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USAID ENERGY POLICY PROGRAM

MONTHLY PROGRESS REPORT

October 2015



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Contract No: AID-EPP-I-00-03-00004

Order No: AID-391-TO-12-00002

Submission Date: October 05, 2015

©USAID Energy Policy Program
House 4, Street 88, Sector, G-6/3
Ataturk Avenue, Islamabad, Pakistan.
Tel: +92 (51) 835 7072, Fax: +92 (51) 835 7071
Email: tjaved@ep-ep.com.pk

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ACRONYMS

AEAI	Advanced Engineering Associates International, Inc.
AEDB	Alternative Energy Development Board
CLM	Cornelius, Lane & Mufti
DGPC	Director General Petroleum Concessions
ECC	Economic Coordination Committee
EETL	Engro Elengy Terminal Limited
DISCO	Distribution Company
EMMP	Environmental Mitigation and Monitoring Plan
EPP	Energy Policy Program
ERP	Enterprise Resource Planning
FWO	Frontier Works Organization
G2G	Government-to-Government
GENCO	Generation Company
GIS	Geographical Information System
GOP	Government of Pakistan
IPP	Independent Power Producer
JPCL	Jamshoro Power Company Limited
LNG	Liquefied Natural Gas
MPNR	Ministry of Petroleum and Natural Resources
MSPA	Master Sales Purchase Agreement
MW	Megawatt
MWP	Ministry of Water and Power
NEPRA	National Electric Power Regulatory Authority
NTDC	National Transmission and Dispatch Company
OGRA	Oil and Gas Regulatory Authority
PESCO	Peshawar Electricity Supply Company
PIL	Project Implementation Letter
PPA	Power Purchase Agreement
PQA	Port Qasim Authority
PSO	Pakistan State Oil Company
RTPSS	Real Time Power System Simulator
SCADA	System Control and Data Acquisition
USAID	United States Agency for International Development
WAPDA	Water and Power Development Authority
WFW	Watson Farley & Williams

EXECUTIVE SUMMARY

MONITORING AND PROJECT IMPLEMENTATION SUPPORT

During October, the Energy Policy Program (EPP) continued to provide monitoring and implementation support for the on-going G2G Signature Energy Projects. EPP visited the Muzaffargarh site to expedite the installation of the remaining equipment. The equipment will add to the reliability of the power plant. Subsequent to GENCOs time extension request, EPP provided USAID with the status of the remaining procurements and also their assessment/recommendation on the GENCOs request for time extension. The remaining items will add to the reliability of the power plants.

EPP environmental experts also visited Tarbela and Mangla power station to ensure that the rehabilitation works are in compliance with EMMP. EPP provided USAID with a cost review memorandum for equipments to be procured under Tarbela phase II. The project will add another 20 MW to the national grid and also add to the sustainability of power plant.

POLICY AND REFORM

EPP staff followed up with the Joint Secretary (Policy) at Ministry of Water and Power (MWP) on stakeholders' comments on the revised draft Power Purchase Agreement submitted to MWP and by them to the Generation Companies (GENCOs). The Joint Secretary is meeting with the GENCOs and the GENCO Holding Company Limited and has requested EPP to continue finalization of the draft Power Purchase Agreement based on agreed guidelines.

EPP continued working on the development of four Connection Agreement to be executed between users (existing and incoming generating facilities, DISCOs and bulk power consumers) as per grid code, including GENCOs, distribution companies, and the National Transmission and Despatch Company (NTDC). CLM will submit the final drafts incorporating the comments by the first week of November.

EPP staff at the Energy Wing, continued working on the database developed for Energy Wing. Work is being done on scripting of user interface which previously was based on Excel but due to technical limitations will now be moved on html for cross platform compatibility.

EPP provided support to PSO covering the salient features of midterm Master Sales Purchase Agreement (MSPA). EPP team visited EETPL LNG Terminal and FSRU at Port Qasim. The team was briefed by EETPL's Technical team and FSRU's crew on the implementation and operation of the project. The visit to the terminal was followed by a meeting with Chairman PQA in which technical assistance provided by USAID EPP was discussed and reviewed.

EPP's LNG Consultant assisted PQA Pilots in carrying out FMBS Study at Siport Spain and firmed up the conclusions of the study in relation to navigation of QFLEX vessels in the existing channel in light of SOPs.

Presentation on Milestone-5 covering the technology, infrastructure, field development plan and wellhead breakeven cost for Shale Gas exploitation was made to the Minister for Petroleum and Natural Resources and was attended by Advisor Petroleum, Secretary, Additional Secretary, Chief Technical Officer, DGPC, USAID officials and LMKR/ KMR representatives.

