

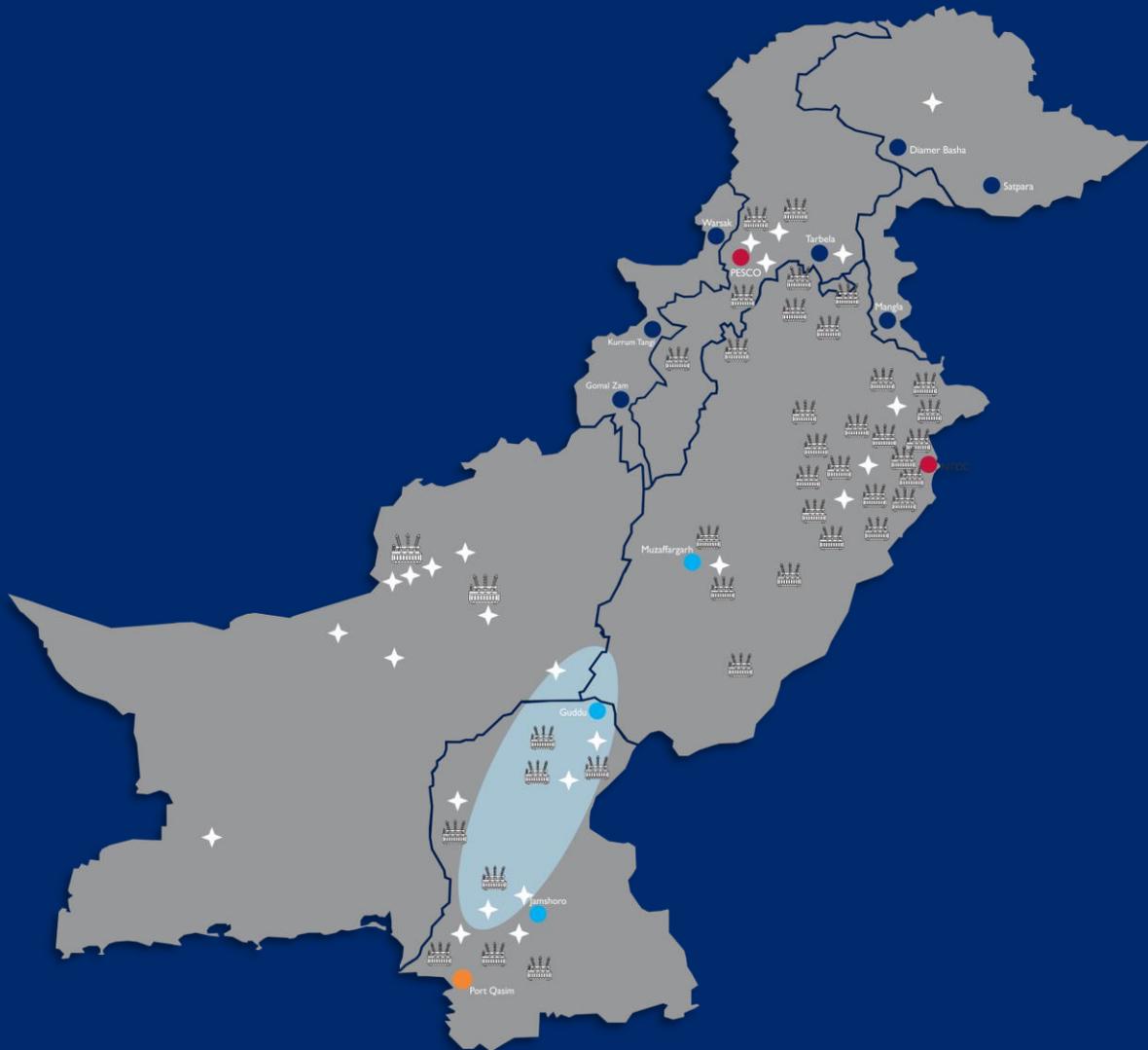


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ENERGY POLICY PROGRAM ANNUAL REPORT

(OCTOBER 1, 2012 – DECEMBER 31, 2013)



FEBRUARY 2014

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ENERGY POLICY PROGRAM ANNUAL REPORT (OCTOBER 1, 2012 – DECEMBER 31, 2013)

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Cover Photo: Current locations of USAID supported EPP activities.

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ACRONYMS

AEAI	Advanced Engineering Associates International
CAR	Central Asian Republic
CEO	Chief Executive Officer
CFW	Corporate Finance Wing
CPGCL	Central Power Generation Company Ltd
DISCO	Distribution Company
ECC	Economic Coordination Committee
EPP	Energy Policy Program
FARA	Fixed Amount Reimbursable Agreement
FATA	Federally Administered Tribal Areas
FESCO	Faisalabad Electric Supply Company
FS	FATA Secretariat
FWO	Frontier Works Organization
FY	Fiscal year
GENCO	Generation Company
GEPSCO	Gujranwala Electric Supply Company
GHCL	GENCO Holding Company Limited
GOP	Government of Pakistan
GTPS	Guddu Thermal Power Station
GZDP	Gomal Zam Dam Project
HEC	Heavy Electric Complex
JTPS	Jamshoro Thermal Power Station
KPK	Khyber Pakhtunkhwa
KV	Kilovolts, 1000 volts, unit of electric potential (voltage)
LC	Letter of Credit
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
MPD	Ministry of Planning and Development
MW	Megawatt, unit of electrical power, 1 million watts,
MWP	Ministry of Water and Power
NEPRA	National Electric Power Regulatory Authority
NPCC	National Power Control Center
NTDC	National Transmission and Despatch Company
O & M	Operations & Maintenance
OGRA	Oil and Gas Regulatory Authority
PC	Planning Commission
PDP	Power Distribution Program
PESCO	Peshawar Electricity Supply Company
PIL	Project Implementation Letter
PO	Purchase Order
PWF	Pakistan WAPDA Foundation
PTF	Power Transformers
PSRP	Power Sector Reform Program
QIP	Quick Impact Project
RFP	Request for Proposal
RPC	Reactive Power Compensation
SCADA	Supervisory Control and Data Acquisition
TPS	Thermal Power Station
TOR	Terms of Reference
USAID	United States Agency for International Development
USD	United States Dollar, \$
WAPDA	Water and Power Development Authority

EXECUTIVE SUMMARY

This Annual Report covers the period from October 1, 2012 to December 31, 2013 for the Energy Policy Program (EPP). The report covers the FY2013 and first quarter of the FY2014 because the significant contract modification which added New Activities (Transmission, Natural Gas, Good Governance, etc.) started in December 2012. See definitization policy explained in the contract amendment/modification number 02. From December 2013 forward, the EPP will report using the common fiscal year reporting structure. Since December 2012, the EPP has grown dramatically in MW gains, transmission support, policy influence, as well as staff.

EPP Activity	October 2012	December 2013
Support to GENCOs and Hydels	439 MW added/restored between 6 signature energy projects	<ul style="list-style-type: none"> • 961 MW added/restored between 6 signature energy projects • Heat rate testing initiated
Policy Reform and Governance	NTDC and GENCO Business Plans developed	<ul style="list-style-type: none"> • Seconded 12 EPP Long-term Advisors to MWP, NTDC, MPNR, MOF, PC, NPCC, and GHCL • 2013 National Power Policy • Circular Debt Report
Due Diligence	Continued due diligence for rehabilitations of Mangla and Kurram Tangi	Completed Mangla due diligence which will lead to \$150 million in G2G funding. Continuing Kurram Tangi due diligence.
Transmission Support	Transmission Activities initiated in December 2012	Enhanced power evacuation by 48MW through rehabilitation of capacitor banks and repaired a damaged transformer at PESCO
Natural Gas	Attempts to push LNG policy stalled	“Fast track” LNG terminal procurement process at advanced stage with terminal construction to be done for first gas delivery in November 2014
Procurement	approx. \$2 million	approx. \$12 million
Capacity Building	Operations and Maintenance training delivered	<ul style="list-style-type: none"> • Ministry buy-in for Power SIM training across energy sector • Completed 4 of the 9 DISCO Live Line Maintenance training programs • 130 interns graduated from the Energy Sector Internship Program – 25% of graduates have received full time employment opportunities
EPP Staffing	48 full time staff 7 expats: 41 local	90 full time staff 8 expats: 82 local

The Energy Policy Program (EPP) continued to focus on strengthening Pakistan's power generation and transmission systems while promoting relevant policy reform. During FY13, the EPP added 522 MW through generation and transmission, assisted in the development of the new GOP National Power Policy, provided inputs on 2013 draft Electricity Act, and added a LNG, shale gas, upstream oil, and gas support to the larger program. The EPP supported the monitoring and implementation of G2G projects while working in close collaboration with GOP counterparts, and continued with due diligence for potential energy projects. Highlights of the reporting period include:

- Optimized G2G procedures that facilitated GOP procurements resulting in additional 474 MW of energy, enough energy to supply 7.5 million people.
- Certified G2G invoices for \$39.5 million that raised GOP disbursements to \$132 million.
- Supported completion of two multipurpose hydropower dam projects, Gomal Zam and Satpara dams, through EPP monitoring and implementation.
- Improved transmission system at Peshawar Electric Supply Company (PESCO) through installation of equipment saving 48 MW, enough energy to supply to about 750,000 people.

- Supported implementation of a telemetering system at PESCO for improving load management that in turn will help in reducing unscheduled load-shedding.
- Due-diligence of Mangla Rehabilitation project through EPP resulted in USAID sign off in August 2013 for Mangla Dam rehabilitation project with \$150 million investment which on completion will add another 70 MW to the national grid.
- Supported development of an interactive, computer-based Power Sector Integrated Model (PSIM), an analytical tool for showing the various financial impacts of policy reforms and efficiency enhancements in the power sector.
- Advised on and developed the GOP National Power Policy, and completed economic and technical studies (impacts of circular debt; GENCO fuel oil management; reactive power compensation study) with appointment of long-term advisors at the Ministry of Water and Power (MWP), Ministry of Petroleum and Natural Gas (MPNR), Ministry of Finance (MOF), the Planning Commission, and the National Power Control Center (NPCC).
- One of the key achievements of EPP was to assist the GOP in preparation of tenders for Liquefied Natural Gas (LNG) imports. EPP is also supporting GOP on shale gas exploration and formulation of upstream oil and gas policy.
- EPP supported the GENCOs in conducting heat rate testing and meters' calibration in order for them to acquire revised tariff through NEPRA and improve their financial performance.
- Under the capacity building activities, EPP supported live-line training of 16 linemen from PESCO. In addition, EPP successfully completed on-the-job training of 71 graduates in the energy sector through the internship program, out of which 25% have already secured jobs.

Through EPP, the generation team continued to provide monitoring and implementation support for the completion of rehabilitation and construction works at the thermal GENCOs and WAPDA hydel projects. The team carried out routine inspections visits at the power plants to ensure the quality of work, and certified \$39.5 million GOP invoices on verifying completion of milestones.

EPP team continued to advise USAID regarding potential energy projects in Pakistan. EPP efforts on due diligence of potential new projects led to G2G funding of \$150 million for Mangla rehabilitation project. Initial assessment was carried out for four run-of-river projects, and four transmission projects with solar, hydel and wind potential. EPP's earlier efforts on due-diligence of Diamer Basha dam resulted in award of study contract to a local firm. To date, the **EPP due diligence work has led to approximately \$348 million in G2G funding** for energy projects.

