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PAKISTAN

ENERGY POLICY PROGRAM

MONTHLY PROGRESS REPORT

JUNE 2014



JULY 2014

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ENERGY POLICY PROGRAM

MONTHLY PROGRESS REPORT: JUNE 2014

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Cover Photo: Visit to the Guddu Thermal Power Station

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ACRONYMS

AEAI	Advanced Engineering Associates International
CPGCL	Central Power Generation Company Ltd.
CPPA	Central Power Purchasing Authority
DGPC	Directorate General Petroleum Concessions
DISCO	Distribution Company
EMMP	Environmental Mitigation and Monitoring Plan
EPP	Energy Policy Program
FARA	Fixed Amount Reimbursable Agreement
GENCO	Generation Company
GHCL	GENCO Holding Company Limited
GOP	Government of Pakistan
GTPS	Guddu Thermal Power Station
ISGS	Interstate Gas System
JTPS	Jamshoro Thermal Power Station
KPK	Khyber Pakhtunkhwa
kV	Kilovolts, 1000 volts, unit of electric potential (voltage)
LNG	Liquefied Natural Gas
LSA	LNG Services Agreement
MOF	Ministry of Finance
MPNR	Ministry of Petroleum and Natural Resources
MTPS	Muzaffargarh Thermal Power Station
MW	Megawatt, unit of electrical power, 1 million watts,
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 and Maintenance
PESCO	Peshawar Electricity Supply Company
PIL	Project Implementation Letter
PO	Purchase Order
PowerSIM	Power Sector Integrated Model
PPA	Power Purchase Agreement
PQA	Port Qasim Authority
PTF	Power Transformer
RFP	Request for Proposal
SCADA	Supervisory Control and Data Acquisition
SMS	Secured Metering System
SOW	Scope of Work
SSGC	Sui Southern Gas Company
USAID	United States Agency for International Development
WAPDA	Water and Power Development Authority

MONTHLY HIGHLIGHTS

The Energy Policy Program (EPP) achieved the following results during the month of June 2014.

Table I: Monthly Highlights

Component 1

- G2G Tarbela: EPP drafted 611(e) MD-Action Memo for the Phase-II of Tarbela Rehabilitation Project and submitted it to USAID for review. .
- G2G Muzaffargarh: EPP also supported MTPS in processing a tax exemption from USAID for equipment worth U.S. \$904,714.
- G2G Jamshoro: support, USAID revised the Activity Agreement and extended the project completion date to December 31, 2014.
- G2G Guddu: EPP facilitated the visit of USAID's Provincial Director for Sindh and Baluchistan, Mr. Leon Waskin, and Deputy Regional Director, Dr. Randy Hatfield, along with Matt Landon, Deputy Director of USAID Pakistan's Energy Office to Guddu.
- G2G Guddu: EPP supported USAID in issuing tax exemption letters for CPGCL for clearance of equipment worth U.S. \$121,796.
- G2G Mangla: EPP supported WAPDA to in regularizing the Mangla Assignment Account through the State Bank of Pakistan, and on May 22, 2014, the first payment of U.S. \$13 Million was transferred.
- PEI: EPP is working with JPCL to develop the Performance Efficiency Improvement Plan.
- 20 GENCO staff completed training at the third installment of best practices in thermal operations and maintenance.

Component 2

- MWP: EPP reviewed the second Draft Policy Framework for Private Power Transmission Line Projects, and made a number of important suggestions to better reflect the reality that these sector entities face.
- MWP: EPP discussed the draft PPAs with the Joint Secretary for Policy, and will send proposed revisions out for stakeholder comment in July.
- MOF: EPP supported MOF's Corporate Finance Wing in preparing a brief regarding payment of net hydel profits to KPK.
- MPNR: EPP provided recommendations regarding the Supplemental Agreement to PCA which included a revised lease deed for incorporating Tight Gas incentives.
- MPNR: EPP prepared the Indigenous Natural Gas Production/Consumption balance for July 2012 – June 2013.
- MPNR: The Implementation Agreement (IA) was signed between PQA and ETPL, which is a major milestone.
- MPNR: EPP, The pending case regarding the extension of a license under the 2009 Rules was examined by EPP, and necessary recommendations were presented to DGPC.

Component 3

- EPP assisted USAID brief a team from U.S. Army Corps of Engineers (USACE) on the two RoR projects.
- EPP advised USAID that WAPDA must to take greater ownership of the Kaitu Weir Project by regularly sharing their Progress Reports and keeping USAID better informed of their activities.

Component 4

- PESCO: 27 MW of throughput capacity were added in the month of June, alone.
- NTDC: Technical Audit: 26 of 41 (63%) audits of NTDC grid stations have been completed.

PROGRESS IN NUMBERS

Indicator	Unit	LOP Target	Achieved in of June 2014	Total Achieved as of June 2014	LOP % Achieved as of June 2014
I.a: GWh of energy sold	GWh	TBD	0	0	0%
I.1.a: Number of beneficiaries with improved energy services due to United States Government assistance	Individuals	13,112,306	345,546	12,750,884	97%
I.1.b: GWh of energy availability	GWh	7,599	189.216	7,331.646	96%
I.1.c: MW available to meet power sector demand as a result of USG assistance	MW	1,263	27	1,254.1	99%
I.1.1.a: MW of electrical power added or saved as a result of USG improvements	MW	1,263	27	1,254.1	99%
I.1.1.b: Efficiency of thermal power plant tests completed	No.	3	0	2	67%
I.1.1.c: Number of USG supported installations and operations and maintenance improvements	No.	40	5	87	218%
I.1.1.d: Number of transmission bottlenecks resolved	No.	13	2	7	54%
I.1.4.a: Public and private funds leveraged by the USG for energy infrastructure projects	U.S. \$	48,500,000	0	33,500,000	69%
I.2.b: Percent Change in the Gross Annual Accumulation of circular debt	%	140%	0	0	0%
I.2.1.a: Number of key policies and regulations in various stages	No.	10	2	10	100%
I.2.2.a: Number of policies following international best practices	No.	5	1	2	40%
I.2.2.b: Number of board recommendations following international best practices	No.	4	0	1	25%
I.2.3.a: Number of best practice-driven systems created, improved, and implemented	No.	10	0	3	30%
I.2.4.b: Number of public forums resulting from USG assistance in which government officials and citizens interact	No.	12	0	5	42%
4.4-8: Number of beneficiaries receiving improved infrastructure services due to USG assistance	Persons	13,112,306	345,546	12,750,884	97%

PLANNED ACTIVITIES

EPP will focus on the following high-impact activities in July 2014.

Table 2: Planned Activities

Component 1
<ul style="list-style-type: none">• Continue providing support to the ongoing G2G-related activities (Tarbela, Mangla, Jamshoro, Guddu and Muzaffargarh)
Component 2
<ul style="list-style-type: none">• Continue providing implementation support of the August 2013 National Power Policy.• Ongoing assistance will be provided to examine and formulate views on the policy proposals that will be submitted by the energy sector ministries and entities to the Ministry of Finance.
Component 3
<ul style="list-style-type: none">• EPP will continue to support USAID in reviewing information and identifying and expediting the next step to move quickly towards signing a PIL.
Component 4
<ul style="list-style-type: none">• Registration and customization of P&I vehicles.• Step II Due Diligence on wind power-related projects.• PESCO and NTDC Technical Audit teams will compile audit reports in July.• The Technical Evaluation of bids for the 132 kV circuit breakers and Series Compensation Study will be completed.
Cross – Cutting Activities
<ul style="list-style-type: none">• EPP will conduct post-training focus group discussions for GENCOs I, II, and III related to O&M training in August 2014.• PowerSIM Training for PC will be conducted in July – Date to be determined. EPP will monitor and evaluate PowerSIM progress at MPNR at the end of July.
Communications
<ul style="list-style-type: none">• Host visible and impact-oriented events that highlight key program deliverables; and provide outreach assistance across all program components.

PROGRAM OVERVIEW

EPP is a multi-year, USAID-funded initiative to increase power generation, improve transmission capacity and reliability. EPP works with selected energy enterprises to assist the Government of Pakistan's sector reform efforts. The program supports the joint goals of the United States Government (USG) and the Government of Pakistan in reforming the power sector, and is designed to address Pakistan's chronic electricity shortage.

While there is a continued and ongoing focus on due diligence and successfully implementing the G2G effort, EPP has begun integrating work on technical upgrades, policy reform implementation, and transmission-related activities. All of these efforts represent a comprehensive approach to help Pakistan expand its indigenous production capacity, eliminate the need for subsidies, and mitigate pressures contributing to the country's current energy crisis. At the conclusion of this important program, EPP will have contributed substantially to both the immediate energy shortages, and helped the country build longer-term energy sufficiency.



Figure 1: EPP Phases

EPP encompasses interrelated activities and targeted interventions that meet the objectives of the program's four components:

Component 1 - Monitoring & support of Project Implementation: EPP proactively advises and supports USAID and counterparts in the monitoring, implementation, and compliance of Fixed Amount Reimbursement Agreements (FARA) with the GOP. This includes monitoring and supporting timely counterpart compliance with all of the terms and conditions of FARAs, and inspection and certification of deliverables.¹ Specifically, EPP provides 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 2 – Advice and Support of Energy Sector Policy Reform: EPP actively supports energy sector reform by undertaking activities that are requested by one or more GOP entities and by the direct secondment of staff to work in the offices of the requesting entity as advisors and specialized support staff.² In achieving the objectives of this component, EPP supports generation and transmission-related studies and policy reform activities assigned by USAID with the support of the GOP.

