, at Islamabad to discuss the support EPP will be providing to NTDC. EPP delivered a presentation on the planned activities and assistance being provided to NTDC. During the discussion, NTDC highlighted different projects EPP could assist them with.

Follow up meeting were conducted throughout the quarter.

# Administration/Management Support to EPP

## Accounting/Finance

Miscellaneous payments were made to the vendors during this quarter. Payroll and financial reconciliations were completed.

District-wise cost allocation of project activities was calculated and the financial data for Oct-Dec, 2012 was uploaded on USAID's PAKINFO site. Projected Expenditure and Actual Expenditure for Oct-Dec 2012 were analyzed. The staff salary and compensation for 2012 was reviewed.

The financial projections for FY13 – FY15 were revised. Monthly Projections for Qtr. 2 & Qtr. 3 (i.e. Jan-Jun, 2013) were prepared and analyzed.

## Procurement

During the reporting period, office equipment/supplies, security equipment, and services were procured to support operations. . Equipment procured for Peshawar office includes:

- 110 KVA Generator procured for Peshawar office
- APC Original Online UPS (6 APC 650VA, 1 APC 1KVA, 1 APC 3KVA) and 6 Linksys Wireless Access points
- Nikon D5100 DSLR Camera including Tri-pod stand, 8GB Memory Card and original Nikon bag for communication department
- CCTV System for Peshawar office
- Dell Desktop PC including 22" LCD and 650VA UPS
- Scanjet Scanner & Multifunction Fax ,
- Nokia cell phones
- Procurement of HP LaserJet MFP and HP Color LaserJet MFP Printer for Peshawar office
- Procurement of Dell Desktop PC with LCD, Wireless KB & Mouse, 1KVA APC Online UPS for Control room, PESCO
- Control room, PESCO, Peshawar (2MB) Internet setup
- LED's for telemetering project
- Purchasing of miscellaneous IT Accessories like USB Optical Mouse, Cables, Power Adapters, Laptop bags, etc.
- Conference room furniture.

## Logistics

- Provided logistical support for 128 trips made by the project staff. Arranged international travel for expats.

**Confidential information redacted**

**Confidential information redacted**

**Confidential information redacted**

# Annexures

## Annex -I: Status of Tarbela FARA

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 and the amount will be reimbursed upon shipment.
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 award is in final stages. PO is expected to be placed in April.
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 reimbursed.
6	1-10	Replacement of Electromechanical Governors by Digital Ones, Unit 1-10	3,000,000	2,700,000	The equipment arrived at site on 30 November. The installation and commissioning of the Digital Governors on Units 1 – 10 is anticipated to be completed in June 2013.90% amount reimbursed.
7	1-10	Replacement of Worn out Station Drainage & Dewatering Pumps, Units 1-10	400,000		Installation completed on all units. However, reimbursement is on hold as one small pump (required under FARA) is being procured by WAPDA to comply the specifications of FARA.
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	13,949,917	

## Annex II: Status of Satpara Activity Agreement

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. 100% Claim reimbursed.
2.	Civil Works for Dam and Power House 1 & 2	100%	1.877	1.877	Work Completed. 100% Claim reimbursed
3.	Civil, Electrical & Mechanical Work for Power Houses 3 & 4	50%	5.846	5.846	Work Completed. 100% reimbursed
4.	Civil, Electrical & Mechanical Work for Power Houses 3 & 4	100% by Apr 30, 2013	3.681		90% work completed and on schedule
5.	Irrigation System	78 %	2.530	2.530	Work Completed. 100% Claim reimbursed
6.	Irrigation System	89 %	2.282	2.282	Work Completed. 100% Claim reimbursed
7.	Irrigation System	90 % by Dec 09, 2011	2.0538	2.0538	Work Completed. 100% claim reimbursed
7a.	Irrigation System	100% by Jun 30, 2012	0.2282		99.9% work completed
8.	Consultancy Services	81%	0.0853	0.0853	Work Completed. 100% Claim reimbursed
9.	Consultancy Services	90%	0.400	0.400	Work Completed. 100% Claim reimbursed
10.	Consultancy Services	100% by Apr 30, 2013	0.390		Ongoing till project end
11.	Project completion with Testing & Placement in Commercial Operation	90% by Dec 09, 2011	1.9116	1.9116	Work Completed. 100% Claim reimbursed
11a.	Completion of Project, with Testing & Placement in Commercial Operation	100% by Jun 30, 2012	0.2124		Milestone 99.9% complete
Total (million)			\$26.00	\$21.4857	