NEW PROJECTS, PLANNING, AND DEVELOPMENT

WAPDA Authority accordingly decided to get the Planning Commission opinion through the Ministry of Water & Power on bidder offered price.

Planning Commission PC I of the project amounting to \$126 million is already approved by GOP. It consists of \$79 million for Kaitu Weir and associated structure and \$47 million for command area development. Since project cost is increased, WAPDA is revising the PC I of the project based on bidder offered price including transmission line and staff colony cost.

The Activity Agreement of Power Transmission System for Wind Power Projects in Sindh Wind Corridor for \$43 million was signed by USAID and NTDC. The agreement now needs the approval from the Economic Affairs Division. The trucks and cranes for PESCO have got exemption certificates from EAD. The Customs clearance regarding trucks has been completed and they have been delivered. Procurement is reviewing options for Customs clearance for cranes. Project is likely to close by mid-December 2015.

The commissioning of first 250 MVA transformer was completed at the 220kV Mardan GS completed, while the installation of second 250 MVA transformer at 220kV Mardan GS was also initiated. The transformer is expected to be in service by Nov 20, 2015.

Training on grid system information of Jamshoro and Guddu 500kV and 220kV circles was completed making eight out of nine (89%) circles completed. Training of Quetta circles is scheduled for next week.

COMPONENT I: PROJECT MONITORING AND IMPLEMENTATION

During the month of October, 2015, EPP continued to provide monitoring and implementation support for the seven G2G Signature Energy Projects. EPP submitted the update of on-going rehabilitation works at all the three power plants (Jamshoro, Muzaffargarh & Guddu) to USAID. The remaining works will add to the reliability of the power plants operation. Table I below summarizes results achieved through G2G projects in October.

Table I: Results Achieved through G2G Projects

Projects	USG Funding (\$ Million)	Disbursed (\$ Million)	Completion Date	MW GAINS/BENEFITS	
				Target	Achieved Oct 29, 2015
Tarbela (Phase I)	16.50	15.55	12/31/15*	128.0 MW	128.0 MW
Jamshoro	19.32	19.32	6/30/16	150.0 MW	270.0 MW
Guddu	19.12	18.91	12/31/15	75.0 MW	80.0 MW
Muzaffargarh	15.77	15.71	3/31/16	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	12/31/17	90 MW	In progress
Tarbela (Phase II)	25.00	PIL Signed	12/31/17	20 MW	In progress
Total	316.71	153.49		973 MW	1013 MW

*WAPDA/Tarbela submitted a time extension request to USAID

REHABILITATION OF TARBELA HYDROPOWER PLANT

Phase-I:

Coordinated with WAPDA to expedite the installation of SCADA system to complete its installation by the project completion date. The SCADA system will add to the sustainability of the power plant operations.

Phase-II:

Subsequent to the signing of project implementation letter of Tarbela (Phase II), EPP updated USAID on the status of assignment account to start disbursements of particular items which WAPDA has already paid from its own resources.

GUDDU THERMAL POWER STATION REHABILITATION PROJECT

Submitted the updates of on-going rehabilitation works at Guddu power plant to USAID. The remaining works will add to the reliability of the power plants operation.

MUZAFFARGARH THERMAL POWER STATION REHABILITATION PROJECT

Submitted the update of on-going rehabilitation works at Muzaffargarh power plant to USAID. The remaining works will add to the reliability of the power plants operation. EPP expert facilitated USAID during the visit to Muzaffargarh Power Station to monitor ongoing rehabilitation works. The visit was important to ensure that the remaining works will be completed by project completion date. The remaining works will add to the reliability and sustainability of power plants operations. EPP also provided support to USAID in planning for their high level official visit to the power station.

MANGLA DAM REHABILITATION PROJECT

EPP provided updated progress of Mangla Rehabilitation project to USAID. The project will add 90 MW to the national grid.

JAMSHORO THERMAL POWER STATION REHABILITATION PROJECT

Submitted update of on-going rehabilitation works at Jamshoro power plant to USAID. The remaining works will add to the reliability of the power plants operation.

EPP facilitated USAID to visit the power station to monitor the ongoing rehabilitation works. The visit was important to ensure that the remaining works will be completed by project completion date. The remaining works will add to the reliability and sustainability of power plants operations.



USAID visit to Jamshoro Thermal Power Station

COMPONENT 2: POLICY AND REFORM

SUPPORT TO MINISTRY OF WATER AND POWER

During the reported period, EPP continued working on power sector agreements emanating from the ongoing power sector reforms. Major activities undertaken during the month are given below.