Component 3 – New Projects, Planning and Development: Based on frequently changing priorities and schedules of USAID and USG entities, EPP undertakes due diligence of projects and activities that are candidates for USG support.³ Specifically, EPP conducts and prepares due diligence reports on new projects under consideration for USG support in order to provide detailed information, reduce USG risk, and set a basis for creating Project Implementation Agreements for the selected projects.

¹ C.4.2, Component One, pg. 8 of 46, Contract No: AID-EPP-I-00-03-00004

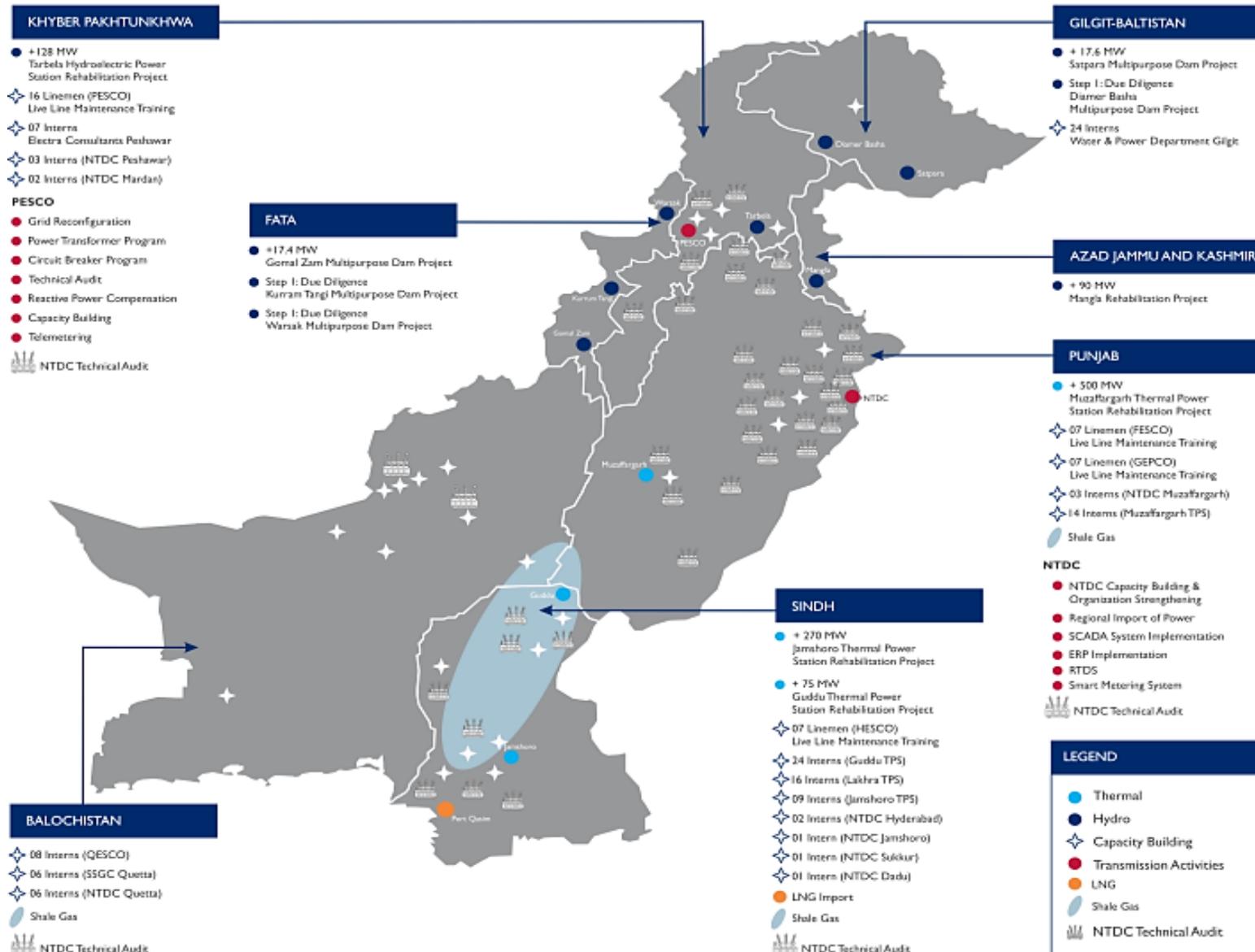
² C.4.3, Component Two, pg. 11 of 46, Contract No: AID-EPP-I-00-03-00004

³ C.4.4, Component Three, pg. 12 of 46, Contract No: AID-EPP-I-00-03-00004

Component 4 – New Activities: As a result of Modification Number 2 to the EPP Task Order Award, EPP supports the following efforts: a turnaround power distribution company (DISCO); identification of new, high-impact opportunities that promote continued support for governance; live line training for transmission linemen; technical assistance to the Ministry of Petroleum and Natural Resources (MPNR) (USAID pre-approved 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); targeted assistance to the National Transmission and Dispatch Company (NTDC) and the Natural Power Control Center (NPCC) to mitigate unscheduled shortages; help generation companies (GENCOs) to improve baseline efficiency measurements and improved operations and maintenance; and deliver technical assistance efforts in support of GOP and USAID activities that promote capacity building, increased public awareness, and targeted advisory services⁴. EPP's capacity building program facilitates sustainability by enhancing local capability in critical areas.

⁴ C.4.5.1, Component Four, pgs. 3-9, , Amendment/Modification No. 2 of Contract No: AID-EPP-I-00-03-00004

Figure 2: Map of EPP Activity Areas



COMPONENT I: PROJECT MONITORING & IMPLEMENTATION

EPP provides monitoring and implementation support for the seven G2G signature energy Projects identified in the Task Order Award. These projects include rehabilitation of three Thermal power plants (Muzaffargarh, Guddu and Jamshoro), one hydropower plant (Tarbela Dam); construction of two new multipurpose dams (Gomal Zam Dam and Satpara Dam); and rehabilitation of Mangla hydropower plant. Total USG funding for these projects is U.S. \$291.7 million (per revised agreements) with estimated gains of 953 MW.

As of June 2014, U.S. \$146.82 Million has been disbursed to GOP implementing partners, and 933 MW have been added to Pakistan’s national grid. Results achieved through the G2G projects are illustrated in the table below:

Table 3: Results Achieved through G2G Projects

Projects	USG Funding (U.S. \$ Million)	Paid (U.S. \$ Million)	Completion Date	MW Gains/Benefits	
				Target	Achieved (June 30, 2014)
Tarbela	16.50	13.95	12/31/14	128.0 MW	128.0 MW
Jamshoro	19.32	16.39	12/31/14	150.0 MW	270.0 MW
Guddu	19.12	17.34	12/31/14	75.0 MW	In progress
Muzaffargarh	15.77	15.14	12/31/14	475.0 MW	500.0 MW
Gomal Zam	45.00	45.00	Completed	17.4 MW	17.4 MW
Satpara	26.00	26.00	Completed	17.6 MW	17.6 MW
Mangla	150.00	13.00	12/31/2017	90 MW	In Progress
Total	291.71	146.82		953 MW	933 MW

During the reporting period, EPP technical experts visited project sites regularly, verified deliveries, inspected equipment, and continuously monitored work progress.

Rehabilitation of Tarbela Hydropower Plant

USAID consented to the GOP’s request for U.S. \$25 Million in additional funds for the Tarbela Rehabilitation Project (Phase –II). The funding will aid the replacement of additional equipment that will support reliability and sustainability, and enhance the life of Tarbela by at least 15-20 years. This support will result in an additional 20 MW, approximately 60 GWh, and U.S. \$12 Million in fuel oil savings per year. EPP drafted 61 I(e) MD-Action Memo for the Phase-II of Tarbela Rehabilitation Project and submitted it to USAID for review.

The rehabilitation work, to date, has resulted in the restoration of 128 MW. The replacement of the generator windings at Units 1, 3 and 4, and the installation of relief valve seals, guides and pumps are now complete. Digital governors have also been installed and commissioned at Units 3, 4, 5, 6, 7 and 9. Further, shutdown for the installations of the remaining four digital governors will take place during the “lean flow period” in October of this year. The digital governors will aid in the smooth operation of the power station.

In order to expedite the procurement of the remaining three items (spare winding, SCADA System, small drainage pump), EPP visited the site to discuss their status with WAPDA.

The remaining replacement/repair work will increase the reliability and sustainability of the power plant, but not support the restoration of additional megawatts.

Of the U.S. \$16.5 Million committed for Tarbela, the total disbursement as of June 2014 was U.S. \$13.95 Million.

Gomal Zam Multipurpose Dam Project (Project Completed)

With U.S. \$45 Million in funding committed, USAID supported WAPDA in the completion of the main dam, powerhouse, and switchyard and transmission line at Gomal Zam.

The dam has the capacity to generate 17.4 MW of electricity, and is capable of storing 1.14 million acre feet of water that will control flooding and irrigate 191,000 acres of land. The power generated by the dam is enough to meet the electricity consumption needs of 161,000 individuals. The project is now complete, and was inaugurated by U.S. Ambassador Olson in September 2013.

Satpara Multipurpose Dam Project (Project Completed)

EPP successfully achieved the Satpara Multipurpose Dam project objectives ahead of the anticipated completion date of December 31, 2013. The dam, four powerhouses, and irrigation canals are complete. The entire U.S. \$26 Million in committed funding has been disbursed to the GOP.

The dam has added 17.6 MW to the Skardu grid, and is capable of storing 0.09 million acre feet of water that will control flooding and irrigate 15,500 acres of land. The power generated by the dam is enough to meet the electricity consumption needs of 163,000 individuals.

Severe weather conditions created challenges for work on this project, but EPP completed the project ahead of schedule. The inauguration of the dam has been delayed due to poor weather.