## Annex III: Status of Gomal Zam Activity Agreement

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. 100% Claim 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 Mar 31, 2013	0.920		98% completed
6.	132kV Transmission Line & related works	50%	1.0	1.0	Work Completed. Claim of 1.0 million reimbursed
7.	132kV Transmission Line and related works	100%	0.5	0.5	Work Completed. Claim of 0.5 million reimbursed
7a.	132kV Transmission Line and related works	100% by Mar 31, 2013	0.5		98% Completed
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 Mar 31, 2013	1.991		Final testing depends upon completion of transmission line, switchyard and availability of water
9.	Interest, penalties, other financial charges, and price adjustments			US\$ Equiv24.50	As and when required through September 30, 2012
10.	Administrative and Security Cost			US\$ Equiv9.00	As and when required through September 30, 2012
11.	Increased cost of labor and equipment user fees resulting from six months of construction delays	100% by Mar 2013	5.0	5.0*	EPP process and submitted the claim of 5.0 million to USAID/ENR on Mar 20, 2013.
Total			\$45	\$41.589	

Claims Processed and Submitted to USAID = \$41,589,000 (including\* \$5,000,000 that is in process of reimbursement with USAID)

## Annex IV: Status of MTPS Activity Agreement

Line Item No.	Unit No.	Work Item Description	Agreement Amount	Claims Submitted under FARA	Claims submitted under new PIL	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
2	1- 4	Special Cooling Water Treatment.	\$187,440			LOI Issued on 13.02.2013. Request for foreign exchange cash was made on 01.03.2013.
3	1-6	Use of Fuel Oil Additive as done on Unit-4 (450 Tons).	\$921,225			PO issued on 22.11.2012. Cash foreign exchange budget allocated on 11.12.2012 and LC opened. Claim for 100% payment received but some required documents were missing therefore claim was not forwarded to USAID. Claim will be processed upon receipt of required documents from NPGCL.
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
5	1,2 & 3	Modification of Excitation system (3 set)	\$191,700			Tender opened in April 2012 and Bid Evaluation is in process. LOI to be issued.
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 received at site on 18.10.2012. Claim for 100% Payment reimbursed
7	3	D.C. Storage batteries (01 Set).	\$60,000	\$60,000		Material received and installed at site. 100% Claim reimbursed
8	1,2 & 3	220Kv circuit breaker SF6 type (06 No).	\$337,605		\$337,605*	LC established on 03.08.2012. Claim for 100% payment received and forward to USAID/ENR for approval on September 25, 2012 however amendment in the PIL specification is required the disbursement.
9	4	Re-blading of LP. Rotor (LP Turbine Rotor blades of row (6&7), pins & locking device).	\$787,035		\$787,035	Material received at site on 09.01.2013. Claim for 100% reimbursed
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 reimbursed
11	4	Up-grading of AVR System (01 set).	\$249,210		\$249,210	PO issued on 20.07.2012. LC opened on 12.10.2012. Claim for 100% Payment reimbursed
12	4	Replacing UPS I&2. (01 set).	\$62,835		\$62,835	Claim for 100% reimbursed
13	4	DEH (01 set).	\$319,500			Tender opened on 27.02.2013 and under evaluation process.
14	4	Up-grading of FSSS System (01 set).	\$138,450			Tender opened on 27.02.2013 and under evaluation process.

Line Item No.	Unit No.	Work Item Description	Agreement Amount	Claims Submitted under FARA	Claims submitted under new PIL	Status
15	4	Up-grading of TSI system BNC 3300 or equivalent (Turbine Supervisory Instrument) (01 set).	\$266,250			Tender opened on 27.02.2013 and under evaluation process.
16	1-6	Training and software/hardware cost for CMMS and off-line efficiency monitoring system. All Units	\$1,000,000			Tender opened on 31.01.2013 and under evaluation process.
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 reimbursed
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.. LC established on 12.10.2012. Claim for 100% payment received but not forwarded to USAID/ENR as amendment in the PIL specification is required for its disbursement.
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 reimbursed
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 13.08.2012. Claim for 100% payment reimbursed
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. Received at site on 25.10.2012. Claim for 100% Payment reimbursed
22	5&6	IP Turbine Rotor (01 No).	\$641,130		\$641,130	PO issued on 14.06.2012. LC established on 12.10.2012. Claim for 100% Payment reimbursed
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			LC established for both the PO. Claim for 100% payment received but not forwarded to USAID/ENR as amendment in the PIL specification is required for its disbursement.
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, however NPGCL request to drop the item in the PIL amendment.
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. Tender opened on 28.11.2012. Technical Evaluation Report sent to G.M (Thermal) Lahore on 04.02.2013 but G.M (Thermal) rejected the technical proposals of both bidders.
26	5&6	Hydraulic coupling of Boiler Feed Water Pumps (01 No).	\$63,900			LOI issued on 13.02.2013 and request for foreign exchange cash was made on 01.03.2013.
27	5&6	Modification of Excitation System	\$166,140			LOI issued on 15.03.2013.