During the reporting period, the EPP increased transmission related activities focusing on support to the turn-around DISCO, PESCO, and support to the National Transmission and Despatch Company (NTDC). The EPP Transmission team installed 124 meters and 56 data collection units at different locations throughout PESCOs network and prepared a report on the collapsed and vulnerable tower locations in the PESCO network. This effort will improve load management at PESCO that in turn will help in reducing unscheduled load-shedding.

To support NTDC, the EPP administered the Live-Line training for GEPCO, FESCO, HESCO and PESCO through an on-the-job training series focused on building labor and safety skills. Additionally, the EPP supported NTDC through technical audits, the transformer program, telemetering, continuous capacity building and the removal of bottlenecks. EPP's transmission work estimates improvements of 400 MW and to date added 48 MW to the energy sector through an integration approach. In addition, support to NTDC was initiated with activities including grid station audits, advising support to NPCC, and metering at common delivery points.

The EPP continued to lend advisory support the GOP key energy sector ministries through policy advisory and technical expertise at a senior- level developing best practices. In 2013, the EPP assisted in the formal bidding process for the building of the LNG terminal and developed the governance framework and supply chain for LNG imports that could result in the country's import of LNG for the first time. Additionally, the EPP developed and trained staff from MWP on the PSIM model that will support in analysis of financial impacts of policy reforms and efficiency enhancements in the power sector. The EPP policy team also worked with the USAID Power Distribution Program (PDP)

to finalize the Circular Debt Report for USAID which was adopted by the Planning Commission (PC). The advisors were supported by short term expats who completed sectorial critical support. The EPP continued to second staff to all key ministries and produce working papers, policy briefs, and comments throughout FY2013.

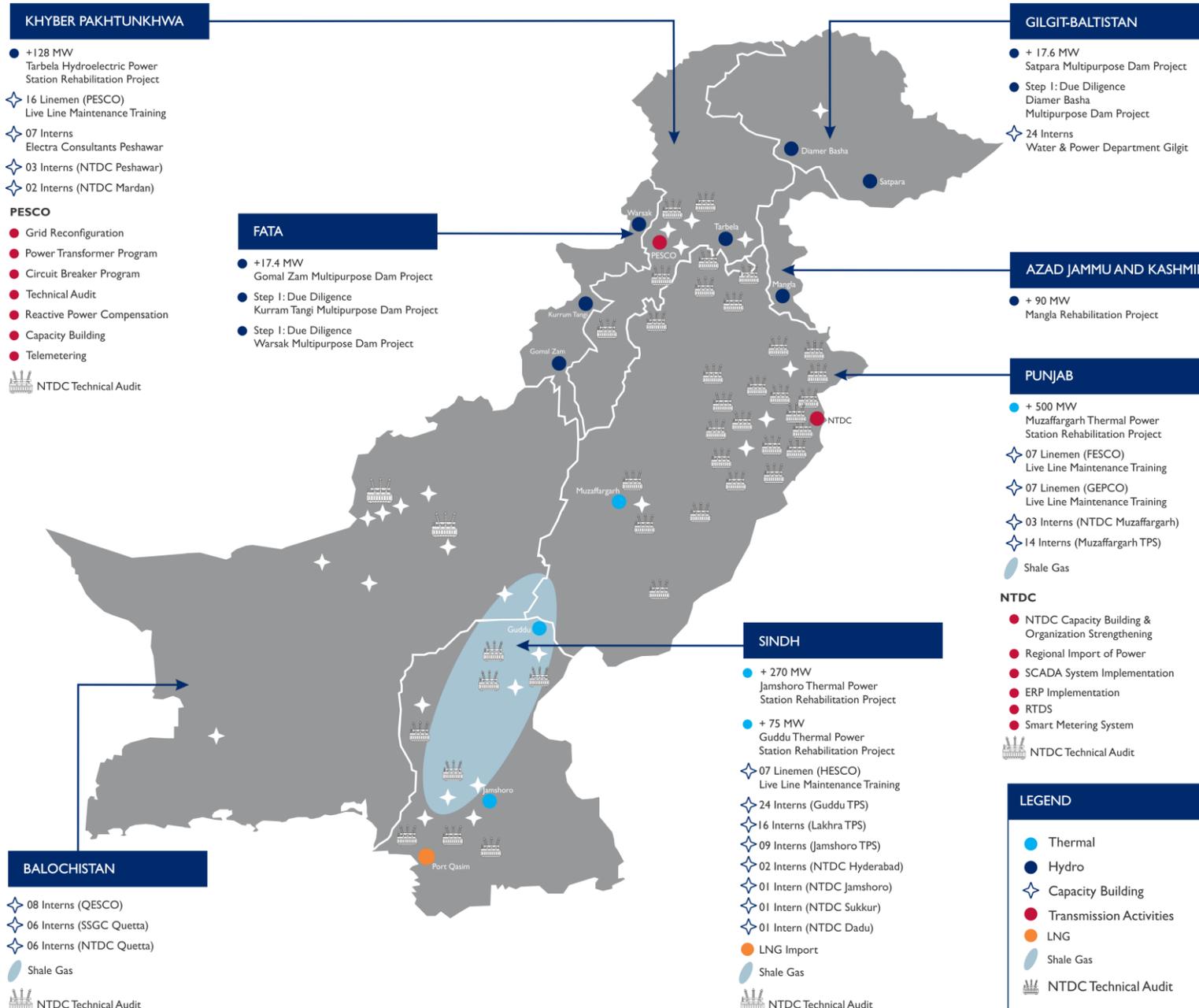
The EPP offices expanded their local presence with an increase from two establishments to a total of six, including the Islamabad office and 2 guesthouses, Peshawar office and guesthouse, and office in Lahore during FY2014. Overall the EPP staff grew significantly (48 to 90 during the reporting period). Additionally, the EPP improved its gender ratio hiring 9 females to work throughout the various projects in the program and continues to increase staff based on project needs.

Major challenges included procurement delays, expat visa delays, and challenges with the change in GOP administration affecting timelines and priorities. Across all activities, the **EPP has procured approximately \$12 million** in equipment for generation and transmission facilities as well as services, with a dramatic increase in activity during the second quarter of the FY2013. Even with procurement delays during the early part of the reporting period, EPP was able to increase procurement by the end of the reporting period, Visas for expatriates were delayed in July 2013 which affected the recruitment of incoming staff as well as the travel opportunities of already committed expatriate staff outside of the country as only single entry, month long visas were issued. By the end of FY2013, the EPP successfully achieved nine indicators, exceeded in 6, of the 15 monitoring and evaluation indicators from the Development Results Framework and is on target to complete all Life of Program targets by FY2015.

The EPP will be focusing on the following activities after December 31, 2013:

Planned Activities	
Component I	
<ul style="list-style-type: none"> • Extending activity agreements for Jamshoro, Tarbela, Guddu, and Muzaffargarh to complete G2G work • Obtain the project implementation letter for Mangla Dam and commence work • Completion of heat rate testing for remaining thermal power plants 	
Component II	
<ul style="list-style-type: none"> • Continue to provide support for the implementation of the August 2013 National Power Policy • Roll out the Power System Integrated Model (PSIM) to relevant partner organizations. This will include training activities to ensure implementation and long term sustainability of the model. 	
Component III	
<ul style="list-style-type: none"> • Perform Step II due diligence for Transmission activities as a precursor to possible Transmission G2G funding 	
Component IV	
<ul style="list-style-type: none"> • Completion of technical audits, procurements, and installations for PESCO • Completion of procurements for NTDC including the Enterprise Resource Planning (ERP), Real Time Digital Simulator (RTDC), and design center development • Perform the shale gas resource and technical assessment • Support the implementation of the 2012 E&P policy • Facilitate and support the “Fast Track” LNG import model 	
Cross – Cutting Activities	
<ul style="list-style-type: none"> • Continue best practices implementation of procurements to support all components • Communications will host events and provide outreach assistance for all components • Planned capacity building interventions will ensure sustainability of EPP implementation activities 	

EPP - Where We Work



BACKGROUND

The EPP is a multi-year 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 USG and the GOP. The EPP is currently in the Integration Phase which continues the due diligence and G2G program focus while emphasizing an integration of technical upgrades with policy report implementation and introduces transmission activities.

The EPP is designed to address Pakistan's chronic and severe electricity shortage, which has created a political and social crisis and threatened overall economic stability. Energy supply continues to lag behind energy demand, resulting in a significant portion of the population being deprived of electricity service. This limited access to electricity, combined with widespread shortages, has contributed to high poverty levels, and constrained economic growth and employment.

Figure I: EPP Phases



EPP was designed to achieve these goals through a program of interrelated activities and interventions built around four major components:

Component I - Monitoring and Support of Project Implementation: EPP is providing monitoring and implementation support for six signature energy projects: four repair and maintenance projects (3 GENCOs and Tarbela) and two multipurpose dam completion projects (Gomal Zam and Satpara)

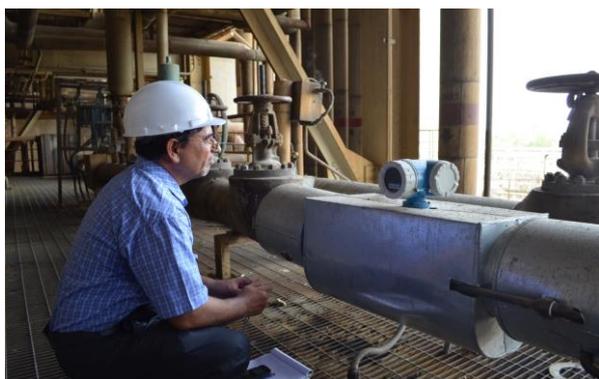
Component II – Advice and Support of Energy Sector Policy Reform: the EPP supports policy reform and governance activities by USAID with the support of the Implementing Partners.

Component III – New Projects, Planning and Development: EPP conducts and prepares due diligence reports on new projects under consideration 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 – New Activities: EPP focuses on strengthening Pakistan's transmission network. This is achieved by delivering targeted capacity building that will result in institutional strengthening of power sector entities involved in transmission, namely, the NTDC and DISCOs.

COMPONENT I: MONITORING AND SUPPORT OF PROJECT IMPLEMENTATION

The EPP continued to provide advice and support to USAID and GOP counterparts for the monitoring and implementation of the six G2G projects. This included monitoring and support of timely counterpart compliance with the terms and conditions of agreements, and inspection and certification of deliverables.



Heat Rate tests taking place at Jamshoro TPS

Two of the six signature power generation projects were completed in FY2013. Additionally, heat rate tests and meter calibrations started for the three designated GENCOs (Jamshoro, Muzaffargarh, and Guddu) with completion of all tests anticipated for early FY2014. The heat rate tests and meter calibrations are critical to filing a new tariff petition with NEPRA to more accurately reflect the cost of generating electricity and resolve the current gap.