Muzaffargarh Thermal Power Station Rehabilitation Project

EPP's support to Muzaffargarh Thermal Power Station (MTPS) has added 500 MW to the national grid. This is enough electricity to supply 4.63 million people. Major equipment has been installed and rehabilitated, and the procurement of remaining equipment required is in process.

During the reporting period, EPP inspected the new IP Turbine Rotor and ensured that it complied with the technical specifications given in the PIL. EPP also discussed the status of the remaining equipment to expedite their procurement.

EPP also supported MTPS in processing a tax exemption from USAID for equipment worth U.S. \$904,714.

With an amendment to the Activity Agreement, the project completion date has been extended to December 31, 2014. As of June 2014, out of the obligated amount of U.S. \$15.77 Million, the total amount disbursed to the GOP stands at U.S. \$15.14 Million.



Figure 3: Inspection of IP Turbine Rotor

Jamshoro Thermal Power Station Rehabilitation Project

USAID-funded rehabilitation efforts at Jamshoro Thermal Power Station (JTPS) have resulted in the restoration of 270 MW of power generation capacity, which exceeds the project's objective of 150 MW. During the reporting period, EPP continued to support JTPS in expediting the procurement process to obtain the remaining equipment, and minimize delays in rehabilitation work. With EPP's

support, USAID revised the Activity Agreement and extended the project completion date to December 31, 2014.

As of June 2014, out of the obligated amount of U.S. \$19.32 Million, the total amount disbursed to the GOP stands at U.S. \$16.38 Million for.

Rehabilitation of Guddu Thermal Power Station

In June, rehabilitation work to uprate three turbines (GT-7, GT-8 & ST-5) was completed, and all were commissioned and undergoing test runs to ensure reliability. After undergoing tests, the turbines will be capable runoff running at maximum capacity, and will add another 75 MW to the national grid; enough to supply electricity to 600,000 people.

In response to CPGCL's extension request, EPP helped USAID review the Activity Agreement and extend the project completion date to December 31, 2014. The total amount disbursed to the GOP as of June 2014 was U.S. \$17.34 Million.

Mangla Dam Rehabilitation Project

EPP supported USAID in finalizing and signing the Project Implementation Letter (PIL), which was signed in March. Subsequently, EPP supported WAPDA in regularizing the Mangla Assignment Account through the State Bank of Pakistan, and the first payment of U.S. \$13 Million was transferred to the account. EPP visited Mangla to discuss USAID's reporting requirements with WAPDA's Project Director, the status of major equipment procurements, and to inspect rehabilitation work.

USAID is providing U.S. \$150 Million to the GOP for the Mangla Dam Rehabilitation Project, out of which U.S. \$72 Million was sub-obligated

under an Activity Agreement signed on August 15, 2013. USAID will upgrade Units 5 and 6, as these units are of the most degraded. USAID will also fund the balance of the plant's units. This support will improve Mangla's efficiency, and extend the productive life of all 10 units. USAID anticipates an additional 90 MW of power generating capacity through this rehabilitation work.

Per the Activity Agreement, the project completion date is December 31, 2017, and the total amount disbursed to the GOP as of May 2014 is U.S. \$13 Million.



Figure 4: Generators of Mangla Power Station

GENCOS PERFORMANCE EFFICIENCY IMPROVEMENT PROGRAM

Having achieved substantial and highly-visible results through the replacement of equipment that resulted in increased power generation capacity and efficiency improvements, EPP is now focused on improving the commercial operations of the GENCOs. In this regard, EPP provides support to the GENCOs to conduct NEPRA-compliant heat rate tests. These tests will enable them to obtain a revised tariff that will reflect the actual costs they incur in producing electricity. The net result of this effort will be an increase in annual revenues through fuel saving of U.S. \$75 Million.

In June, EPP continued working level discussions with JPCL regarding USAID support for improving the commercial and technical performance of GENCOs. A Performance Efficiency Improvement Plan

is being developed in consultation with JPCL. As part of a rapid assessment of the functional areas where support could be provided, EPP prepared an action plan which focused on sustaining the megawatt gains achieved with USAID funding, and to improve the plant's operating life.

Procurement of Flow Meters

The procurement of the flow meters for the three GENCOs is complete. These meters were critical in ensuring that accurate instruments are in place prior to conducting NEPRA-compliant heat rate tests.

Heat Rate and Dependable Capacity Testing

Heat rate tests have been completed at Muzaffargarh and Jamshoro and achieved U.S. \$70 Million in annual fuel savings. With EPP support, a revised tariff petition has been filed with NEPRA for Jamshoro.



Figure 5: Heat rate tests being conducted at Muzaffargarh and Jamshoro Thermal Power Plants

COMPONENT 2: POLICY AND REFORM

SUPPORT TO MINISTRY OF WATER AND POWER

During this reporting period, EPP continued to lend targeted and impact-oriented support to the Ministry of Water and Power (MWP) in implementing the GOP's Power Sector Reform Program in generation, transmission, fuel diversification, policy and finance.

Improved Policy Implementation

Pakistan is moving to allow private sector participation in transmission as part of sector reform efforts. To support this, EPP reviewed the second Draft Policy Framework for Private Power Transmission Line Projects, and made a number of important suggestions to better reflect the reality that these sector entities face. Concerns centered on capping the ROE, the exclusion of all costs in the tariff, and the differential roles of NTDC and the private transmission operator.

More Autonomous Energy Sector Entities

EPP is working with GOP-owned and operated power sector entities, NTDC, and the GENCOs to improve efficiency, improve operational and management functions, and to help them perform more autonomously from the Ministry of Water and Power. During this reporting period, EPP lent the following support:

- **PPAs:** After a thorough analysis, EPP discussed the draft PPAs with the Joint Secretary for Policy, and will send proposed revisions out for stakeholder comment in July. The new contracts are designed to mimic commercial contracts, providing greater transparency and accountability.
- **NTDC:** EPP received and reviewed the NTDC/CPA-G Business Transfer Agreement. Major concerns center on the misallocation of risk between parties, asset allocation and liabilities.

Improved Capacity of USAID-Supported Energy Public-Sector Entities

Policy decisions in Pakistan are often made without the benefit of detailed quantitative analysis. To better prepare senior decision makers, EPP has developed a tool (**PowerSIM**) for analyzing how key policy, regulatory and operational parameters impact important sector performance indicators such as circular debt, cash flow, generation, end-use quantities of electricity and tariffs. To improve the capacity of USAID-supported energy sector entities during this reporting period, EPP lent the following support:

- After successfully demonstrating the usefulness PowerSIM to major stakeholders, the model required testing and validation. During the month of June, the subcontractor responsible for model development made extensive changes based on feedback provided by EPP.
- PowerSIM requires extensive data which needs to be gathered from various sources. EPP decided to use publicly available data sources which would ensure that all stakeholders can easily access and update the data. The data is currently being uploaded and sourced, and the results are being compared for the base year. Arrangements are being made to work around the paucity of publicly available data for certain areas in the model.
- The PowerSIM User Manual Draft has been received by the EPP, and is undergoing a thorough review. The manual incorporated many of the changes and feedback provided through various stakeholder meetings and training sessions. EPP is reviewing the manual, and will make appropriate changes that reflect the latest version of the model.
- EPP conducted a full-day training session on PowerSIM for key staff nominated by the Ministry of Petroleum and Natural Resources, including the Director General Gas. For the training, EPP developed a complete training schedule, agenda and materials. The session included an overview of the power sector, a presentation on the salient features of PowerSIM, its capabilities and constraints. The uses of PowerSIM for the petroleum sector were discussed and a question and answer session was held. Further hands-on training and assistance will be provided as required.

- An introductory meeting with the Planning Commission Energy Wing took place to finalize the training schedule for PowerSIM.
- EPP will work with MWP to implement PowerSIM at the Ministry of Water and Power, and to work closely with senior management to generate results through use of the model. An initial meeting with the Joint Secretary Power was held, and EPP will work closely with him to demonstrate the usefulness of the model as a policy-making tool.

Issues and Constraints, and Measures Taken to Resolve Them

More Autonomous Energy Sector Entities

NTDC/CPPA Separation: EPP prepared comments and concerns on the draft and after initial discussions with the Joint Secretary Policy, and will meet with PDIP to discuss.

Planned Activities for the Coming Month

Improved Policy Implementation: EPP will use PowerSIM to investigate critical issues and develop a series of white papers for policy consideration. It is anticipated that the first of these, to be completed in July, will be an analysis of the impacts of rising fuel prices on power industry performance, including tariffs, circular debt and fuel allocation.

More Autonomous Energy Sector Entities

- Draft PPA/FSA ready for discussion with key stakeholders
- Meeting with NTDC to discuss its role in separation from NTDC
- Discussions with PDIP on the BTA to separate NTDC and CPPA

Improved Capacity of USAID-Supported Energy Public-Sector Entities

- The latest version of PowerSIM is being updated with the most recent data available from publicly available sources. The model is also being validated and tested for accuracy.
- The model and the User Manual will be available for circulation to stakeholders shortly.
- Further hands-on training at Ministry of Petroleum and Natural Resources is scheduled.
- Training on PowerSIM at the Planning Commission is scheduled.
- Introductory meetings to present PowerSIM to other stakeholders in the Power Sector have been scheduled.

Planning Commission

- EPP lent ongoing assistance to Planning Commission for the Power Sector Chapter of the 5 Year Plan.
- EPP lent ongoing assistance to the Planning Commission on PowerSIM and other analytical tools.