Line Item No.	Unit No.	Work Item Description	Agreement Amount	Claims Submitted under FARA	Claims submitted under new PIL	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 15.10.2012. Claim for 100% payment reimbursed
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 reimbursed
30	5&6	Procurement of 6.6/0.4KV Breaker (5 No. 6KV breaker, 18Nos. 0.4Kv Breakers).	\$295,005			LC opened on 12.10.2012. Claim for 100% payment received but not forwarded to USAID/ENR as amendment in the PIL specification is required for its disbursement.
31	5&6	Protection Relay for Generators.	\$29,820			Tenders opened and LOI issued on 24.02.2012. PO issued on 31.05.2012. LC established on 12.10.2012. Claim for 100% payment received but not forwarded to USAID/ENR as amendment in the PIL specification is required for its disbursement.
32	5&6	MK Breakers, Seal Oil Coolers, PMG	\$169,335		\$169,335	Consignment received at site. Claim for 100% payment reimbursed
33	5&6	Supply, Installation, Commissioning & Testing of complete distributed control system 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			Tender will again open in April.
34	5&6	Rehabilitation of Furnace safety Supervisory System including Furnace camera, flame monitoring & ignition system	\$266,250			Tender again opened on 30.1.2013 and is under evaluation process.
Total			\$15,778,195	\$4,872,500	\$5,260,501	

Claims Processed and Submitted to USAID = \$10,133,001 (including\* \$337,605 that will be disbursed after amendment in PIL)

Summary of Status of Muzaffargarh TPS as of March 31, 2013

Description	Number	PIL Item #	Amount
Material Received at Site	12	1,4,6,7,9,10,17,19,20,21,28,32	\$8,741,776
LC opened and material is awaited	10	3, 8, 11,12,18,22,23,29,30,31	\$3,626,325
PO issued and LC is awaited			
Performance Bond received and PO is awaited	-	-	-
LOI Issued and Performance Bond is awaited	2	2, 26-	\$251,340
Tender/Re-Tender opened and in process	9	5, 13,14,15,16, 24,25,27,34	\$2,945,755
Tender/Re-Tender Awaited	1	33	\$213,000
Total PIL Line Items	34		\$15,778,195

LC opened for PIL Item # 8, 18, 23, 30, 31 but their specifications are not as per PIL therefore claim will be processed on procurement of remaining items or amendment in the PIL specification is required for disbursement

## Annex V: Status of JTPS Activity Agreement

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		\$1,672,050	LC established on 18.10.2012. Partial material received at site. . Claim for 100% Payment reimbursed.
2	1	Replacement of Final Super Heater Coils.	\$958,500		\$958,500	Material received on 16/12/12. Claim for 100% Payment reimbursed.
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. . Claim for 100% Payment reimbursed.
4	1	Complete Rehabilitation of Cooling Towers.	\$500,000	\$450,000	\$50,000	Material received at Jamshoro. Installation completed. . Claim for 100% Payment 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. . Claim for 100% Payment reimbursed.
6	1	Hiring of services for major overhauling.	\$810,000			Tender is re-called fourth time but the required technical expertise not offered. Now OEM M/s Fuji are contacted.
7	1	Soot Blower Spare Parts.	\$117,150		\$117,150	LC opened on 28.12.2011. . Claim for 100% Payment reimbursed.
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% Claim reimbursed
9	1	Spares for Oil & HSD Burners & Igniters.	\$213,000		\$213,000	LC Established on 28.12.2011 and material received at site. . Claim for 100% Payment reimbursed.
10	1	Air Pre-heater Elements & Seal,	\$670,000	\$670,000		Material Installed at site amount reimbursed. 100% Claim reimbursed.
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 finance division vetted it and PO is expected to be issued in April.
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	LC Established on 30.09.2011. The material reached at site on 07.08.2012. New H.P heaters on unit 2 & 3 are completed and now new instrumentation & control is in progress. 100% Claim reimbursed

13	2-4	Complete Rehabilitation of Cooling Towers.	\$718,875		LC established on 27.06.2012, but some items were not procured. JPCL will procure the remaining items and then the claim will be lodged.
14	2-4	Complete Rehabilitation of drain valves.	\$351,450		LC Established on 28.12.2011 but some items were not procured. JPCL will procure the remaining items and then the claim will be lodged.
15	2-4	Rehabilitation of soot blowing system.	\$702,900	\$702,900	Foreign Exchange Allocation received on 31.07.2012. LC established on 17.09.2012. Claim for 100% Payment reimbursed.
16	2-4	Supply, installation and commissioning of complete economizers of three units	\$3,195,000	\$3,195,000	LC has been established on 28.06.2012. First shipment consist of two economizers is received on 23.10.2012, installation on unit 2&3 is in progress. Claim for 100% Payment reimbursed
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 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 d. Replacement of Turbine Vibration system with Vibro-Control-4000 Schenk or equivalent	\$1,171,500		Tender is re-invited third time.
18	2	Procurement of Boiler Feed Pump Motor Complete.	\$117,150	\$117,150	LC was opened on 28.12.2011 and the equipment reached site and is installed. Claim for 100% Payment reimbursed
19	3	Replacement of Final Super Heater Coils.	\$958,500	\$958,500	Foreign Exchange Allocation received on 31.07.2012. LC established on 11.09.2012. Claim for 100% Payment reimbursed.