USG funding projects totals \$141.7 million (per revised agreements) and the estimated gains in generation were 863MW. As of September 30,

2013, the total amount disbursed to the GOP implementing partners was \$132.1 million, or 93% of total funding, with 913MW achieved with 474MW achieved in generation for FY2013. Results achieved through the G2G projects are illustrated in table below:

Table I: Summary of G2G Projects for Hydro and Thermal Power Plants

Projects	USG Funding (Millions)	Paid (Millions)	Completion Date	MW Gains/Benefits		
				Target	FY2013	Achieved to Date
Tarbela	\$16.50	\$13.95	12/31/13	128 MW	11.6 MW	128 MW
Jamshoro	\$19.32	\$15.96	03/31/14	150 MW	245 MW	270 MW
Guddu	\$19.12	\$17.34	12/31/13	75 MW	0	0
Muzaffargarh	\$15.77	\$13.83	12/31/13	475 MW	200 MW	480 MW
Gomal Zam	\$45.00	\$45.00	09/30/13	17.4 MW	17.4MW	17.4 MW
Satpara	\$26.00	\$26.00	12/31/13	17.6 MW	0	17.6 MW
Total	\$141.71	\$132.08		863 MW	474 MW	913 MW

For effective monitoring and control, EPP technical experts visited the project sites on a regular basis, verified deliveries, inspected equipment and ensured environmental compliance, instituted performance tests, verified results, and advised USAID for the disbursement of funds. The Component I team performed analysis to define work packages for the project, planned schedules and milestones, and helped resolve difficulties during implementation while working closely with the GOP counterparts.

Overall, Component I's largest challenge in FY2013 was the delay of procurements as a result of the design of the G2G mechanism and Reimbursement Agreement.; however, the projects are currently on track for completion if not already completed after the G2G mechanism was aligned with GOP practices.

TARBELA HYDROPOWER PLANT REHABILITATION

The rehabilitation work to date has resulted in the restoration of a targeted 128 MW at Tarbela Hydropower plant. Replacement of generator windings at units 1, 3 and 4, and installation of spare seals, guides and pumps is complete. Procurement and installation of the remaining equipment that includes governors, SCADA system and windings will add to the sustainability and reliability of plant operations. EPP team is working closely with WAPDA to complete the remaining works within the completion date of December 2014. EPP facilitated the US Ambassador's visit to Tarbela power station in March 2013 when it was announced that 128 MW of generation capacity were added to the national grid, sufficient to supply electricity to 2 million individuals. Other achievements include the certification of \$13.95 million in invoices upon completion of major milestones (85% complete) and 20 engineers from Tarbela trained on Operations and Maintenance (O&M) practices to enhance capacity of plant engineers for ensuring sustainable operations at the power plant.

The Component I team experienced delays as a result of the extensive GOP procurement procedure and frequent changes in WAPDA staff at the power plant. Regardless, the Tarbela Plant is set for completion in December 2014.

GOMAL ZAM MULTIPURPOSE DAM PROJECT



In September 2013, the Gomal Zam Multipurpose Dam Project was completed with EPP facilitation and inaugurated by the US Ambassador. The project added 17.4 MW of generation capacity to the national grid, sufficient to supply electricity to 277,000 individuals. With the main dam completion, downstream areas of FATA are protected from floods and irrigate 191,000 acres of land. EPP certified \$45 million invoices upon completion of major milestones (100% complete).

The FATA region provided security challenges which resulted in delays. Additionally, the extensive GOP procurement procedures contributed to challenges.

SATPARA MULTIPURPOSE DAM PROJECT

The Satpara dam, power houses and irrigation canals were completed in FY2013 and the dam has added 17.6 MW to the Skardu grid and capable of storing 0.09 million acre ft. that will control flooding and irrigate 15,500 acres of land. WAPDA completed the remaining canal work all project targets have been achieved. The addition of 17.6 MW to the local Skardu grid supplies enough electricity to assist 280,000 individuals. By the end of the project, EPP certified \$26 million invoices upon completion of major milestones (100% complete).

Severe weather conditions created challenges for the project; however the deadline was met.

MUZAFFARGARH TPS REHABILITATION PROJECT

Rehabilitation work to date has resulted in the addition of 480 MW of generation capacity at Muzaffargarh TPS which exceeds the target of 475MW. The 480 MW added to the national grid is sufficient to supply electricity to 7.6 million beneficiaries. EPP has worked closely with Muzaffargarh TPS to complete the rehabilitation of major equipment, including: boiler super heater tubes, air pre-heater elements, overhauling and replacement of ID Fans and ducts, other major equipment. EPP team continues to support the GENCO in procurement process and seeks to expedite all remaining equipment. By the end of the project, EPP certified \$13.83 million invoices upon completion of major milestones (88% complete).

Frequent changes in Muzaffargarh TPS senior-management/decision-making staff and the extensive GOP procurement procedure created initial challenges; however the deadline was met.

JAMSHORO TPS REHABILITATION PROJECT

EPP worked with the GENCO to rehabilitate major engineering equipment that included economizers, air-preheaters, and control systems which resulted in 270 MW generation capacities added to the national grid thus far. The 270 MW added to the national grid will supply enough electricity to 4.3 million individuals. EPP is facilitating the GENCO to complete the remaining equipment under procurement that will further enhance the sustainability of the power plant. To date, EPP certified \$15.96 million invoices upon completion of major milestones (83% complete)

Frequent changes in Jamshoro TPS senior-management/decision-making staff and extensive GOP procurement procedure created challenges in the program to date.

GUDDU TPS REHABILITATION PROJECT

EPP facilitated negotiations between Guddu and GE to reach an Agreement and major equipment was shipped and transported to the power station. Rehabilitation is scheduled to start in February 2014, which will take three months to restore 75MW at Guddu. EPP is also facilitating inspection of the equipment along with GE and Guddu. To date, EPP certified \$17.34 million invoices upon completion of major milestones (91% complete).

Similar to other Component I projects, Guddu has experienced delays as a result of the extensive GOP procurement procedure.

MANGLA REHABILITATION PROJECT

EPP assisted USAID to develop and finalize the required 611(e) certification and responded to questions from USAID Washington D.C. regarding the proposed refurbishment and upgrade of the 1,000 MW Mangla Hydroelectric Power Station. The USAID funded a portion of the rehabilitation project will give new life to 200MW, increase generation capacity by 70MW, enable generation of additional 600 GWh, and modernize the balance of the plant to ensure increased reliability of the eventual 1,310 MW power plant. EPP will continue monitoring progress and report to USAID on the project.



EPP facilitated the signing of the Activity Agreement subsequent to the due-diligence carried out by a team of experts in August 2013. EPP also supported USAID in preparation of payment schedule and Environmental Mitigation plan for Mangla rehabilitation.

With the approval of the PC-1 on December 31, 2013, focus will shift to the disbursement of funds through a formal project implementation letter (PIL). The PIL is expected early in the second quarter of FY2014.

HEAT RATE TESTING

In the last quarter of 2013, the EPP completed one heat rate test and two meter calibrations for the three GENCOs selected. Jamshoro completed the heat rate test and meter calibration while Muzaffargarh completed only the meter calibration. Muzaffargarh procured the flow meters and the heat rate test is underway for completion in the next quarter. EPP is facilitating the GENCOs' filing of a tariff petition with NEPRA to get a revised tariff which would reflect the actual cost of energy generation and close the gap. Regarding Guddu, 50% of the units have undergone meter calibration and remaining equipment for heat rate tests and meter calibrations is being procured.

COMPONENT II: ADVICE AND SUPPORT FOR ENERGY SECTOR REFORM

The EPP completed a number of significant policy achievements during FY2013 with the use of seconded staff to the GENCO Holding Company Ltd., MWP, MOF, and Planning Commission. Activities related to policy and seconded staff within the MPNR and NPCC is detailed in Component IV under the EPP structure. Significant policy achievements in FY2013 include:

- GOP National Power Policy drafted with support of EPP and adopted by MWP in August 2013
- Completed the Power Purchase Agreements for the GENCOs and CPPA
- The “The Causes and Impacts of Power Sector Circular Debt in Pakistan” was completed in March 2013 in collaboration with PDP and was commissioned by the PC.
- EPP completed the Power Sector Integrated Model in September 2013 that provides policy advice on key decisions such as tariffs, subsidies, generation mix and distribution for the MWP and other power sector stakeholders
- Cost of Load Shedding to the Economy of Pakistan (May 2013)
- The “Improving Fuel Oil Management at GENCOs I, II, and III” was submitted in December 2012 and offered short and long term recommendations that will lead to more efficient thermal power generation and provide affordable electricity

EPP hired many staff in FY2013 to increase a presence in the ministries. A list of seconded staff during the reporting period below:

Table 2: EPP Seconded Staff

Agency	Title	EPP Staff	Role
MWP	Director - Policy Reform	Richard P. Smith	Provides strategic advice on range of issues including power sector reforms, restructuring, governance, national power planning, and leadership development
NTDC, MWP	Financial Analyst	Aman Ullah Manngrio	Revision of NTDC business plan and reporting for critical decision making purposes
MWP	Policy Advisor	Faraz S. Khan	Detailed financial modeling, financial advice on matters related to power sector
MWP	Policy Advisor	Aisha Fariel Salahuddin	Detailed financial modeling, financial advice on matters related to power sector
MWP, MPNR, MOF, PSEs	Senior Legal Advisor - Policy Reform	David Lockart	Mounting circular debt, policies to increase supply of affordable electricity, inefficient power sector operation and excessive sector energy losses, poor governance and management of PSEs
Planning Commission	IT Specialist	Imran Haider Janjua	Support services to the Member energy and Energy Wing of the Ministry of Planning and Development
MPNR	Senior Advisor	Akbar Yusuf	Implementer of EPP oil and gas work, specifically in LNG, shale gas, and upstream
MPNR	Energy Policy and Program Specialist	Munir Ahmad	Coordinates with the Senior Advisor regarding the development and implementation of EPP'S Petroleum Sector Programs: LNG Import, Shale Gas Resource and Technology Assessment, and upstream Exploration and Production Sector.

Agency	Title	EPP Staff	Role
PESCO	Advisor	Kevin Thomas	Ensure the quality of performance of each assignment related to the scope of work pertaining to EPP's Turnaround DISCO, and Live-Line Training for 9 DISCOs activities.
MOF	Financial Advisor	Muhammad Razi Abbas	Ensure quality control on advisory services, develop and implement a database for PSEs, analyze financial and other aspects of PSEs.
NPCC	Advisor	Saluhddin Rifai and Kevin Thomas	Provides technical assistance for load management by promoting the development of efficient power system operation and dispatch improvement
GHCL	Power Plant Performance Expert	Asadullah Khan	Risk-based inspection and maintenance
MWP MPNR GENCOs	Policy Analyst	Lauren Wygonski	Capacity building and advisory support to key ministries. Respond to support requests from officials of the GOP ministries

SUPPORT TO THE GENCO HOLDING COMPANY LTD.

In December 2012, the EPP completed the *“Improved Fuel Oil Management at GENCOs I, II, and III”* which provided a template for management of residual fuel oil and provided short-term and long-term recommendations for improving current management practices.

In addition to the fuel oil management report, the EPP developed the business plans for GENCOs I, II, III; however, implementation of the business plans by the GENCOs has yet to take place due to administrative changes and developing a buy-in to plan implementation methodology. In January 2013, the CEO of the GENCO Holding Company (GHC) sent a formal letter to EPP requesting continued support at an advisory level for commercial assistance, technical assistance, and implementation of the business plans which EPP anticipates in FY2014.