SUPPORT TO MINISTRY OF FINANCE

EPP's ongoing support to the Ministry of Finance provides impartial and transparent advice and support that promotes the GOP's and USG's shared vision for sector reform. During this period, EPP's embedded advisor provided the following assistance:

- EPP provided assistance to the Corporate Finance Wing of the Ministry of Finance (MOF) by reviewing the TDS claims submitted by the Distribution Companies through the Ministry of Water and Power for the month of April, 2014.
- Work continued on the Diagnostic Analysis of the Regulatory Framework for NEPRA. The comments received from various stakeholders are being examined by the committee constituted by the Ministry of Finance.
- EPP lent support to the Corporate Finance Wing of MOF as they prepared their comments on the draft summary for ECC that was submitted by the Ministry of Petroleum and Natural Resources regarding the revision of the Mari Wellhead Gas Pricing Agreement. The proposal provides changing the present gas pricing formula (cost plus) with a crude oil pricing formula. In support of this effort, EPP held a meeting on June 11 with the Ministry of Petroleum and Natural Resources to obtain more details. In this meeting, MPNR was asked to analyze the impact of this

proposal on GOP fertilizer subsidies. Mari Gas is the major supplier of gas to fertilizer the sector. MPNR was also asked to provide information to MOF on the impact of their proposals related to the Gas Development Surcharge (GDS).

- The updated Draft Policy Framework for Private Sector Transmission Line Projects is undergoing a review in consultation with MOF's Corporate Finance Wing. These comments will be included in a summary that will be submitted by the Ministry of Water and Power to ECC.
- EPP helped prepare the Draft Security Documents for investment in Solar Power Generation Projects that were submitted by the Alternative Energy Development Board (AEDB). The draft documents are being examined in consultation with MOF's Corporate Finance Wing to help prepare their comments on these documents. These documents will ultimately be submitted by the Ministry of Water and Power to ECC for their approval.
- EPP supported MOF's Corporate Finance Wing in preparing a brief regarding payment of net hydel profits to KPK.
- EPP reviewed the power sector's additional revenue requirements in consultation with MOF's Corporate Finance Wing to ensure better power supply during the month of Ramadan.

Impact

- Assistance provided by EPP helped the Ministry of Finance to formulate their views and comments on various policy issues that help mitigate Pakistan's power crisis.

Issues Constraints

- No constraints were faced during the reporting period.

Planned Activities for the Coming Month

- Ongoing assistance will be provided to examine and formulate views on the policy proposals that will be submitted by the energy sector ministries and entities to the Ministry of Finance.
- Ongoing monitoring of Circular Debt.

SUPPORT TO MINISTRY OF PETROLEUM & NATURAL RESOURCES

EPP's Policy Team provides ongoing, targeted technical assistance in support of the Ministry of Petroleum and Natural Resources and other GOP entities in upstream oil and gas activities. This ongoing support includes policy and regulatory advice and oversight that will result in increased supplies of domestic and imported natural gas (including LNG and shale gas) for power generation and the economy. Specifically, EPP strategy for implementing this activity leverages a combination of different international consultants with highly specialized but complementary skill sets to ensure expeditious service delivery on upstream oil and gas issues in support of MPNR in implementing their E&P Policy

Shale Gas

During this reporting period, the data evaluation of 86 public domain wells continues to be analyzed at NuTech facilities in Houston for the Shale Gas Resource Assessment. The local training program for DGPC professionals by LMKR re-commenced on June 4.

Following the release of wire-line logs for confidential well data by OGDCL and PPL, LMKR initiated the process of identifying core intervals for review in consultation with NuTech. Additionally, the LMKR team visited NuTech's labs in Houston to oversee the work on Milestone # 3.

An amendment to the delivery order to provide flexibility to LMKR for non-labor expenses was executed, and the invoice for Milestone #2 was processed for payment.

Upstream Oil and Gas Support

EPP provided day-to-day advisory support to DGPC on various legal and regulatory issues. Weekly progress review meetings were held with PTS consultants during the reporting period to review the outstanding cases.

The pending case regarding the extension of a license under the 2009 Rules was examined by EPP, and necessary recommendations were presented to DGPC.

OGDCL's response on the NDA related to the release of data for depleting/marginal gas fields was received along with a draft NDA.

The Draft Supplemental Agreement for policy conversions was submitted by PTS after the required amendments EPP requested were included. The Draft Agreement was provided to USAID, and a copy of the Agreement was also sent to PPEPCA by DGPC for comments.

EPP provided recommendations regarding the Supplemental Agreement to PCA which included a revised lease deed for incorporating Tight Gas incentives.

Based on discussion with the Additional Secretary MPNR, the revised Draft Flare Gas Policy was sent by DGPC to PPEPCA for input. A copy of the draft policy was also submitted to USAID for review. EPP prepared MPNR's reply to the Law Division's response on the proposed amendment in the rules regarding the extension of leases and submitted to DGPC.

A media advertisement was published in leading local newspapers for hiring a Legal Advisor for providing advice to DGPC in upstream matters

The Indigenous Natural Gas Production/Consumption balance was prepared for July 2012 – June 2013.

PTS's revised invoice for April was processed for payment.

LNG Imports

The Implementation Agreement (IA) was signed between PQA and ETPL, which is a major milestone.

The RFP for conducting the Full Mission Bridge Simulation (FMS) study for PQA was advertised on June 1 in the leading local newspapers and uploaded onto EPP's web site.

RFP enquiries for the simulation study were entertained in coordination with PQA.

The Technical and Financial Evaluations of proposals submitted for consulting services for LNG import terminals at Port Qasim were finalized. Pre-award discussions were initiated on June 11 with the local partner of the selected bidder to discuss important elements prior to the award of a subcontract. However, the selected bidder declined the award due to security concerns in Karachi. Pre-award discussions were subsequently initiated with the next most qualified bidder.

Technical and Financial evaluations of proposals submitted for providing legal and commercial/technical advisory services for LNG were finalized this period. Pre-award discussions were also finalized, and a recommendation was made to USAID to proceed with the award of a subcontract.

The Technical Evaluation of bids submitted in response to the Full Mission Bridge Simulation Study RFP was initiated by EPP's Technical Evaluation Committee.

Comments and inputs were provided to the proposed Scope of Work for an LNG exchange visit, and a media advertisement was published in the leading local newspapers seeking applications for an LNG Specialist.

Issues/Constraints and Steps Taken to Resolve those Issues

Shale Gas: The provision of selected confidential wells' cores/cuttings data from OGDCL and PPL was delayed due to their reluctance to provide this data. Following DGPC's intervention, companies provided the well log data which is currently being evaluated. The cores will be selected following a lengthy evaluation. However, the companies have informed EPP that they will provide limited core samples as they want to use these samples for their own studies. OGDCL is also reluctant to provide the Basin Study Report to LMKR. DGPC has been approached to assist in resolving the matter.

Upstream Oil & Gas Support: There is a serious constraint of manpower in DGPC. The issue was discussed with DGPC, the Secretary and the Advisor MPNR, as this is impeding the progress of work under Work Area #4 (Advisory Support on day to day issues). This issue was highlighted to DGPC in a meeting held on June 20.

The timeline for implementing some activities in the work plan has been missed due to delays in visa issuance to PTS's foreign consultants. Therefore a mid-course revision in the work plan is under way to complete all work by October 2015.

LNG: The selected bidder for providing consulting services for LNG import terminals at Port Qasim declined to accept the award of a subcontract due to security concerns. Pre-award negotiations were subsequently initiated with the second most qualified bidder.

Planned Activities for the Coming Month

- **Shale Gas:** Completion of Milestone #3 and commencement of Milestone #4.
- **Upstream Oil & Gas Support:** Revision of the Six Month Work Plan for implementation of deliverables (peer review, review of rules, and implementation of policies).
- **LNG:** Signing of subcontract for providing consulting services for LNG import terminals at Port Qasim; signing of subcontract(s) with the two selected bidders (commercial and legal) for providing advisory services for LNG procurement; evaluation of bids and signing of subcontract with the selected bidder for the Full Mission Bridge Simulation Study for PQA.

SUPPORT TO MINISTRY OF PLANNING AND DEVELOPMENT

EPP staff seconded to the Ministry of Planning and Development provided ongoing assistance to the Acting Senior Chief (Energy). Specifically, EPP:

- Prepared first and second drafts of the Energy Chapter for the 11th, 5 Year Development Plan under "Pakistan Vision 2025." Specifically, EPP provided an overview of the current supply and demand situation throughout energy sector, updated and analyzed historic supply and demand scenarios for oil and gas (natural and LPG), and proposed steps to improve the current supply demand gap the energy sector is facing. LNG imports and their positive impact on the economy were also included in the chapter.
- Prepared a brief that examined demand-side fluctuations and management of energy entities (gas, petroleum products, LPG) for last 10 years, and the vital role renewable energy resources can play in mitigating the supply demand gap
- EPP helped analyze Pakistan's Primary Energy Balance Sheet to prepare a brief and presentation for the Acting Senior Chief (Energy).
- EPP drafted a brief for the Minister and Secretary for Planning, Development and Reform on the issuance of NOCs for new CNG stations by OGRA despite the ban imposed by the government.

COMPONENT 3: NEW PROJECTS, PLANNING AND DEVELOPMENT

Run-of-River (RoR)

The Rapid Environmental Analysis (REA) Report for the Allai Khwar and Duber Khwar Run-of-River (RoR) projects were completed and submitted to USAID.

During the reporting period, EPP assisted USAID brief a team from U.S. Army Corps of Engineers (USACE) on the two RoR projects. EPP also helped answer USACE's many questions, and provided detailed information on the projects. The USACE Team has been tasked to review project costs.