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. Claim for 100% Payment reimbursed.
21	3	Spares for Overhauling of Turbine.	\$532,500		\$532,500	Consignment reached Jamshoro. . Claim for 100% Payment reimbursed.
22	4	I.D Fan Impellers.	\$479,250		\$479,250	Material has been received at site. One set of ID fan impeller has been installed on Unit# 4.. Claim for 100% Payment reimbursed.
23	1-4	Off-line Efficiency Monitoring system and training.	\$426,000			Tender opened on 29.05.2012. The finance division vetted it and PO is expected to be issued in April.
Total			\$19,329,150	\$2,545,000	\$12,347,825	

Claims Processed and Submitted to USAID = \$14,892,825

Summary of Status of Jamshoro TPS as of March 31, 2013

Description	Number	PIL Item #	Amount
Material Received at Site	18	1,2,3,4,5,7,8,9,10,12,13,14,16, 18,19,20,21,22	\$15,260,250
LC opened and material is awaited	1	15	\$702,900
PO issued and LC is awaited	-	-	-
Performance Bond received and PO is awaited	-	-	-
LOI Issued and Performance Bond is awaited	-	-	-
Tender/Re-Tender opened and in process	4	6,11,17,23	\$3,366,000
Tender/Re-Tender Awaited	-	-	-
<b>Total PIL Line Items</b>	<b>23</b>		<b>\$19,329,150</b>

## Annex VI: Status of GTPS Activity Agreement

LINE ITEM #	WORK ITEM DESCRIPTION	AGREEMENT AMOUNT	CLAIMS SUBMITTED	PRESENT STATUS
1.	Purchasing the supply of Spares / Equipment for reliability assurance (up-rating and upgrading) including MK Vle Control System for GT-7&8 and ST-05	\$8,889,555	\$8,889,555	LC opened on 28.09.2012. Claim for 100% Payment reimbursed by USAID.
2.	Replacement of existing DCS with new Mk Vle Single Platform DCS for ST-5, GTs 7 & 8	\$692,250	\$692,250	LC opened on 28.09.2012. Claim for 100% Payment reimbursed by USAID.
3.	Purchasing the Supply of 1 & 2 stage buckets and nozzles for GT-7&8	\$3,621,000	\$3,621,000	LC opened on 28.09.2012. Claim for 100% Payment reimbursed by USAID.
4.	Rehabilitation of HRSGs, Replacement of Modified Bypass Dampers, all existing expansion joints of HRSGs and Replacement of Economizer tubes and bends of HRSG for GTs 7 & 8	\$1,571,940		Two PO have been placed and one tender is recalled
5.	Rehabilitation / Replacement of Evaporative Coolers and Cooling Media of GT-7&8	\$213,000		One tender under evaluation and other is recalled due to no bid participation
6.	Inspection, testing and repair of Generators of GT-7, GT-8, ST-5 along with supply of essential spares and testing kits	\$2,212,005	\$2,212,005	LC opened on 28.09.2012. Claim for 100% Payment reimbursed by USAID.
7.	Purchasing of Control Cables, Monitoring Instruments, Motorized and pneumatic Actuators and Turbine Supervisory Instruments / Equipment for ST-5	\$97,980	\$97,980	LC opened on 28.09.2012. Claim for 100% Payment reimbursed by USAID.
8.	Application of Service Charges for complete up-rate and upgrade package of GTs and replacement of controls etc. for block consisting of GT-7&8 and ST-5 on turnkey basis	\$1,826,000		Service order opened and LC will be opened soon.
Total		\$19,123,730	\$15,512,790	

Summary of Status of Guddu TPS as of March 31, 2013

Description	Number	PIL Item #	Amount
Material Received at Site	-	-	-
LC opened and material is awaited	5	1,2,3,6,7	\$15,512,790
PO issued and LC is awaited	1	8	\$1,826,000
Performance Bond received and PO is awaited	-	-	-
LOI Issued and Performance Bond is awaited	-	-	-
Tender/Re-Tender opened and in process	2	4,5	\$1,784,940
Tender/Re-Tender Awaited	-	-	-
<b>Total PIL Line Items</b>	<b>8</b>		<b>\$19,123,730</b>

USAID ENERGY POLICY PROGRAM

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