SUPPORT TO THE MINISTRY OF WATER AND POWER

EPP has worked closely with MWP in providing sector support over the past fiscal year. The last fiscal year saw the change of political leadership, which led to various changes in the power sector. The current political regime has been focused on reducing circular debt, improving line losses and creating better financial sustainability for the sector. The EPP team has worked on producing reports and presentations analyzing key parameters of power sector performance in the past year as well as developing financial modeling, reports and policy papers. The EPP team has worked closely with the development of the GOP Energy Policy 2013 with senior management at MWP. The EPP team has also provided periodic performance monitoring and future projections based on past data. Major areas of work include generation, tariff, performance indicators, and energy policy review.

One of the biggest challenges in MWP is the turnover of senior staff in the GOP. This constant change leads to poorly developed or delayed policy formation. Continuing to build relationships in an ever changing environment with MWP management remains a key challenge ahead. The EPP shifted priorities with the MWP, therefore, energy efficiency has not been a high priority item for MWP during FY2013 and the development of the National Energy Conservation Center (ENERCON) still has not occurred. EPP anticipates that renewable and conservation energy policy work will depend on the passing of the Energy Conservation Bill 2013 which will determine the future course of action for ENERCON. Analysis of major EPP contributions to the MWP and their outcomes in FY2013 are detailed below:

Table 3: Ministry of Water and Power Deliverables and Outcomes

Deliverable	Outcome
<p>Energy Development Fund EPP collaborated with the Private Power Infrastructure Board for design of an Energy Development Fund</p>	To be adopted
<p>Reactivation of CPPA EPP supported the MWP in the improvement of the financial management of CPPA and assisted in the identification of key personnel to be transferred from Lahore to Islamabad for the operationalization of CPPA. The EPP developed a model to establish daily payment mechanism.</p>	To be implemented
<p>Generation and Distribution Analysis EPP carried out an analysis of generation, transmission and financial impacts for the years 2010-2012 for the Secretary of MWP</p>	EPP produced analysis reports to find trends and performance highlights.
<p>GENCO's Fuel Oil Management Report Developed a fuel oil management report for the GENCO I, II, and III for short-term and long-term recommendations to improve fuel resource management for the GENCOs.</p>	Presented to MWP with recommendations for performance improvement in December 2012. Key recommendations adopted in 2013 in National Power Policy.
<p>Power Sector Integrated Model The PSIM model provides policy advice on key decisions such as tariffs, subsidies, generation mix and distribution for the MWP and other power sector stakeholders. While the MWP agrees that the model will be beneficial, there have been various challenges in retrieving 2013 data from the MWP to update the model and improve its accuracy. MWP has agreed to provide this data after signing an NDA. Processing the NDA and getting access to the data in a timely manner will be a challenge ahead.</p>	PSIM model completed and implementation stage is currently being undertaken with planned trainings in FY2014 for MWP and stakeholder staff. After a NDA is signed with MWP, then EPP will commence a training series.
<p>Smart Meter Financial Model Developed financial model to calculate the long-term benefits resulting from introduction of smart meters. Model included information on industrial and domestic consumers and detailed discounted cash flow analysis. The model was shared with the MWP Secretary.</p>	MWP Secretary brought all common delivery points onto Smart Metering with USAID involvement in identifying 16 IPPs.
<p>Small Hydro Developed project brief regarding Public Private Partnership in Small Hydro projects encompassing the present scenario in Hydel generation and costs for generation and existing PPPs in hydro generation</p>	The report was sent to the MPW after completion.
<p>Pakistan Power Sector Rehabilitation Project The EPP supported the MWP in performing analysis to determine which reform processes to undertake in the development on an Action Plan. The team has worked closely with the Advisor to the PM on Energy and the senior management at the Ministry in developing an Action Plan to support the reform process. A significant challenge will be to monitor the implementation aspect of the Action Plan. The PSIM will also be extremely useful in future action plans and in determining the benefits of certain policy interventions.</p>	The PSRP Action Plan and Communications Strategy were put on hold after the GOP and EPP re-directed its focus to the GOP National Power Policy, released in August 2013. EPP assisted in the drafting of the National Power Policy and continues to comment and develop the policy with the MWP.
<p>WAPDA Bundling EPP conducted an analysis of the pros and cons of the restructuring of the power sector, namely WAPDA. EPP noted that when compared to most other countries, Pakistan was in the intermediate stages of power sector report and explained that Pakistan's power structure would be under the multi-buyer model. After the restructuring in March 2013, EPP was requested to conduct an analysis on the pros and cons of this new methodology.</p>	In March 2013, the MWP issued orders for restructuring the power sector by bringing all power sector entities under 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.
<p>Gap Analysis EPP reviewed policies and regulations in the Power Sector and undertook a GAP analysis</p>	Summaries of the reviewed policies were drafted and shared with the Joint Secretary

SUPPORT TO MINISTRY OF FINANCE

The EPP Senior Energy Advisor worked the MOF to prepare significant deliverables in the Circular Debt Report and Hydro Power Development Fund report. Deliverable and outcome details are listed below:

Table 4: Ministry of Finance Deliverables and Outcomes

Deliverable	Outcome
<p>Circular Debt Report The EPP advisors collaborated with the MWP/CPA, Economic Reforms Unit (ERU) and Corporate Finance Wing (CFW) of MOF to determine the power sector share of the circular debt as of May 31, 2013; estimated to be Rs.503.025 billion.</p>	The debt stock was cleared by MOF in two phases, first in June, 2013 and the second in July 2013. This helped to add around 1500 MW to Power System.
<p>Hydro Power Development Fund EPP submitted a paper regarding the financing proposals and management structure for the fund as well as a financial model to depict structuring of the fund and estimated cost.</p>	Circulated by MWP with request to related stakeholders for comments in January 2013.
<p>Marginal/Stranded Gas Field Preparation of their comments on a summary for the ECC submitted by MPNR regarding Marginal/ Stranded Gas Field – Gas Pricing Criteria and Guidelines 2013.</p>	The guidelines were approved by the ECC.
<p>Nandipur Project Financing Examination and assistance provided to MOF regarding the draft summary for financing arrangement of Nandipur Project. The summary was approved by the ECC and financing arrangement amounting to Rs. 23 billion through local banks has been finalized.</p>	Work has restarted.
<p>ENGRO Fertilizer Plant Preparation of comments on a summary for the ECC submitted by MPNR regarding diversion of gas from fertilizer plant of ENGRO to new fertilizer plant</p>	The proposal is now being reviewed by a committee constituted by the ECC.
<p>Pakistan Power Park at Gadani EPP prepared comments on the ECC summary submitted by MWP for Pakistan Power Park at Gadani, a potential 6,600 MW project.</p>	Proposal was approved by ECC.
<p>Economic Development Plan Preparation of input for the Fiscal Consolidation and Economic Development Plan</p>	Still drafting at MOF level.
<p>PPMCL Preparation of comments on Draft Memorandum of Association and Article of Association of Pakistan Power Mark management Company Ltd. (PPMCL)</p>	Company established by MWP has now been incorporated with the approval of Security Exchange Commission of Pakistan
<p>Rationalization of Power Tariff Preparation of views and comments on summary for the ECC submitted by MWP for Rationalization of Power Tariff</p>	
<p>TAPI Project Preparation of views and comments on summary for ECC submitted by MPNR regarding Transaction Advisory Services Agreement (TASA) of Turkmenistan-Afghanistan-Pakistan-India Pipeline (TAPI) Project</p>	The TASA has been approved by the ECC.

SUPPORT TO PLANNING COMMISSION

EPP assistance to the Planning Commission in FY2013 consisted of drafting working papers and studies as well as lending IT support to the Member Energy's office which included routine updating of software and troubleshooting. The EPP completed the following deliverables with the Planning Commission:

Table 5: Planning Commission Deliverables and Outcomes

Deliverable	Outcome
Pakistan Power Park at Gadani: EPP staff prepared draft working papers regarding the 6,600 MW power park in Gadani, Baluchistan for the PC	A company M/s Pakistan Power Park Management Company Ltd. (PPMCL) has been established. PC-1 approved of Rs. 100 million from Finance Division as seed money for PPMCL to operate. Case is with PPIB to establish 2 companies to operate, 2 public sector plants out of total of 10 plants at the power park, rest of the 8 plants will be operated in private sector.
Draft Working Paper for 35 MW Nagdar Hydro Power Project	The project has been approved from CDWP and is under process for approval from Executive Committee of National Economic Council (ECNEC). It will be put up for approval in next ECNEC meeting.
Draft Working Paper for 40 MW Dowarian Hydro Power Project	The project has been approved from CDWP and is under process for approval from Executive Committee of National Economic Council (ECNEC). It will be put up for approval in next ECNEC meeting.
Draft Working Paper for Private Power and Infrastructure Board (PPIB)	Working paper was prepared on the agenda items for the 90 th Board Meeting of the PPIB. Working paper was circulated among board members for consideration in the meeting.
Developed comments on the Planning Commissions summary to ECC on LPG Production and Distribution Policy 2012.	MPNR accommodated Planning Commission's comments in the LPG Policy and forwarded the same to ECC for approval. The Economic Coordination Committee (ECC) of the Cabinet approved the LPG (Production and Distribution) Policy 2012 in its meeting held in January 2013.
Gas Allocation form New Sources	Planning Commission supported the proposal made by Ministry of Petroleum and Natural Resources (MPNR) in this summary. MPNR forwarded the summary for approval from Economic Coordination Committee (ECC) of the Cabinet.
Acquisition and Rehabilitation of DHA Cogen Ltd.	The case is with NEPRA for tariff notification of the DHA Cogen Plant. Case hearing was on November 8th, 2013 but DHA Cogen requested to postpone the date and it is still pending.
Incentives for Re-location of Oil Refineries	Planning Commission communicated its comments in negative to MPNR, for the request made by an Oil Refinery for financial incentive.
Economic Development, PSDP, and Project Monitoring and Evaluation achievement of Present Government	The report on achievements of the government was prepared for then Deputy Chairman, Planning Commission Dr. Nadeem Ul Haque and was given to him to be shared with Prime Minister, before end of the previous government.
LNG Coordination with QED Gas Market Reports	Planning Commission supported Import of LNG. MPNR is in negotiation process for import of LNG into the country and establishment of LNG terminal for the same.
Restructuring Plan of the Energy Wing of the Planning Commission	Restructuring plan of Energy Wing of Planning Commission has not yet been implemented; the case is still pending with the Secretary, Ministry of Planning, Development and Reforms.

COMPONENT III: ADVICE AND ASSISTANCE IN THE SELECTION, PLANNING AND DESIGN OF NEW PROJECTS

In FY2013, the EPP continued due diligence of projects and activities that are candidates for USG support based on the frequently changing priorities and schedules of USAID/USG entities. The due diligence process ensures that the criteria under technical feasibility, cost, and overall effect elements are met.