Kurram Tangi/Kaitu Weir Project

EPP was successful in securing a preliminary Milestone and Payment Schedule from WAPDA for the Kaitu Weir Project. The schedule is needed to complete a Project Implementation Letter (PIL) for the G2G transfer of USAID funds. The information has been sent to USAID, and will be discussed following their review.

EPP advised USAID that WAPDA must take greater ownership of the Kaitu Weir Project by regularly sharing their Progress Reports and keeping USAID better informed of their activities.

As advisors, EPP will continue to support USAID in reviewing information and identifying and expediting the next step to move quickly towards signing a PIL. EPP also advised USAID that they may consider asking WAPDA to establish a Project Office at Spin Wam, close to the Kaitu Weir site, to demonstrate their commitment to the project.

COMPONENT 4: NEW ACTIVITIES

New Activities and an expanded scope to EPP's work were identified to respond to the Government of Pakistan's efforts to address the current energy crisis and the severe load shedding that adversely affects all sectors of Pakistan's economy. Due to the magnitude of the energy crisis in Pakistan, EPP's New Activities Component seeks to accelerate efforts that assist USAID in increasing energy supplied to the economy. EPP's delivers this support in a way that builds the capacity of the GOP to ultimately continue these activities without external support, and with a bias toward utilizing the personnel of the generation companies and transmission system, including DISCOs and transmission operation and maintenance staff, to perform this work

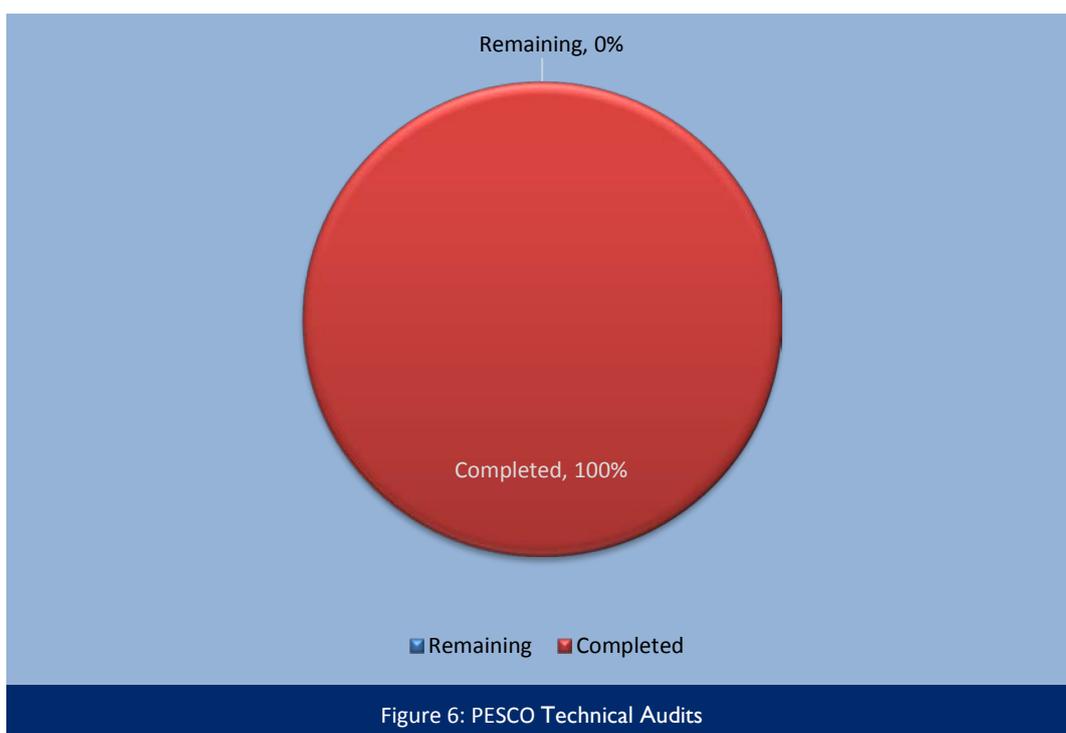
TRANSMISSION

PESCO

EPP's support to PESCO will improve and upgrade their transmission system by reducing transmission losses, improving reliability and adding more MW to the Pakistan's grid.

As part of this activity, EPP's Transmission Team has conducted detailed assessments (Technical Audits) of the primary plant at each grid station and overhead transmission line (OHTL). These assessments have identified needed system improvements, including all rouge feeders and faulty equipment. They also have included a detailed prioritized action plan, Bill of Material (BOM), and cost estimates to bring faulty/out of service equipment back into commission, and have identified areas for system expansion. To date, 321.1 MW of transmission throughput capacity have been added to PESCO's network as a result of EPP's assistance. 27 MW of throughput capacity were added in the month of June, alone. Specific activities in support of PESCO in June include:

- **Technical Audits:** The audits of Drosh and Jutilash 33 kV Grid Stations were completed. As of this reporting period, all of the PESCO grid stations (84/84) have been audited. The Audit Reports being compiled highlight the problems discovered, and propose corrective and preventive measures.

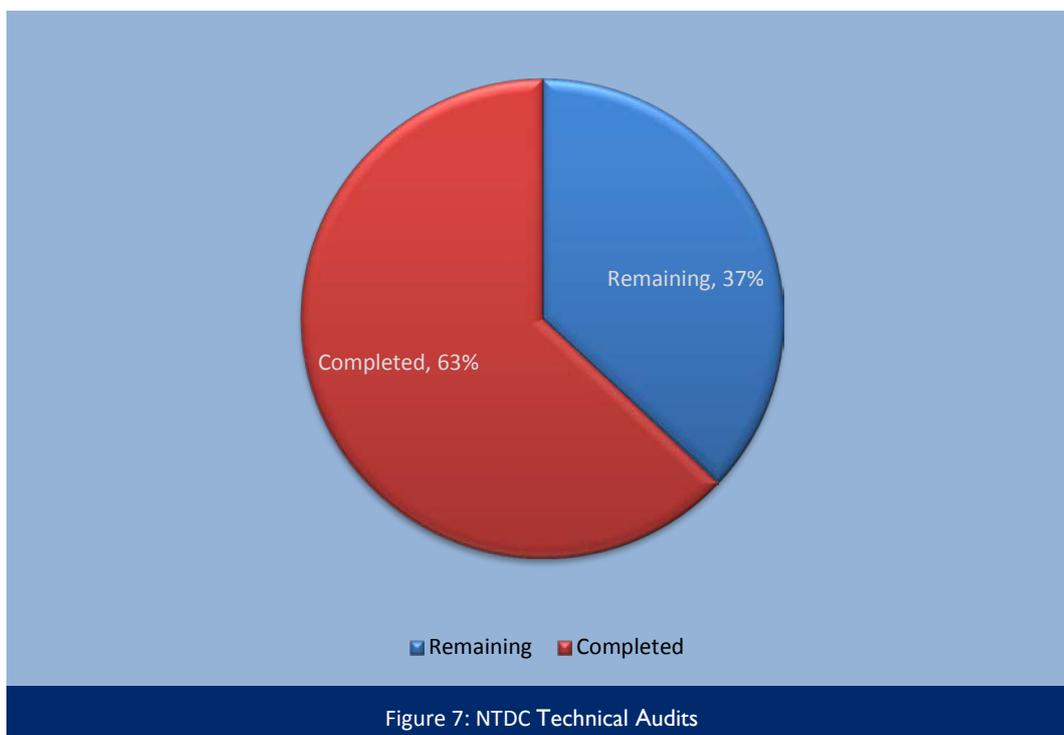


- 13 MVA of throughput capacity was added to PESCO’s network following the commissioning of the repaired 20/26MVA power transformer at the Gadoon Amazai 132 kV Grid Station. The activity is will benefit 166,374 people.
- 14 MVA of throughput capacity was added to PESCO’s network following the commissioning of an incoming panel for the new 40 MVA power transformer at the Jamrud 132 kV Grid Station. The activity will benefit 179,172 people.
- EPP’s Transmission Team concluded the Technical Evaluations for the tower repair, transmission line and grid (T&G) equipment and bucket trucks procurements.

NTDC

EPP’s support to NTDC helps improve the operation and maintenance of its transmission system and related equipment. Through technical assistance, training and technical audits, EPP’s efforts strengthen the knowledge, skills and abilities of NTDC’s management and technical staff to develop the processes and resources to achieve the goal of providing uninterrupted, reliable and quality electric power to consumers in Pakistan. Specific activities during the reporting period in support of this effort include:

- Technical Audits: 26 of 41 (63%) audits of NTDC grid stations have been completed. This month, the Burhan, Daud Khel, and Vehari 220 kV Grid Stations, as well as the Muzaffargarh 500 kV Grid Station were audited.



- On June 10, EPP met with CPPA’s Director General IT to discuss pre-deployment issues related to the Secured Metering System (SMS). The site allocated for the deployment of servers was surveyed; and the cooling, housing and power requirements for the deployment were deemed satisfactory.
- On June 12, EPP interviewed candidates for the Storage Area Network (SAN) training. Eight candidates were shortlisted.
- On June 13, EPP met with NTDC’s Consultant Planning and Chief Engineer Telecom to discuss helping make the communication medium for the SMS more reliable and secure. EPP proposed and delivered a pilot execution that performed optimally.

- On June 13, EPP met with NTDC's Manager Planning. The discussions centered on the Series Compensation Study. The deliberations with NTDC helped respond to queries raised by respondents to the Series Compensation Study RFP.
- From June 16-19, EPP conducted interviews for the proposed USEA Executive Exchange. Nine NTDC managers were shortlisted for the Grid System Operation (GSO) Exchange.
- EPP's Transmission Team completed the Technical Evaluation for the Auto Transformers procurement.