Thermal Power Purchase Agreement

EPP continued to review the bifurcated PPA draft of May 2015 and is working on editorial changes and general improvements. Cornelius, Lane & Mufti (CLM) was provided with a copy of this draft to ensure consistency while making connection agreements.

Connection Agreement

EPP continued development of the four Connection Agreements between NTDC and users (existing and incoming generating facilities, DISCOs and bulk power consumers) as per Grid Code. EPP lawyer (CLM) has submitted drafts of the four agreements. During the month, working level meetings in Lahore and Islamabad were held with CLM to review the drafts. The final drafts incorporating the comments will be submitted by CLM by the first week of November.

Power Sector Reforms

EPP continued development of power sector reforms paper. The paper highlights the structural changes undertaken in the power sector since unbundling and the market structure after reforms. CLM has provided their input on the report which shall be incorporated in the final draft.

SUPPORT TO MINISTRY OF PLANNING AND DEVELOPMENT

Database

EPP staff at Energy Wing continued working on the database developed for Energy Wing. Work is being done on scripting of user interface which previously was based on Excel but due to technical limitations will now be moved to html for cross platform compatibility. Using all the links previously established in Excel based setup.

SUPPORT TO MINISTRY OF FINANCE

- Corporate Finance Wing of Ministry of Finance was assisted in preparation of their views/ comments on the proposed Policy for development of Mega Hydel Project submitted by the Ministry of Water & Power.
- Worked with the C.F.Wing and Economic Reforms Unit of Ministry of Finance to look into issues relating to the revaluation of the land owned /in possession of Faisalabad Electric Supply Company (FESCO).
- Work continued to scrutinize the tariff differential claims of the distribution companies for the month of June 2015 submitted by the Office of the Engineering Advisor, Ministry of Water and Power.
- Assistance was provided to Corporate Finance Wing of Ministry of Finance in preparation of their views/ comments on the draft National Electric Power Regulatory Authority Investment Standards and Procedures (Transmission and Distribution) Rules 2015 sent by the Cabinet Division.

- Work continued in consultation with C.F.Wing of Ministry of Finance to scrutinize the revised data submitted/ being submitted by the Distribution Companies regarding their subsidy claims for the month of June and July 2015. A meeting was also held with the DG (Commercial) of the Distribution Companies to find out the mechanism to adjust the Tariff Rationalization Surcharge imposed by the government with effect from June 10, 2015.

SUPPORT TO MINISTRY OF PETROLEUM AND NATURAL RESOURCES

Liquefied Natural Gas Imports

Liquefied Natural Gas Procurement

- Facts Global Energy (FGE) and Watson Farley & Williams (WFW) were engaged for limited services. Support was provided to PSO covering the salient features of midterm Master Sales Purchase Agreement (MSPA).

Support to Port Qasim Authority

- USAID EPP team visited EETPL LNG Terminal and FSRU at Port Qasim. The team was briefed by EETPL's Technical team and FSRU's crew on the implementation and operation of the project. The visit to the terminal was followed by a meeting with Chairman PQA in which technical assistance provided by USAID EPP was discussed and reviewed.
- USAID EPP's LNG Consultant assisted PQA pilots in carrying out FMBS Study at Siport Spain and firmed up the conclusions of the study in relation to navigation of QFLEX vessels in the existing channel in light of SOPs.
- Review by ECIL-Granada team for closing of issues arising out of various gap studies conducted for LNG terminal design and quality is in process.
- Updated status of compliance of Port Facilities and EETPL LNG Terminal with PIANC guidelines was finalized and conveyed to PQA for further action.
- Response to observations of Shell International's Audit Report on LNG operational and navigational aspects was finalized and submitted to PQA for review and dispatch to EETPL.
- Review of compliance status of Port Facilities and LNG Terminal with SIGTTO guidelines and US NFPA Code is in progress by Granada.

Shale Gas

- Presentation on Milestone-5 covering the technology, infrastructure, field development plan and wellhead breakeven cost for Shale Gas exploitation was made on October 8, 2015 to the Minister for Petroleum and Natural Resources and was attended by Advisor Petroleum, Secretary, Additional Secretary, Chief Technical Officer, DGPC, USAID officials and LMKR/ KMR representatives.
- After USAID approval, LMKR continued working on procurement of hardware and software (GGX) for the DGPC office. LMKR agreed to provide all the hardware/software with by November 15, 2015.
- Report on Milestone – 5 has been finalized as per discussion with MPNR.
- Work continued on Milestone-6 covering the Shale Gas/Oil Guidance Document including the adequacy of regulatory and legal framework by LMKR/KMR.
- Work on Milestone 7 covering the workshops is under discussion with LMKR and DGPC.