Table 6: Due Diligence – Generation Projects

DUE DILIGENCE PROJECT	USG FUNDING	TOTAL PROJECT COST	MW POTENTIAL	TIMELINE
GENERATION				
Mangla	\$150 million	\$397 million	270 MW	5 years
Kurram Tangi	\$57 million	\$700 million	83 MW	4 years
Diamer Basha Dam		\$14 billion	4500 MW	10 years
Run-of-River: Jinnah	\$46.15 million (funding under consideration)	\$255 million	96 MW	< 1 year
Run-of-River: Khan Khwar		\$138 million	72 MW	
Run-of-River: Allai Khawar		\$190 million	121 MW	
Run-of-River: Dubair		\$290 million	130 MW	

MANGLA DAM

As a result of the EPP due diligence efforts, in August 2013, an Activity Agreement was signed between USAID and WAPDA to initiate support of the Mangla Dam rehabilitation. Therefore, the Mangla Dam project scope was moved from Component III to Component I as a Generation activity. WAPDA initiated and completed an international competition and has pre-qualified 5 firms of equipment suppliers for bidding. The bidding documents are being prepared. Additionally, EPP assisted USAID in completing an EMMP for the project. The EPP resolved the funding and timing issue with JICA by proceeding with the USAID funded portion of the project rather than wait for JICA to complete its approval formalities. The EPP anticipates that the Mangla Dam project can be completed in 4-5 years and add 70 MW to the national grid. A challenge for the Mangla Dam G2G effort is that WAPDA has to secure approval of the project PC I by ECNEC as a precondition to signing of a PIL that will commit and enable disbursement of USAID funds.

DIAMER BASHA MULTIPURPOSE DAM

EPP completed the official step – I due diligence for the Diamer Basha Multipurpose Dam in 2011. EPP continues to provide updates and requested information regarding the Diamer Basha project to USAID.

KURRAM TANGI MULTIPURPOSE DAM

EPP completed the official step – I due diligence for the Kurram Tangi Multipurpose Dam in 2011. EPP continues to provide advice on the project as USAID completes an Environmental Impact Study and the FATA Secretariat and the FWO prepare to implement the Kaitu Weir and canals portion of the larger Kurram Tangi Dam project.

RUN-OF-RIVER

During FY2013, EPP completed a quick, technical assessment of the four run-of-river projects. The projects include:

- 72MW Khan Khwar on a right bank tributary of River Indus, near Besham
- 96MW Jinnah on the River Indus in Punjab
- 121MW Alai Khwar on a left bank tributary of Indus, also near Besham
- 130MW Duber Khwar on the right bank of the Indus, about 40 km upstream of Besham

OTHER PROJECTS

HYDROPOWER

EPP provided USAID with a review of the opportunities for hydropower development in Azad Jammu and Kashmir (AJK). The AJK President had given a list of 26 small dams to US Ambassador for funding and the Secretary Electricity requested support for 4 small hydropower projects and for up gradation of a 11kV line in Muzaffarabad. EPP is also of the view that the projects proposed by AJK are primarily water storage and/or area development projects and not hydropower development investments. All 26 projects proposed by AJK would add about 140 kW at cost of approximately \$400,000/kW. The largest capacity project adds 25 kW at cost of \$3.7 million or about \$148,000/kW. The EPP could justify investment of \$3,000/kW if plant factor was close to 60%.

EPP provided a brief on the silting of the reservoir behind the Tarbela Dam. The silt deposit in the Tarbela reservoir created a '200 foot sheer face mountain' of silt about 5 miles upstream of the Dam. This 'mountain of slit' is a hazard that could 'liquefy' and flow downstream choking the power house and irrigation tunnels. As a safety measure, the reservoir is kept above the level established by the "Delta Pivot Point." The reservoir has thereby lost some of its "live storage" capacity not so much because of the quantity of silt but because of its deposit profile.

A brief was provided to USAID on the Neelum Jehlum hydropower project. The GOP requested USAID to provide approximately \$100 million to overcome current funding shortages for a \$3 billion, 969MW project in AJK. WAPDA estimated the cost of \$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, 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. The project has been delayed by 2 years and cost estimates have been revised to approximately \$2.5 Billion. About \$400 million have been spent to date. WAPDA is short of funds for the project in addition to 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.

TRANSMISSION

PP completed step 1 due diligence studies for four transmission lines including the line to evacuate 1000MW from the Quaid-e-Azam solar park in Punjab; the Patrind Hydropower project, the Islamabad University double circuit line and the 1750MW wind power projects in Sind. Below is a list of transmission projects currently undergoing the due diligence process with EPP:

Table 7: Due Diligence – Transmission Projects

DUE DILIGENCE PROJECT	TOTAL PROJECT COST	MW POTENTIAL	TIMELINE
TRANSMISSION			
Quaid-e-Azam Solar	\$38.8 million	1000 MW	2 years
Sind Wind Projects	\$132 million	1750 MW	4 years
Patrind Hydel	\$8.4 million	147 MW	3 years
PESCO Reactive KPK	\$33 million	250 MW	4 years

COMPONENT IV: NEW ACTIVITIES

In October of 2012, Component IV was added to expand the EPP's existing program of work and respond to the GOP's efforts to address the severe load shedding that severely affects Pakistan's economy. Due to the magnitude of the energy crisis in Pakistan, EPP was tasked with accelerating implementation of the activities and disbursement of funds under this award. EPP was also asked to assist USAID in responding to the requests for information to meet USG requirements for information unique to Pakistan.

The majority of Component IV activities are dedicated to transmission advisory and equipment procurement, training, and project implementation. The EPP worked on transmission issues with a greater focus on a turnaround DISCO, which has been identified as Peshawar Electric Supply Company (PESCO). Additionally, the EPP provided technical assistance in support of MWP, GOP and the power sector for USAID preapproved activities, including but not limited to, power imports, transmission system reviews, capacity building, and advisory services. Additionally, Component IV focused on the newly introduced LNG import, Shale Gas, and Upstream Oil programs with significant progress made in the development of a LNG terminal in FY2013.

TRANSMISSION

TURNAROUND DISCO – PESCO

Power Transformer Program: Repair/Transformer Program

One 40 MVA transformer has been repaired and been added to the PESCO system. Two more 40MVA transformers are in the shop to be repaired. Contracts have been awarded for three new 40 MVA transformers; however the transformer shops have large backlogs of work and turn around on repairs takes longer than usual.

Telemetry

The telemetry project has been completed and operations turned over the PESCO. The meters and interruptible power supplies have been installed at 143 common deliver points that will measure the net power used on the PESCO system. Displays for the data were installed in the dispatch center, Chief Engineers Office, and CEO's office. During this activity, it was discovered that the system relies on cellular networks for communication links and is susceptible to cellular system reliability issues. Additionally, the PESCO operations personnel make changes in the grid system configuration that affect the quality of the data without proper notification.

Circuit Breaker Repair Replacement

Seven 130 kV circuit breakers have been ordered, manufactured, tested and are being shipped. The foundations and control cabling are being installed in preparation for the delivery of the circuit breakers. Factory acceptance testing was witnessed and approved at the manufactures testing facility in Germany.

Reactive Power Compensation study

The Reactive Power Compensation Study has been completed and the results communicated to EPP and PESCO staff. The Reactive Power Study concluded that the addition of capacitors at the locations identified in the study will create 417 MW of additional capacity on the PESCO system. Initial EPP calculations indicate a cost/benefit payback of approximately seven months. To date, funding for implementing the study recommendations has not been approved. PESCO does not have the technical capability to implement the recommendations.

Technical Audit of Grid Stations

EPP has ten engineers assigned to the technical audits and five of the forty substations have audited. Average time per substation for an audit is eight days. A standard spreadsheet for recording the audit results was created to allow for the easy mining of the data for trends and issues. In FY2013, Six new engineers were hired to supplement the existing EPP PESCO staff and a spreadsheet was created for the uniform compilation of the data. Security continues to be an issue in the PESCO service territory which requires additional time and resources for auditing.

Transformer Maintenance Workshops

To date, the transformer maintenance workshops are underway with the Scope of Work development for the services of a qualified engineer/architect to lead the workshop design and construction project. Similar workshops have been visited to determine the broad level scope for the building size and design. Potential staff has been interviewed for training PESCO employees on proper operation of a workshop and the maintenance activities performed there. Currently, PESCO management is reviewing their desire and need for a workshop which could change the scope of work.

Transmission Line

Field inspections are being made of transmission lines to identify issues that affect public safety or are an immediate threat to system reliability. To date, three PESCO divisions have been inspected and a statement of work is being prepared for the solicitation of contractors to repair the items identified. Security continues to be an issue in the PESCO service territory which requires additional time and resources for auditing.

Live Line Training

Live line training classes are being conducted to train DISCO linemen on the safety techniques to maintain 130kV transmission lines while they remain energized. This eliminates the need to disrupt power to customers to perform routine maintenance. In FY2013, sixteen PESCO line technicians completed training in the first class and eighteen additional technicians collectively from FESCO, GEPCO, and HESCO were trained in the second class. The third class for eighteen more technicians will start on December 16, 2013. Live line tools have been purchased and will be received in January, 2014. Vehicles and live line trailers were purchased and are in storage waiting the completion of training and the arrival of the tools.

A challenge for the completion of the Live-Line training is the hot stick trailers that were purchased do not meet the requirements for the proper storage and maintenances of the hot sticks. They are usable and needed as material trailers by the live line crews but new hot stick trailers will need to be purchased.



Providing Live line Training to PESCO Employees to provide maintenance services without shutting down the electricity supply line leading to fewer interrupted services to the consumers and minimizing losses.

SUPPORT TO NTDC

A Business Plan was completed and resulted in the creation of the NTDC Performance Improvement Action Plan. The Action Plan was approved and funded; however, finding and hiring qualified personnel has proved a challenge.

The EPP has established an office near the NTDC office in Lahore for all EPP personnel working on all NTDC projects. In addition, two local offices have been established in the NTDC Planning Department for the close work required for training and close work with their engineers. Ten staff members have been hired and recruitment for additional staff continues.

A challenge to the NTDC work has been the skill set required for the NTDC tasks are very specific and it has been difficult to find qualified candidates. Multiple changes in the NTDC management at all levels throughout the year are a barrier to project implementation.

The NTDC Planning Department has agreed to support the implementation of real time digital simulator training for their engineers and have provided a room and other support for the training. The selection of the real time simulator software is under review.

Additionally, the EPP has contacted EPRI regarding membership costs and program opportunities for NTDC participation which will advance NTDC’s capacity. Another ongoing activity is the hiring of three experts for the Enterprise Resource Plan (ERP) implementation and is working with the NTDC on an ERP project scope, budget, and resource commitment.