Challenges

- The servers that EPP procured for the SMS Project were destroyed in the terrorist attack on Jinnah International Airport in Karachi. This may delay execution of project.
 - The vendor has already placed an order for new servers. The delivery is expected in late July.
- As a result of the ongoing military operations in KPK, EPP could not deploy personnel to certain areas. This challenge has delayed the rehabilitation of capacitor banks in Bannu and Tall.
 - EPP will resume work in these areas once the security situation improves.
- Registration of P&I vehicles in the name of PESCO.
 - PESCO has been asked to take the necessary steps to successfully transfer the vehicles.

Planned Activities for July 2014

- Registration and customization of P&I vehicles.
- Step II Due Diligence on wind power-related projects.
- PESCO and NTDC Technical Audit teams will compile audit reports in July.
- The Technical Evaluation of bids for the 132 kV circuit breakers and Series Compensation Study will be competed.
- Preparation of the business case on helping the communication medium more reliable and secure for the SMS Project will commence.

CROSS-CUTTING ACTIVITIES

CAPACITY BUILDING

Best Practices in Thermal Operations and Maintenance Training

EPP completed the final GENCO training program focused on best practices in thermal operations and maintenance (O&M) on June 20, 2014. This training will enable the GENCOs to identify deficiencies in their current maintenance practices, and increase their plants' efficiency. During the final training program, EPP recruited five female students from National University of Science and Technology (NUST) and Air University, a public research university run by the Pakistani Air Force. EPP will continually monitor and evaluate participants to ensure implementation of best practices for GENCO staff, and support the pursuit of energy sector careers for the five female students. In total, EPP trained the following:

Table 4: EPP Trained GENCO's Staff and Five Female Students

GENCOs	Batch I Participants (March 2014)	Batch II Participants (May 2014)	Batch III Participants (June 2014)	Total
Jamshoro	7	6	7	20
Guddu	7	7	6	20
Muzaffargarh	6	7	7	20
NUST & Air University Students	0	0	5	5
Total	20	20	25	65



Figure 8: USAID's Tim Moore, Deputy Director, Office of Energy, EPP's Chief of Party and Trainers at the final O&M training session. Female participants after receiving training certificates

The selected GENCO participants represent junior, senior and management-level engineers, with experience that ranges from 2 to 25 years in their respective technical areas of responsibility.

Best Practices in Hydro Operations & Maintenance Training

EPP received USAID's Country Code Exemption for the selected subcontractor to deliver the Best Practices in Hydro O&M Training. The training program is tentatively scheduled for September 2014.

PowerSIM and the Ministry of Petroleum and Natural Resources

On June 21, EPP delivered Power Sector Integrated Model (PowerSIM) Training for staff from the Ministry of Petroleum and Natural Resources (MPNR). A total of seven senior managers (6 male and 1 female) attended the all-day training program. The training was designed to effectively use PowerSIM, and implement a routine to analyze the impact of policy interventions.

One MPNR participant remarked, *"The course will surely help MNPR in fixation of consumer prices on weighted average cost of gas especially utilization of imported LNG and imported gas from Iran. It gave first-hand knowledge on power sector pricing and different technical matters."*

EPP will continue to monitor and evaluate MPNR participants and the utilization of PowerSIM. Going forward, EPP will host PowerSIM Training for the Planning Commission (PC) and potentially the Central Power Purchasing Authority (CPPA).

NTDC and CPPA Support

EPP conducted one-on-one interviews with NTDC's nominated participants for the October "Grid Operations Exchange" visit to the United States. EPP selected the top 9 candidates with 2 alternates for the exchange, and is awaiting USAID approval of nominees before commencing the J-1 Visa process.

EPP continues to develop a Design Department Rehabilitation and Capacity Building scope of work that will increase NTDC's design capacity, and its ability to better deliver transmission improvements.

EPP interviewed 8 nominees from CPPA, and selected 6 participants for the Storage Area Network (SAN) Training. SAN training will improve the effectiveness and productivity of CPPA executives in helping them perform internal maintenance. Training will take place at EPP's Lahore Office, and will be carried out by the SAN provider with EPP supervision and monitoring and evaluation support.

DISCO Live Line Training

Logistical and transportation delays in shipping the live line tools necessitate a refresher course for those Live Line Training (LLT) participants from HESCO, GEPCO, FESCO, and PESCO. EPP is developing a curriculum to coincide with the delivery of the tools and trucks to the four previously-trained DISCOs. The refresher course is tentatively scheduled for September 2014.

EPP received USAID's Country Code Exemption approval for the proposed assessment subcontractor. This subcontractor will report on NTDC's Tarbela Training Facility. After the final assessment report is delivered, EPP will train crews from IESCO, QESCO, LESCO, SEPCO, and MEPCO to support resolving transmission network bottlenecks.

GENDER ACTIVITIES

Gender Equality Assessment

EPP collected baseline gender data from OGDCL, SNGPL, Jamshoro TPS, Guddu TPS, NTDC, WAPDA, and AEDB. EPP will compile all baseline data into a comprehensive report that will be reviewed by USAID. After the assessment, EPP will develop a gender strategy for the energy sector. EPP will submit the formal scope of work for this activity in July 2014.

Female Participation in Training Activities

As part of EPP's efforts to encourage female participation in training activities, 5 female electrical engineering students from Islamabad participated in the final batch of Best Practices in Thermal O&M Training in June. Four of the five women recently completed their Bachelors in Electrical Engineering from National University of Science and Technology (NUST). The fifth female participant is a lecturer from the Electrical Engineering Department, Air University.

The female student from NUST said, *"I believe that the newly-acquired knowledge, gained in various capacities has equipped me with the information and utilization of thermal power generation in the energy sector. It gave me amazing learning experience, where I learned from not only the mentors and teachers but also from professionals attending the training. It provides us with the opportunity to gain practical knowledge of subjects that we had studied theoretically."*

EPP will continue to promote female participation in all future capacity building activities.

MONITORING & EVALUATION

Data Quality Assessment and M&E Plan Update

On June 10, MSI conducted a Data Quality Assessment (DQA) of EPP's 16 indicators. MSI provided input into calculation methods, verification, data reliability, and documentation to be added to EPP's current M&E Plan.

Site Visits

EPP developed a comprehensive evaluation report outlining the responses of previous LLT participants, and determined improvements that will strengthen the refresher course and future sessions. These findings will be shared with the LLT Assessment Consultant. Additionally, EPP developed the post-training focus group discussion elements for site visits at GENCOs I, II, and III for August 2014. The purpose of these site visits is to review O&M training outcomes, as well as verify installations of equipment that have resulted in MW gains.

Planned Activities

- EPP will conduct post-training focus group discussions for GENCOs I, II, and III related to O&M training in August 2014.
- Participants selected for NTDC Grid Operations Exchange will begin the J-1 Visa process once approved by USAID. Travel to the U.S. is planned for October 2014. NTDC will propose nominees for the Commercial and Market Exchanges in July.
- PowerSIM Training for PC will be conducted in July – Date to be determined. EPP will monitor and evaluate PowerSIM progress at MPNR at the end of July.
- EPP will enter the quarterly PakInfo entry for FY2014 Q3 during the month of July.
- EPP will revise and submit an updated M&E Plan to USAID for approval with DQA additions. EPP will submit a scope of work for Gender Activities to be implemented between July and October 2014.

COMMUNICATIONS

EPP's Communications activities promote and develop outreach strategies that highlight the program's ongoing efforts and achievements.

Events

EPP organized and hosted a certificate distribution ceremony to mark the completion of the third phase of training on Best Practices in Thermal Operation and Maintenance. Among the participants were USAID's Energy Office Director, Mr. Tim Moore, EPP's COR and Senior Program Manager, Mr. Saeed Anwar, the General Manager – Thermal of the GENCOs Holding Company Ltd., Mr. Ghulam Rasool Akhund, and the CEO of Muzaffargarh Thermal Power Station, Mr. Shoaib Rasheed.

The Certificate Distribution Ceremony was held on June 20, 2014 at the Serena Hotel in Islamabad; and 20 engineers were awarded certificates.

Outreach Material

To strengthen communications and outreach efforts, the Communications Team began collecting data that will help develop success stories and one-pagers.

Reports

The Communications Team provided appropriate USAID branding and marking for the following EPP-generated reports:

- Rapid Environmental Analysis Duber Khwar Run-of-River Hydroelectric Power Project
- PowerSIM Presentation (for the training of MPNR staff)
- Environmental Monitoring and Audit Report THPS
- Environmental Monitoring and Audit Report JTPS
- Environmental Monitoring and Audit Report MTPS
- EDF/EMMP – Transmission Activities
- Initial Review of Implementation of Resettlement Action Plan - MDRP

A success story entitled, "More Reliable Power," based on the installation and commissioning of a power transformer at the D.I. Khan Grid Station was submitted to USAID's Energy Office. Factsheets on the G2G projects were updated and shared with USAID's Energy Office, as well.

Confidential information redacted

Finance

Payroll maintenance and reconciliations with the previous reporting periods was completed; and miscellaneous technical payments were made to vendors. The following administrative functions were also completed.

- Time Sheets (Islamabad, Lahore and Peshawar)
- Per Diem Calculations (Islamabad, Lahore)
- Overtime Calculations (Islamabad, Lahore and Peshawar)
- Deductions (Mobile and Others) (Islamabad, Lahore and Peshawar)
- Transfer advice preparations (Islamabad, Lahore and Peshawar)
- Pay Slips for the month of May 2014 (Islamabad, Lahore and Peshawar)
- Technical Payments (Foreign Wires)
- Leave Record (Islamabad, Peshawar and Lahore)
- C) Health Insurance and Card Issuance (Islamabad, Peshawar and Lahore)
- D) Monitoring of Mobile and OPD/IP Ceilings (Islamabad, Peshawar and Lahore)
- E) Interviews conducted for the positions advertised.
- F) Life Insurance of AEAI employees.

Logistics

Logistical support was provided for 50 trips made by project staff. International travel for expatriate staff was arranged.

Human Resources

During this reporting period, the Human Resources Department completed the recruitment and hiring of the following staff:

- Amir Hadi, Senior Software Engineer, June 4, 2014 (Contractual)

Procurement

- Split AC 1.5 ton and split AC 2.0 ton for Peshawar Office.
- 4 Lenovo B5400 laptops for four program staff members (Invoice #5002).
- Sony VAIO SVF15N17SB Laptop for COP (Invoice #SIT/AMC/288987)
- Revolving chairs for Islamabad Office's main conference room (Invoice #135)

IT

During this reporting period, the following tasks were undertaken by IT:

Procurement & Installation	Troubleshooting & IT Support	Maintenance
<ul style="list-style-type: none">• 4 IBM Lenovo B-5400 laptops procured for new employees.• 1 HP 4525dn black toner was purchased for the Lahore Office.• 1 HP 5525dn black toner was purchase for the Islamabad Office.• 5 Users' Kaspersky Internet Security Licenses were renewed.• 1 Samsung Galaxy Grand 2 cellular phone purchased for the Islamabad Office.• Miscellaneous IT Accessories such as USB Optical Mouse, cables, power adapters, laptop bags, etc., were also purchased.	<ul style="list-style-type: none">• Bio-metric time and attendance machine troubleshooting and centralized network management.• QuickBooks Accounting and Point of Sale software support for Islamabad and Peshawar Offices.• CCTV System Management for Peshawar, Islamabad and expatriates guesthouses.• Troubleshooting of (AEAI, Islamabad Office, Ministry of Finance, NPCC, Lahore Office and Peshawar Office) network printers and complete track of	<ul style="list-style-type: none">• E-mail configuration and setup on newly-purchased Samsung smartphones.• Installation, Configuration and e-mail setup on 6 Laptops.• House 6 and House 17 cabling work for Internet, telephone and video services (digital hd-boxes).• Tracking of 19 official eVo Internet devices monthly recharges.

Procurement & Installation	Troubleshooting & IT Support	Maintenance
	<p>cartridges and toner replacements.</p> <ul style="list-style-type: none"> • Monthly attendant backup activity for Outlook e-mail communications. • IT support to all program staff, including seconded staff and third party contractors, working at ministries, NPCC and DGPC. • 24/7 Internet, telephone and video services support to expatriates guesthouses in Islamabad and Peshawar. • E-mail server management of ep-ep.com.pk domain and BlackBerry services administration and support for all program staff. • Complete monthly payroll and large official documents scanning and archiving. • Ongoing assistance to Administration and Finance Department to maintain a functional database and record of travel authorizations and leave application forms. • Daily routine hardware, software, systems and network support for all program staff. • Request for Proposals support and groundwork for all IT-related procurements. 	

PROCUREMENT

Table 6: Completed Procurement

Item	Achieved or Completed	Targets LOP	% Completion
Procurement Contracts (U.S. \$ Million)	15.06	40.02	37.63

Table 7: Purchase Orders Issued during the Month

Progress/ Activities	Impact s	Issues/ Constraint s	Resolvin g Issues
Comprehensive Insurance for 09 Double Cabin: Purchase Order issued for comprehensive insurance for 9 double- cabin trailers. Total Amount: U.S. \$8,084.00.	N/A	N/A	N/A
45 kV Generator for Guesthouse: Purchase Order issued to M/s Synergy Corporation for a 45 kV generator for EPP's guesthouse. Total Amount: U.S. \$16,207.00.	N/A	N/A	N/A
Transportation of Radiators: Purchase Order issued to M/s Nimra & Co. Transport Company for transportation of 42 radiators from Lahore to Chakdara Grid Station. Total Amount: U.S. \$1,071.00.	N/A	N/A	N/A
Furniture for Guesthouse: Purchase Order issued for procurement of basic furniture for new EPP guesthouse. Total Amount: U.S. \$8,628.00.	N/A	N/A	N/A
Split ACs for Guesthouse: Purchase Order issued for supply and installation of heat and cooling split unit air conditioners for EPP's new guesthouse. Total Amount: U.S. \$15,716.00.	N/A	N/A	N/A
Repair & Refurbishment of Nine Live Line Logistic Trailers: Purchase Order issued for the repair and refurbishment of live line logistic trailers. Total Amount: U.S. \$26,908.00.	N/A	N/A	N/A
PowerSIM Training: Purchase Order for PowerSIM Training. Total Amount: U.S. \$26,908.00.	N/A	N/A	N/A
Transport of 20/26 MVA Power Transformer from 132 kV Hattar Grid Station to 132 kV Khawazakhela Grid Station: Purchase Order issued for transportation. Total Amount: U.S. \$4,031.00.	N/A	N/A	N/A
Placement of 20/26 MVA Power Transformer at Gadoon Amazi Grid Station: Purchase Order issued placement of 20/26MVA PTF at Gadoon Amazi Grid Station. Total Amount: U.S. \$765.00.	N/A	N/A	N/A
Civil Works at 132kV Jamrud Grid Station: Purchase Order issued to for civil works at 132kV Jamrud Grid Station. Total Amount: U.S. \$1,482.00.	N/A	N/A	N/A
Transit and Comprehensive Insurance for Vehicles and Live Line Tools and Equipment: Purchase Order issued for comprehensive insurance for vehicles and live line trailers. Total Amount: U.S. \$6,337.00.	N/A	N/A	N/A

Work Continued

- **Hilux Pickups 4x4 M/T for Transmission:** USAID approved this procurement, and AEAI's Home Office will sign the Purchase Order by July 1, 2014. Approximate Amount: **U.S. \$270,000.00.**
- **O&M Hydro Power Plant Training:** USAID approved the procurement, AEAI's Home Office will sign the subcontract by July 3, 2014. Total Amount: **U.S. \$136,000.00.**
- **Live Line Consultancy Services:** USAID approved the procurement, and AEAI's Home Office will sign the subcontract by July 3, 2014. Total Amount: **U.S. \$44,500.00.**
- **Telescopic Bucket Truck:** Technical Evaluation has been completed, and the Financial Evaluation is underway. Approximate Amount: **U.S. \$250,000.00.**
- **Repair of Damaged Towers:** Technical Evaluation has been completed, and the Financial Evaluation is underway. Approximate Amount: **U.S. \$300,000.00.**
- **Tools and Equipment for PESCO's T&G Department:** Technical evaluations have been completed, and Financial Evaluations are underway. Approximate Amount: **U.S. \$450,000.00.**
- **Port Qasim Authority Consultancy Services:** Financial and Technical Evaluations have been completed. Negotiations with consultants are underway. Approximate Amount: **U.S. \$1,500,000.00.**
- **220/132kV-250MVA Three Phase Auto Transformers:** Technical Evaluations are underway. Approximate Amount: **U.S. \$4,000,000.00.**
- **Legal Advisory Services for LNG Procurement:** Technical and Financial Evaluations have been completed. Negotiations with consultants are underway. Approximate Amount: **U.S. \$1,500,000.00.**
- **Commercial and Technical Advisory Services for LNG Procurement:** Technical and Financial Evaluations have been completed. Negotiations with consultants are underway. Approximate Amount: **U.S. \$1,500,000.00.**
- **Simulation Study Service:** Technical Bids have been opened, and Technical Evaluations are underway. Approximate Amount: **U.S. \$250,000.00.**
- **Study for Enhancement of Transmission Capacity of NTDC:** Request for Proposals is being developed to study the enhancement of transmission capacity of NTDC's 500 kV transmission system by the application of Series Compensation. Approximate Amount: **U.S. \$100,000.00.**
- **Custom Clearance, Transportation and Transit Insurance of Live Line Tools** Custom clearance, transport and provision of transit insurance for live line tools and equipment has been completed. Invoice due. Total Amount **U.S. \$20,000.00.**
- **Augmentation of 10/13 MVA PTF at 132 kV Khawazakhela GS:** Bids have been opened, and the Technical Evaluation is underway. Approximate Amount: **U.S. \$22,000.00.**
- **Dismantling and Removal of 31.5/40 MVA Power Transformer:** Bids have been received. Approximate Amount: **U.S. \$5,584.00.**
- **4 Sets of 220 kV and 27 Sets of 132 kV Circuit Breakers:** Request for Proposals has been developed for the supply of 4 sets of 220 kV and 27 sets of 132 kV Circuit Breakers for NTDC and PESCO, respectively. Approximate Amount: **U.S. \$1,130,000.00.**

Planned Activities for the Next Month

- Purchase Order for Hilux Pickup 4x4 M/T for Transmission Team. Approximate Amount: **U.S. \$270,000.00.**
- Purchase Order for Telescopic Bucket Truck. Approximate Amount: **U.S. \$300,000.00.**
- Purchase Order for the repair of damaged towers. Approximate Amount: **U.S. 25,000,000.00.**
- Purchase Order for 220/132kV-250MVA Three Phase Auto Transformers. Approximate Amount: **U.S. \$4,000,000.00.**
- Bidding process for the Study for Enhancement of Transmission Capacity of NTDC's 500kV Transmission System: Request for Proposal closing date isl May 16, 2014. Approximate Amount: **U.S \$100,000.00.**

- Subcontract for Port Qasim Authority Consultancy Services. Approximate Amount: **U.S. \$1,500,000.00.**
- Purchase Order for Tools and Equipment for PESCO's T&G Department. Approximate Amount: **U.S. \$200,000.00.**
- Follow-up for transportation of radiators from Lahore to Chakdara Grid Station.
- Follow-up for delivery of furniture, split air conditioners and 45 kV generator for new EPP guesthouse.
- Follow-up for delivery of SAN and associated equipment for NTDC.