SUPPORT TO MINISTRY OF PETROLEUM AND NATURAL GAS

EPP was asked to provide technical assistance in support of MPNR and the GOP for USAID preapproved activities, including but not limited to, Liquefied Natural Gas (LNG), oil and gas including shale gas and advisory services to increasing Natural Gas supplies for power generation and to the economy. The LNG Import Program faced setbacks due to dealing with intervention by courts, accountability agencies, public procurement authorities, etc. Other issues included the operational readiness at Port Qasim for LNG carriers and terminals as well as the LNG procurement and signing of Gas Sales Agreement with international supplier. The below list details the deliverables and respective outcomes of the MPNR support from EPP seconded staff:

Table 8: Ministry of Petroleum and Natural Resources Deliverables and Outcomes

Deliverables			Outcomes
LNG Import Program: In October 2012, the Tolling terminal adjacent to LPG jetty (500 MMCFD) project process commenced. The technical and commercial evaluation was completed and a bidder was selected and approved by SSGC Board. Further approval by MPNR and ECC is pending. The technical assistance program started in December 2012 and includes the ongoing services of an international LNG Company (with specialized expertise) to support the LNG program. After a competitive bidding process, the technical and commercial evaluation was completed and a bidder was selected but it led to legal proceedings and a ‘stay order’ by Supreme Court. It was subsequently discontinued by the new Government. In August 2013, an unbundled structure was proposed by EPP and approved by Minister MPNR in which the private sector will develop terminals under a competitive bidding process while GOP agency will purchase/ship LNG and pay the tolling fee. Developments of the program over FY2013 include:			Recently, the program scope included implementation support to the Port Qasim Authority (PQA), where the LNG terminals will be located.
Integrated Project	Retrofit Project	Fast Track Project	
RFP (Dec 12)	RFP (Jan 13)	RFP (Aug 13)	
Draft GSA (Feb 2013)	Technical Evaluation (Apr 13)	Draft LSA (Sep 13)	
Technical Evaluation (Mar 13)	Commercial Evaluation (Sep 13)	Technical Evaluation (Oct 13)	
Commercial Evaluation (May 13)		Commercial Evaluation (Nov 13)	
Shale Gas: The MPNR Minister approved the program and the MPNR’s designated entity, Directorate General Petroleum Concessions (DGPC) gave formal			The formal program is expected to start in December 2013 as the EPP awaits

concurrency to commence the program as per defined scope. Delays in the program are the result of timely GOP coordination for smooth program implementation, data availability, infrastructure assessments, E&P company buy-in to the program findings, and mitigating environmental concerns.	approval to access to DGPC's sub-surface data and signing of Non-Disclosure Agreement.
Upstream Oil and Gas: EPP provided a broad range of advisory services for the DGPC via specialized consultants in policy, technical, legal, regulatory and operational aspects of upstream oil and gas. Challenges faced to date include the conversion of older concessions to new policy, security threats, identification of policy impediments and institutional reforms and GOP buy-in for improvements and the successful promotional campaigns and bidding rounds leading to investments by international oil and gas companies in Pakistan's upstream oil and gas sector.	Subsequent to a competitive procurement process, EPP has selected a consultant group comprising of local and international E&P companies and a draft contract has been developed Agreement expected in Jan' 14

CAPACITY BUILDING AND PARTICIPANT TRAINING

In FY2013, the EPP hosted capacity building and training activities in both generation and transmission activities, highlighted below:

Table 9: Capacity Building and Participant Training Deliverables and Outcomes

Deliverable	Outcome
Energy Sector Internship Program The internship program paired 130 qualified interns with 16 partner organizations including power plants, grid stations, distribution companies, a water and power department, and consultancy firms. The interns underwent a rigorous 6-month on-the-job training which resulted in a graduation ceremony with the final graduates completing the program in November 2013.	Of the 130 interns, 30 received full time jobs as a result of their experience with reputable energy organizations. The EPP is regularly contacted by partner organizations, intern alums, and applicants about new opportunities.
Live Line Training On-hand technical assistance training was provided for four DISCO partners in FY2013 to share standard practices, safety procedures, and introduces new technology. The program will continue in FY2014 with four more DISCO training programs	All 8 DISCO partners will need to be trained with the tools procured by EPP for future use. The training will finish in October 2014.
Power SIM Training 4 Ministry of Water and Power Employees were trained in how to use the Power SIM model at the ministerial level.	The four employees were successfully trained and training will continue in the future for more employees after the NDA is signed.
WAPDA Dam Safety Conference In March 2013, EPP escorted three WAPDA engineers to a two day dam safety conference in South Africa.	The WAPDA engineers recommend empowering the existing Dam Safety Council to more closely monitor dams built under the supervision of the Provincial Governments.
University Public Forum Tour EPP successfully held five public forums with five universities throughout Pakistan. The forums were attended by students, faculty, interns, as well as EPP staff and stakeholders.	In total, 637 attendees were recorded and 54% of the attendants were females with more than 500 persons reached.

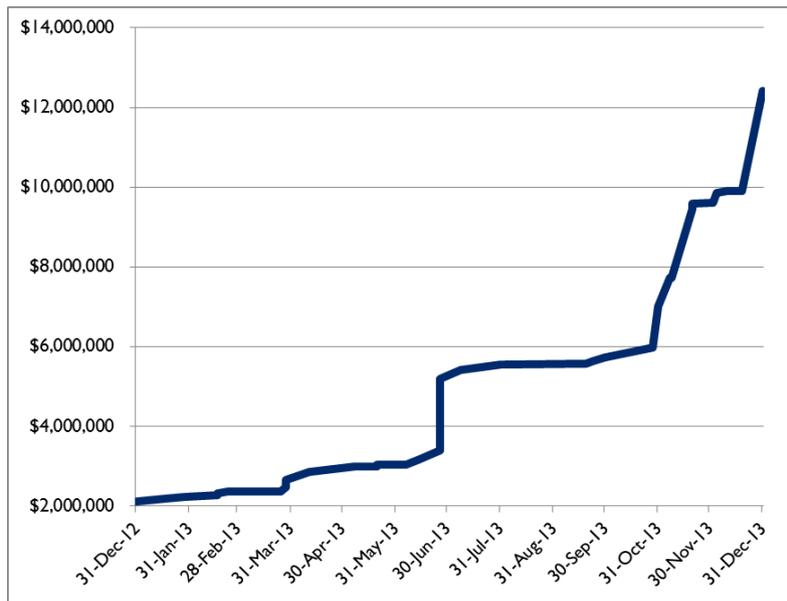
The EPP Program Monitoring Plan does not account for the standard training indicators; therefore, data on individual trainings has not been organized outside of the individual components. The EPP is committed to obtaining training data in the next year with gender, cost, district, and evaluation information and share this information with the Trai-Net website.

To date, the EPP has not maintained data on capacity building and participant training data. In the last quarter of FY2013, the EPP developed a Trai-Net account and will retroactively report on all previous trainings under EPP to USAID. Additionally, the EPP has not completed partner training assessment reports and will begin this activity in FY 2014.

PROCUREMENT

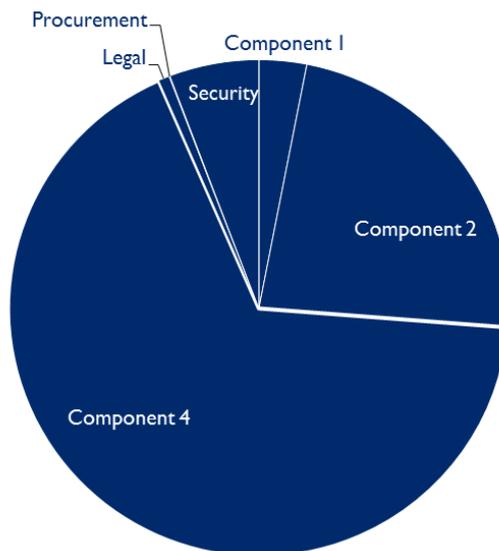
In FY2013, the EPP issued and completed a total of \$2,681,746 purchase orders with efforts starting in December 2012 and issued purchase orders in the amount of \$12,413,141. The charts below show the procurement orders arranged by component, as well as the growth in procurement orders since December 2012. Annex IV: EPP Procurement Detail further evaluates each purchase order issued during the reporting period.

Figure 2: Purchase Orders Issued from December 2012 – December 2013



The purchase orders issued are detailed by component below:

Figure 3: Total Procurement Orders in FY2013



MONITORING AND EVALUATION

In FY2013, the EPP M&E department reviewed and monitored the 15 indicators from the Results Framework to develop quarterly and annual performance monitoring reports. (See Annex I: Performance Monitoring Indicator Tracker Sheet) The EPP is working in close collaboration with the implementing partners ensuring timely completion of the projects as seen in the Performance Indicator Reference Sheets. EPP engineers are providing support for streamlining the procurement procedures and schedules are developed for tracking and controlling the key milestones. Timely inspections of physical work completed and/or equipment ensures compliance with the FARA requirements. EPP experts visits the sites, verify deliverables, check quality control, ensure environmental compliance, institute performance tests, verify designs and work packages for the on-going projects. Issues are quickly brought to the attention of decision makers, and corrective actions are taken and documented. Lessons learned are applied to the on-going and future activities. On a regular basis EPP provides monthly reports on projects' financial and physical progress.

M&E highlights include receiving the supporting data from the stakeholder agencies namely:

Table 10: Stakeholder Partner Monitoring

Components	Stakeholder Agencies/Partners
Component I	Guddu Power Generation Company Limited Jamshoro Power Generation Company Limited Muzaffargarh Power Generation Company Limited Gomal Zam Satpara Tarbela
Component II	Ministry of Finance Ministry of Water and Power,
Component IV	PESCO HESCO FESCO GEPCO

In FY2013, the M&E department had difficulty accounting for the requested Results Framework indicators in relation to the EPP contract objectives and programmatic goals. A number of indicators have measuring methods, especially those related to transmission into MW, are not easily accessible information and do not reflect true progress made. For example, the circular debt was cleared in FY2013 by the GOP which would make the EPP accomplish the program target of eliminating the debt; however the circular debt is again accumulating. Similarly, the MW added/saved by the program are the result of program installations, trainings, heat rate testing, adding transformers, and repairing transmission equipment. The EPP has voiced its concerns over the Results Framework and continues to collect data accordingly. Currently, the EPP PMP and its associated performance indicators are aligned with USAID's Results Framework of June 2013. Consequently, EPP reporting also reflects progress toward those indicators. Additionally, training accomplishments that do not fall under public forums were not accounted for in FY2013; however, this proposed revision to the Results Framework will continued to be addresses.

Furthermore, retrieving confidential supporting documents, which come under the jurisdiction of the GOP, cannot be shared without GOP's consent. Some feedback on implementation progress depends on the availability and veracity of input from other GOP stakeholders (factors beyond EPP's control).

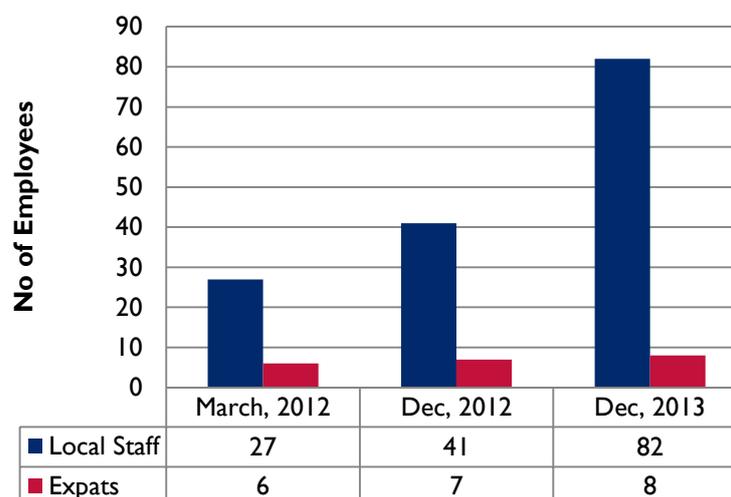
ADMINISTRATION AND FINANCE

KEY PERSONNEL AND STAFFING

The EPP has dramatically grown from a staff of 33 to 90 from March 2012 to December 2013 with significant growth in the hiring of local staff. Additionally, the EPP hired 9 females to work throughout the various projects in the program and continues to increase staff

Figure 4: EPP Staff Updates

based on project needs. The chart below shows the growth of EPP staff since March 2012 and staff increased in the past FY2013 as well. For a full list of staff changes and additions, see Annex II: Staff Additions and Updates.