LIST OF KEY MEETINGS

Table 8: List of Key Meetings Conducted in June

Meeting with	Date	Location	Purpose	Outcome/Result
USAID (Alternate Project Manager for Thermal Projects)	June 2, 2014	EPP Islamabad	Discuss the progress of the projects.	<ul style="list-style-type: none"> EPP briefed USAID on the progress of the projects and the remaining procurements.
CE, RE (Power)	June 7, 2014	Tarbela Power Station	Discuss progress and to expedite the process.	<ul style="list-style-type: none"> Issues discussed, and WAPDA is expediting the remaining procurements.
Tahir Manhood, Managing Director NTDC; NTDC Board Member Mosin Syed, and approximately 30 NTDC managers	June 9, 2014	NTDC Offices, Lahore	Explain Enterprise Resource Planning (ERP) to NTDC managers	<ul style="list-style-type: none"> Explained ERP project objectives, schedule, and expected outcomes to the team that will lead the ERP project at the NTDC. Answered questions on change management and other obstacles to implementation. Gained support from NTDC's senior management and project team for the ERP project.
Tahir Manhood, Managing Director NTDC; NTDC Board Member Mosin Syed, and approximately 30 NTDC managers	June 9, 2014	NTDC Offices, Lahore	Explain Enterprise Resource Planning (ERP) to NTDC managers	<ul style="list-style-type: none"> Explained ERP project objectives, schedule, and expected outcomes to the team that will lead the ERP project at the NTDC. Answered questions on change management and other obstacles to implementation. Gained support from NTDC's senior management and project team for the ERP project.
Mr. Hassan Mahmood	June 10, 2014	DG GAS Office, ISB	Training on PowerSIM for MPNR.	<ul style="list-style-type: none"> Discussed training for MPNR Discussed key items to be presented in training. Training schedule finalized.
Hagler Bailly and USAID Senior Energy Engineering Specialist	June 10, 2014	EPP Office	Update on PowerSIM status.	<ul style="list-style-type: none"> Presentation on changes made to PowerSIM. Discussed the way forward, including training and model updates. Finalized key activities for upcoming weeks.

Meeting with	Date	Location	Purpose	Outcome/Result
Director General IT, CPPA	June 10, 2014	WAPDA House, LHR	Discuss SMS deployment and inspect readiness of installation site.	<ul style="list-style-type: none"> The site allocated for deployment of servers is satisfactory.
USAID, USACE, WAPDA	June 11, 2014	EPP Islamabad	Discuss the ROR Projects and, specifically, the cost validation.	<ul style="list-style-type: none"> WAPDA briefed on the projects and provided the required documents to USAID and USACE.
Mr. Arshad Malik (Chief Energy)	June 11, 2014	PC Energy Wing, ISB	Training on PowerSIM for PC.	<ul style="list-style-type: none"> Discussed training for PC. Discussed applications of PowerSIM.
Director Gas, Ministry of Petroleum and Natural Resources	June 11, 2014	Ministry of Finance chaired by Sr. Joint Secretary, Corporate Finance	Discuss Mari wellhead Gas Pricing Agreement. Changing present gas pricing formula (cost plus) to crude oil pricing formula already allowed to PPL.	<ul style="list-style-type: none"> The meeting helped obtain information about the impact of the change in pricing formula on Gas Development Surcharges (GDS) being paid to the provinces, and the subsidy for fertilizer sector.
NTDC	June 12, 2014	Lahore	Conduct interviews with nominees for SAN training.	<ul style="list-style-type: none"> EPP Selected 6 participants for the SAN training scheduled to take place in August 2014.
MPNR (Addl. Sec., DGPC, DG(Gas), DD(DGPC)), EPP (Advisor O&G, O&G Specialist), PTS	June 13, 2014	MPNR	Draft Flare Gas Guidelines 2014	<ul style="list-style-type: none"> Draft Flare Gas Guidelines were reviewed. Some suggestions were made by the Additional Secretary. MPNR advised DGPC to share the final draft with PPEPCA for their input. The final Draft Flare Gas Guidelines were provided to DGPC.
Consultant Planning and Chief Engineer Telecom, NTDC	June 13, 2014	WAPDA House, LHR	Discussed options for making the communication medium reliable for SMS.	<ul style="list-style-type: none"> EPP experts proposed taking advantage of the existing OPGW and PLC network of NTDC for data communication. The pilot execution, as proposed by EPP, was a success.
Manager Planning, NTDC	June 13, 2014	WAPDA House, LHR	Discuss queries concerning Series Compensation Study.	<ul style="list-style-type: none"> The queries raised by bidders on the Series Compensation Study were discussed. Clarifications were given to bidders after deliberations with NTDC executives.
NTDC	June 16-18, 2014	Lahore	Conduct interviews with nominees for Grid Operations Exchange Visit.	<ul style="list-style-type: none"> EPP selected 9 participants and 2 alternates for the first of three exchange visits on Grid Operations planned for October 2014.

Meeting with	Date	Location	Purpose	Outcome/Result
Atif Rais Khan, CEO LMKR	June 19, 2014	LMKR Offices, Islamabad	Introduce COP to LMKR, a critical subcontractor for upstream gas program	<ul style="list-style-type: none"> Developed working relationship with CEO and COO. Gained knowledge of service provided by LMKR.
USAID (Deputy Director Energy Office, COTR), EPP (COP, DCOP, DPR, Advisor O&G, Advisor LNG, Advisor Policy, O&G Specialist)	June 19, 2014	EPP Office	Review of Petroleum Sector Programs	<ul style="list-style-type: none"> EPP briefed USAID on the progress of ongoing petroleum sector programs (LNG, Shale Gas Program, Upstream Oil & Gas Support). USAID requested that EPP provide the documents and information related to major Milestones along with the schedule for petroleum sector programs. All requested information was provided to USAID.
USAID (COTR), EPP (COP, DPR, Advisor (O&G, O&G Specialist)	June 19, 2014	LMKR Office	Review of Milestone #3	<ul style="list-style-type: none"> LMKR made a presentation on the progress of Milestone #3. USAID and EPP also visited the LMKR facilities.
Project Director	June 20, 2014	Mangla Power Station	Discuss the progress of the project.	<ul style="list-style-type: none"> Issues discussed and WAPDA is expediting the remaining procurements.
MPNR (DGPC), EPP (DPR, Advisor O&G, O&G Specialist)	June 20, 2014	DGPC Office	Lack of Counterpart Support from DGPC	<ul style="list-style-type: none"> The issue regarding non-availability of DGPC counterpart officers was highlighted as it was affecting the work plan. It was agreed that DGPC will discuss the matter with Secretary MPNR for further action.
USAID – Training for Pakistan	June 20, 2014	Islamabad	Participation in the 2 nd Participant Training Working Group hosted by USAID and Training for Pakistan.	<ul style="list-style-type: none"> EPP will continue to work with other USAID implementing partners related to capacity building.

Meeting with	Date	Location	Purpose	Outcome/Result
Mr. Qazi Mohammad Saleem (Director General Gas) MPNR TEAM 1. Hassan Mehmood, Director (Gas) 2. Muhammad Ashiq, Deputy Director 3. Sohail Anwar, Deputy Director 4. Shahid Zaman, Accountant 5. Shabana Kifayat, Accountant 6. Imran Ahmed, Director	June 21, 2014	EPP Office	PowerSIM Training Session	<ul style="list-style-type: none"> Delivered a briefing on the power sector. Lent an overview of salient features of PowerSIM and its applicability to MPNR. Gauged feedback from participants on modeling requirements in the petroleum sector. Discussed next steps for MPNR and further in-depth training on PowerSIM.
CEO, CE (Tech Director)	June 23, 2014	Muzaffargarh Thermal Power Station	Discuss the progress of the project.	<ul style="list-style-type: none"> Issues discussed and MTPS was asked to expedite the procurement of the remaining equipment.
Mr. Arshad Malik (Chief Energy)	June 24, 2014	PC Energy Wing, ISB		<ul style="list-style-type: none"> Lent assistance to PC in providing cost estimates from hydels that EPP had worked with so that reliable comparisons can be made.
USAID, IRG	June 25, 2014	EPP Islamabad	Film documentary of the projects.	<ul style="list-style-type: none"> EPP will provide support to USAID for the site visits.
Mr. Zargham Eshaq Khan (Joint Secretary, MWP)	June 26, 2014	Ministry of Water & Power, Islamabad	Discussions on GENCO Power Purchase Agreements	<ul style="list-style-type: none"> The new provisions in the PPA were discussed in detail with regards to bolstering their commercial terms. Way forward on dealing with Fuel Supply Agreement.
Dinsons	June 26, 2014	Islamabad	Departure of Dr. Ilyas by the deadline which was June 28, 2014.	<ul style="list-style-type: none"> Issue resolved
Mr. Zargham Eshaq Khan (Joint Secretary, MWP)	June 27, 2014	Ministry of Water & Power, Islamabad	Discussion on the Draft Business Transfer Agreement between CPPA Guarantee and NTDC	<ul style="list-style-type: none"> The BTA provisions were discussed in the context of protecting NTDC and the GENCOs. Discussed the way forward on the two parties meeting to sort out the rights and obligations of each party, and to amend the document accordingly.

ENERGY POLICY PROGRAM

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