The staff fluctuated during the reporting period for both expatriates, local, and key personnel. Visa delays from July to November 2013 prevented new expatriate staff from joining the EPP and old

expatriate staff from leaving Pakistan. The visa delays have impacted recruitment of staff and delayed progress predominately in the Policy Component II; however, the EPP was able to hire more local staff during this period to minimize program impacts. The EPP contract calls for the Pakistan-ization of the EPP program staff, and in FY2013, EPP hired a significant number of Pakistani staff to fulfill this target. The following key personnel changes took place during the reporting period:

Table II: Key Personnel Update

Key Personnel Position	Original	Reporting Period/Current
Chief of Party	Manzoor Sheikh	Richard P. Smith
Deputy Chief of Party/ Director Monitoring and Implementation	Dan Vincent	Talha Javed
Director –Finance and Administration	Talha Javed	M.K. Hoti
Director – Energy Sector Policy Reform	Richard Smith	Michael Biddison*
Director – New Project	Mian Shahid	Mian Shahid

*Michael Biddison was replaced by Akbar Yusuf as the Director – Energy Sector Policy Reform in February 2014.

The Chief of Party, Deputy Chief of Party, and Director of Policy changed during the reporting period and the Director of Policy position was only filled in November 2013 due to visa issues.

FACILITIES

EPP expanded its guesthouse needs during the reporting period to two guesthouses in Islamabad and one guesthouse in Peshawar to house expatriate staff. New offices were also opened in Peshawar and Lahore.

FINANCIAL REVIEW

During September 2012, a contract modification increased the funding from approximately \$14.9 to \$80.2 million using FY2011 Development Assistance Funds. AEAI received the modification as a result of their expert consul and extensive management and energy policy guidance to the GOP. For a quarterly review of FY2013 and review of FY2012, please review Annex III: Quarterly Financial

Confidential information redacted

SECURITY

With the company increase in staff numbers, it was imperative from a security stance to verify current security policies and procedures to ensure that appropriate mechanisms and mitigating measures for the current security conditions are in place. During the reporting period, the Security team delivered an updated Security Plan as well as a “Guesthouse Policy” for the two guesthouses in Islamabad and one in Peshawar.

Immediate introduction with USAID Safety and Security Manager took place to ensure that compliance with USAID rules of engagement and Pakistani laws pertaining to security operations and procedures are correctly adhered to. Also compliancy, documentation and reporting was correctly established

Physical security assessments have been conducted and are a holistic look into the overall physical security of buildings, facilities and locations. The assessments included basic functions such as an analysis, determination of critical assets, threats that may place individual / facility in danger, identify the existing countermeasures and recommended countermeasure improvements were covered.

Office and residential locations have been improved, with the introduction to increased local security provider presence, privacy screening where appropriate and biometric operated door locking mechanisms. Also additional CCTV cameras have been installed as an important interactive part of man companies’ safety and security measures. Local company vehicles have been correctly organized to ensure appropriate coverage is provided over a 24 hour period.

Great emphasis was placed on communications and accountability, which included issue of cell phones to all company staff, completion of correct, accountable transportation control and movement documentation.

COMMUNICATIONS AND OUTREACH ACTIVITIES

The communications and outreach activities continued to focus on educating the local Pakistani population about the dynamics of the energy sector and creating awareness of the steps or initiatives being taken and implemented. Emphasis has been placed on both print and visual media as well as public outreach activities. During the reporting period, the EPP communications department used outreach activities to familiarize the public with the EPP and disseminate information on goals, ongoing tasks, and achievements so as to cultivate an understanding of the challenges faced by the energy sector and positive U.S. assistance provided. EPP also expanded its web presence with the introduction of a Facebook page and website dedicated to communications.

The communications department ensured that all outreach activities were properly branded and marked with the USAID/Pakistan and/or EPP appropriate marking. The communications department continues to work with the four component departments and USAID/Pakistan to reach out to Pakistani citizens and promoted the EPP. EPP coordinated closely with USAID's Development and Outreach Communications Office in the implementation of its activities. Emphasis was placed on adhering to USAID branding and marking guidelines in all of the programmatic and administrative communications.

The communications team organized and executed nine high profile media events, with the star event being the inauguration of the Gomal Zam Dam and Power House held at the dam site in South Waziristan on September 12, 2013. The events were very well executed and covered extensively by the print and electronic media. The media tour covered each dams and thermal power station event, and provided the opportunity for the media to visit and capture footage of these facilities, which are usually closed to the media given the security sensitive installations).

EPP used the print and electronic media vehicles frequently for promoting the program's activities. EPP activities were mentioned in nearly 100 press releases in 20 national and local newspapers (both English and Urdu). Additionally, the EPP internship program was featured on a live radio show which received positive feedback through live calls and Facebook messages. EPP developed a presence in the social media by launching the EPP website and Facebook page. The website is updated on a regular basis and the Facebook page acts as a platform for interacting with the general public. A list of all deliverables is available in Annex IV: Communications Deliverables Chart.

Some of the activities planned to be implemented during the reporting period were not executed due to security issues, access of media to project sites, and overall negative and hostile sentiments of the public towards the expanding energy crisis.



Screenshot of the Energy Policy Program Website

Table 14: Communications Deliverables Chart

Deliverable	Title	Outcome
Media Events	Jamshoro Internship Induction Ceremony (Oct 24, 2013 at JTPS)	Guest of Honor : EPP COP
	Ambassador visit to Mangla (Nov 27, 2013 at Mangla)	Guest of Honor: US Ambassador and USAID Mission Director
	Guddu Internship Induction Ceremony (Dec 12, 2013 at GTPS)	Guest of Honor: DCOP EPP
	US Senator visit to Mangla (Feb 21, 2013 at Mangla)	Guest of Honor: US Senator Menendez and US Ambassador
	Muzaffargarh Internship Induction Ceremony (Feb 25, 2013 at MTPS)	Guest of Honor: USAID Energy Office Director
	Tarbela Milestone Achievement Ceremony (Mar 5, 2014 at Tarbela)	Guest of Honor: US Ambassador
	Telemetry Launch and Certificate distribution of Live Line Training (June 20, 2013 at PESCO)	Guest Honor: USAID Energy Office Director and US Consul General Peshawar
	Gomal Zam Dam inauguration event (Sept 12, 2013 at Gomal Zam, FATA)	Guest of Honor: US Ambassador
	Ambassador visit to Jamshoro Thermal Power Station (Sept 26, 2013 at JTPS)	Guest of Honor: US Ambassador, USAID Mission Director and Director of Energy Office
Press releases	Coverage of EPP events and milestones	Coverage in more than 20 national and local papers (both Urdu and English)
Electronic coverage	Coverage of EPP events and milestones	Events covered by 6 major news channels (Dawn, Geo, Ajj, Samaa, PTV and Duniya)
Website	Energy Policy Program website	Launched in April 2013
Facebook	USAID Energy Policy Program	Created on October 12, 2012
Give-Aways	Calendars	Distributed among all stakeholders
	Internship kits	Distributed to the interns
Radio Show	Radio on Internship Program	Successfully aired live

During the reporting period, the EPP experienced unique communications challenges and shifted communications priorities to adapt to the new scope of work and build awareness:

- **Opinion-editorials and Feature Articles:** Work on submitting and publishing Op-eds was not executed as it might have led to strong debate and negative sentiments towards EPP and USAID considering the severe energy crisis the country was surpassing. However, EPP placed an advertisement in the USAID supplement that was published in Feb 2012.
- **Policy Seminars:** Since the focus of the program was on projecting achievements through media events, it was decided to shift the proposed policy seminars and roundtables to the next year.

EPP continued to ensure strict adherence and compliance to the Branding Implementation Strategy and Marking Plan submitted to USAID on July 21, 2011. The EPP was given permission to not follow USAID branding and marking regulations in the KPK region due to security reasons; this includes the EPP Peshawar office and most directly influences deliverables from work with PESCO. EPP developed a revised branding and marking plan to accompany the USAID/Pakistan branding and marking plan; however, the revised plan has not been submitted for approval to date.

ENVIRONMENTAL COMPLIANCE AND MANAGEMENT

During the reporting period, the EPP continued to ensure that activities carried out under the USG funding comply with the Government of Pakistan and US environmental policies and procedures. Where there is a conflict between U.S. and Pakistani environmental requirements those that are more protective of health and the natural environment have been used. With the increased scope of work in transmission and generation, EPP plans to hire an Environmental Compliance Manager to advise regarding the required environmental policies and procedures.

Environmental support provided for the following activities:

- Environmental audits to ensure implementation of EMMPs for the six G2G projects
- Environmental Mitigation and Monitoring Plan (EMMP) developed for Mangla rehabilitation project, and subsequently approved for USAID.
- Initial environmental assessments for the four run-of-river projects (Dubair Khawar, Khan Khawar, Allai Khawar and Jinnah).

SUPPORTING ANNEXES

ANNEX I: Performance Monitoring Indicator Tracker Sheet

ANNEX II: Staff Additions and Updates

ANNEX III: Quarterly Financial Review

ANNEX IV: FY2013 Procurement

ANNEX I: PERFORMANCE MONITORING INDICATOR TRACKER SHEET

Indicator		Baseline	FY2011 Achieved	FY 2013 Target	FY 2013 Achieved	LOP Achieved	LOP Target	% LOP Achieved
DO Ia Gigawatt-hours (GWh) of energy sold		TBD		TBD	TBD	TBD	TBD	TBD
I.1.a. Number of beneficiaries with improved energy services due to United States Government assistance (4.4.1-31)	Generation	5,777,145	-	6,747,960	7,543,710	8,753,250	13,734,645	64%
	Transmission	-	-	1,273,200	763,920	763,920	6,366,000	12%
	TOTAL	5,777,145	-	8,021,160	8,307,630	9,517,170	20,100,645	47%
I.1.b. Gigawatt-hours of energy availability	Generation	0 GWh	1908 GWh	2,482 GWh	2657 GWh	4970 GWh	4796 GWh	104%
	Transmission	0 GWh	0 GWh	701 GWh	420 GWh	420 GWh	3504 GWh	12%
	TOTAL	0 GWh	1908 GWh	0 GWh	3077 GWh	5390 GWh	8300 GWh	65%
I.1.c. Power available to meet power sector demand as a result of United States Government assistance	Generation	0 MW	363 MW	424 MW	474 MW	913 MW	863 MW	106%
	Transmission	0 MW	0 MW	80 MW	48 MW	48 MW	400 MW	12%
	TOTAL	0 MW	363 MW	504 MW	522 MW	961 MW	1263 MW	76%
I.1.1.a. Megawatts of electrical power added or saved as a result of United States Government supported construction, rehabilitation, and other generation and transmission improvements	Generation	0 MW	363 MW	424 MW	474 MW	913 MW	863 MW	106%
	Transmission	0 MW	0 MW	80 MW	48 MW	48 MW	400 MW	12%
	TOTAL	0 MW	363 MW	504 MW	522 MW	961 MW	1263 MW	76%
I.1.1.b. Efficiency of thermal power plants (British thermal units of input heat energy per kilowatt-hour of electrical output energy)	GENCO I	12669 BTU/kwh	12669 BTU/kwh	12162 BTU/kwh	11063 BTU/kwh	11063 BTU/kwh	12162 BTU/kwh	100%
	GENCO II	10000 BTU/kwh	10000 BTU/kwh	9641 BTU/kwh	9641 BTU/kwh	9641 BTU/kwh	9641 BTU/kwh	0%
	GENCO III	11547 BTU/kwh	11547 BTU/kwh	10161 BTU/kwh	10161 BTU/kwh	10161 BTU/kwh	10161 BTU/kwh	0%
I.1.1.c. Number of United States Government supported installations and operations and maintenance improvements of generation plants and transmission networks	Generation	0	0	12	10	16	24	67%
	Transmission	0	0	6	5	5	16	31%
	TOTAL	0	0	18	15	21	40	53%

Indicator	FY2011 Achieved	FY2012 Achieved	FY 2013 Target	FY 2013 Achieved	LOP Achieved	LOP Target	% LOP Achieved
I.1.1d. Number of transmission bottlenecks resolved	0	0	6	6	6	13	46%
I.1.4a. Public and private funds leveraged by the United States Government for energy infrastructure projects (alternative F indicator 4.4.1-32)	\$33 million	\$33 million	\$33 million	\$33 million	\$33 million	\$48 million	69%
I.2b. Percent Change in the Gross Annual Accumulation of circular debt	100%	162.38%	150%	0%		140%	86%
I.2.1a. Number of key policies and regulations in development stages of analysis, drafting, stakeholder consultation, legislative review, approval, or implementation as a result of United States Government Assistance	0	1	2	8	9	10	90%
I.2.2a. Number of policies following international best practices developed and implemented	0	0	2	2	2	5	40%
I.2.2b. Number of board recommendations following international best practices implemented by public sector entities	0	0	2	0	0	4	0%
I.2.3a. Number of best practice-driven systems created, improved, and implemented	0	0	2	3	3	10	30%
I.2.4b. Number of public forums resulting from United States Government assistance in which government officials and citizens interact	0	0	4	5	5	12	42%

ANNEX II: STAFF ADDITIONS AND UPDATES

#	Names	Titles	TCN/Local National/American National
1	[Redacted]		
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Note: This list includes personnel added and removed from the EPP from March 2012 – September 2013.

ANNEX IV: PROCUREMENT DETAILS

No.	Comp.	Purchase Order #	PO Approval/ Start Date	Delivery Date	Description of Goods/Services	Supplier / Vendor Name	Purchase order Value (USD)	Payments Made	Status as of December 31, 2013
1	4	A018-001	4-Dec-12	15-Oct-15	LNG Import Consultancy Services	(QED) Quality Energy Developments Consulting Ltd.	\$1,954,875	32%	Total four (05) Delivery Order Completed, 6th in process
2	4	A012-PWF-003	10-Dec-12	24-Sep-13	Transformer oil Tests	Pakistan WAPDA Foundation (WPF)	\$63,770	100%	Completed
3	4	A012-HEC-005	16-Jan-13	15-May-13	Repair of damaged Power Transformer 30/37.5 MVA, 132/66KV ELTA make for PESCO	Heavy Electrical Complex Pvt. Ltd. (HEC)	\$175,865	100%	Completed
4	4	A013-PESCO-001.01	28-Jan-13	13-May-13	Live line Maintenance Training to PESCO Crew	PESCO, WAPDA House, Peshawar	\$30,353	100%	Completed
5	4	A012-PPI-002.01	16-Feb-13	30-Nov-13	Implementing of automated metering system	Power Planners International	\$62,340	100%	Completed
6	4	A012-PPI-002.01	16-Feb-13	1-Nov-13	Reactive Power Compensation study for PESCO	Power Planners International	\$44,999	100%	Completed
7	1	A012-SGS-003	22-Feb-13	31-Jan-14	Services for Calibration RFO and Gas Flow Meters at Thermal Power Plants located in Muzaffargarh, Jamshoro and Guddu	SGS Pakistan Pvt. Ltd.	\$36,616	37%	Work In Process
8	1	A012-NAD-001	25-Mar-13	15-Apr-13	Perform GAP Analysis with respect to Coal-fired Power Generation	Dr. Nasir Ali Durrani	\$3,012	100%	Completed
9	1	A012-ACE-001	25-Mar-13	15-Apr-13	Perform GAP Analysis for Hydro Power Generation Activities	ACE Consultants	\$3,563	100%	Completed
10	2	A013-HBP-001	28-Mar-13	26-Dec-13	Power System Integrated Modeling	Hagler Bailly Pakistan Pvt. Ltd. (HBP)	\$104,314	100%	Completed
11	4	A012-PWF-002	28-Mar-13	31-Dec-13	Complete Rewinding of 40 MVA, 132/66 kV Power Transformer	Pakistan WAPDA Foundation (WPF)	\$180,495	30%	Transformer will be repaired by December 31, 2013

No.	Comp.	Purchase Order #	PO Approval/ Start Date	Delivery Date	Description of Goods/Services	Supplier / Vendor Name	Purchase order Value (USD)	Payments Made	Status as of December 31, 2013
12	1	AO12-PES-001	11-Apr-13	10-Apr-14	Heat Rate Testing Thermal Power Plants, GENCOs 1,2 and 3 at Muzaffargarh, Jamshoro and Guddu	Pakistan Engineering Services	\$206,343	41%	Work In Process
13	4	A013-IKC-001	7-May-13	31-Aug-13	Live Line Tools and Equipment (Local)	Ikram Corporation	\$124,407	100%	Completed
14	4	A013-FESCO-001	20-May-13	31-Dec-13	Live Line Training to FESCO Crew	Faisalabad Electric Supply Company Ltd.	\$14,268	100%	Completed
15	4	A013-HESCO-001	20-May-13	31-Dec-13	Live Line Training to HESCO Crew	Hyderabad Electric Supply Company Ltd.	\$14,442	100%	Completed
16	4	A013-GESCO-001	20-May-13	31-Dec-13	Live Line Training to GEPCO Crew	Gujranwala Electric Supply Company Ltd.	\$14,420	100%	Completed
17	4	EPP-C4-PO-001	30-May-13	7-Jun-13	Transportation and Unloading of Power Transformer	Heavy Electrical Complex Pvt. Ltd. (HEC)	\$6,194	100%	Completed
18	4	EPP-C4-PO-003	6-Jun-13	30-Jun-13	Repair and transportation of Radiators	Heavy Electrical Complex Pvt. Ltd. (HEC)	\$5,528	100%	Completed
19	4	EPP-C4-PO-004	14-Jun-13	31-Dec-13	Supply of Cooling Fans and Fan Motor Circuit Breakers	Heavy Electrical Complex Pvt. Ltd. (HEC)	\$136,748	100%	Completed
20	4	EPP-C4-PO-005	26-Jun-13	30-Nov-13	Supply of 7 x 132kv Circuit Breakers	ALSTOM Grid Pakistan (Pvt) Ltd.	\$214,418	30%	FAT completed successful
21	4	EPP-C2-SC-001	26-Jun-13	26-Jun-14	Advisory Service for unconventional Shale Gas	LMK Resource Pakistan Pvt. Ltd.	\$1,805,855		DGPC Approved LMKR
22	4	EPP-C4-PO-006	8-Jul-13	18-Oct-13	Secured Metering Panels	TMA International Pvt. Ltd.	\$219,910	100%	Delivery expected by Mid of November
23	1	EPP-C4-PO-007	31-Jul-13	23-Oct-13	RFO Flow Meters for GENCOs	Speedy Automation	\$129,256	100%	Completed
24	4	EPP-C4-PO-008	19-Sep-13	19-Oct-13	Dismantling, loading, transportation and unloading of ANSALDO 20/26 MVA Power Transformer at HEC	Heavy Electrical Complex Pvt. Ltd. (HEC)	\$12,912	100%	Completed

No.	Comp.	Purchase Order #	PO Approval/ Start Date	Delivery Date	Description of Goods/Services	Supplier / Vendor Name	Purchase order Value (USD)	Payments Made	Status as of December 31, 2013
25	4	EPP-C4-PO-009	23-Sep-13	23-May-14	CIF Import of 3 Nos. Toyota Hiace High Roof Long Vehicles	Toyota Islamabad Motors, Islamabad.	\$73,632		Shipment of Vans expected in May, 2014
26	Legal	EPP-Legal-PO-010	30-Sep-13	29-Sep-14	Legal Services	Hassan Kaunin Nafees	\$90,000	11%	Legal Services in Process
27	4	EPP-C4-PO-011	31-Oct-13	20-May-14	Live Line Tools and Equipment for 9 DISCO's	KOBEECOUSA LLC	\$1,021,470	20%	Manufacturing of tools and equipment in process.
28	4	EPP-C4-PO-012	28-Oct-13	28-Apr-14	Circuit Breakers, Current Transformer and Capacitor Banks	ALSTOM Grid Pakistan (Pvt) Ltd.	\$254,358	30%	Manufacturing in process
29	Security	EPP-Security-SC-002	7-Nov-13	31-Oct-15	Mobile Protection Security Services	Haris Enterprises (Pvt) Ltd.	\$717,353	5%	Services started
30	Procurement	EPP-C4-PO-013	8-Nov-13	8-Dec-13	Customs Clearance of RFO Flow Meters and delivery at Muzaffargarh	United Professional Moveers	\$5,705	100%	Completed
31	4	EPP-C4-PO-014	20-Nov-13	26-Feb-14	New Power Transformers 40MVA/132/11.5kV Power	Pak Elecktron Ltd.	\$1,726,426	10%	Manufacturing in process
32	5	EPP-C4-PO-015	20-Nov-13	20-Mar-13	Repair of 26/26MVA Power Transformer for Jamrud PESCO	Heavy Electrical Complex Pvt. Ltd. (HEC)	\$134,300	50%	Repair of Power Transformer in process
33	2	EPP-C1-SC-003	4-Dec-13	30-Apr-14	O&M Training Thermal Power Plants	Dinsons	\$260,040	30%	Development of training materials in process
34	4	EPP-C4-PO-017	2-Dec-13	17-Dec-13	15,000 Ltrs. Power Transformer Oil	Orient Oils (Pvt) Ltd.	\$20,879	100%	Completed
35	4	EPP-C4-PO-018	10-Dec-13	30-Apr-14	Power Transformers Oil Testing	Orient Oils (Pvt) Ltd.	\$32,617		6 Samples sent for testing
36	2	EPP-C2-PO-019	13-Dec-13	13-Jan-14	Orific Plates	M. Ramzan Engineering	\$972	50%	Manufacturing in process
37	1	EPP-C4-PO-020	19-Dec-13	29-Dec-13	Loading, Transportation and Unloading of Radiators	Safe Ways Goods	\$2,019	100%	Completed
38	2	EPP-C2-SC-004	31-Dec-13	31-Oct-15	Upstream Oil and Gas Consultancy Services	Petroleum Technology Services	\$2,508,468		
Total Procurements Completed and Ordered by December 31, 2013							\$12,413,141		

United States Agency for International Development – Pakistan Mission
American Embassy
RAMNA 5, Diplomatic Enclave
Islamabad, Pakistan