The discussions on arrangements for the final presentation to MPNR and USAID continued. It has been agreed that the presentation may cover all the support provided by USAID under EPP in the Petroleum Sector. This presentation is expected to be held in the week starting from November 9 during the visit of NuTech Team.

Upstream Oil and Gas

- Advisory support to DGPC on regulatory, commercial, legal and other matters is being provided by AEAI professionals.
- Presentation on improvement of E&P Rules made to DGPC on October 9, 2015. The report on the improvement of E&P Rules (track changes) has been finalized and provided to DGPC.
- The red lined version of changes in the E&P Policies has been finalized and provided to DGPC.
- Report on the deliverable regarding the possibility of transferring sub-surface rights to land owners for opening up the inaccessible areas has been finalized and provided to DGPC.

COMPONENT 3: NEW PROJECTS, PLANNING, AND DEVELOPMENT

KURRAM TANGI/KAITU WEIR PROJECT

Evaluation of Technical Proposal and financial proposals received for construction of the Kaitu Weir, feeder tunnel linking Kaitu River to Kurram Tangi Reservoir, two power houses with installed capacity of 18.4 MW, two irrigation canals (Spaira Ragma and Sheratella) and associated structure is finalized but no decision to award the contract is made by WAPDA as the bidder (Joint Venture of FWO and Descon) offered price is much higher than the estimated price.

WAPDA accordingly decided to get the Planning Commission opinion through the Ministry of Water & Power on the bidder offered price. Planning Commission PC I of the project amounting to \$126 million is already approved by the GOP. It consists of \$79 million for Kaitu Weir and associated structure and \$47 million for the command area development. Since project cost is increased, WAPDA is revising the PC I of the project based on bidder offered price including transmission line and staff colony cost.

GOLEN GOL PROJECT

USAID has indicated \$36 million funding to WAPDA for the works related to power house electrical and mechanical equipment (Lot 3.2 of the contract). Total cost of Lot 3.1 and Lot 3.2 contracts is \$75.5 million. Kuwait Fund is providing \$37 million loan for the construction of powerhouse civil works and some portion of E&M equipment.

The Saudi Development fund is providing a soft loan of approximately \$97 million for civil structures i.e. intake structure, diversion weir, headrace tunnel, surge chamber and pressure shaft (Contract Lot 2), whereas OPEC Development Fund is providing \$30 million for transmission lines and grid stations. Overall funding gap of the project cost is approximately \$71 million.

- EPP had already submitted 611(e) report, which is a USAID requirement for assessment of capabilities of beneficiary organization to effectively maintain and utilize USAID funding of Golen Gol Project. EPP attended to the queries raised on the draft by USAID and submitted 611(e) report.
- EPP also forwarded draft PIL Agreement of Golen Gol project to USAID.
- EPP is working cost reasonableness of Golen Gol hydro power project.

Project is expected to be completed by August 2017 and will provide 106 MW of power and 436 GWh of annual energy to the national grid. Revenue from Golen Gol will be over \$33 million a year.

COMPONENT 4: NEW ACTIVITIES

PESHAWAR ELECTRIC SUPPLY COMPANY

Transmission

To date, 637.2 MW of transmission throughput capacity have been added to PESCO and NTDC's network as a result of EPP's assistance.

Crane-Mounted Trucks

- The trucks and cranes for PESCO have got exemption certificates from Economic Affairs Division (EAD). The customs clearance of trucks has been completed and they have been delivered. Procurement is reviewing options for customs clearance of cranes. Project is likely to close by mid-December 2015.

Power Transformer Program

- Purchase order for three new 40 MVA power transformers has been executed. Factory Acceptance Tests were conducted earlier this month. These transformers have now been delivered to the respective sites. The first 40MVA transformer at Mardan 220kV GS has been installed and the punch list items are being addressed.
- Oil purification plant's Sindh tax exemption is awaited and is expected by end of next week. On delivery the vendor will provide a two-day training to the PESCO staff on operation and maintenance of these plants. However, delays are expected if Customs does not release the plants by November 6, 2015.

Circuit Breakers

Five 132kV circuit breakers were installed in PESCO's network thereby making (35%) seven out of 20 complete.

NATIONAL TRANSMISSION AND DESPATCH CENTRE

G2G Projects

- Activity Agreement of Power Transmission System for Wind Power Projects in Sindh Wind Corridor for \$43 million was signed by USAID and NTDC. The agreement now needs the approval of Economic Affairs Division. Draft on the cost reasonableness analysis and project implementation letter for this project is under review.

NTDC System Studies

- Intermittent renewables draft final report of Task C (Financial Analysis) has been received. Final report of Task A and B are expected by end of October. GOPA has agreed to provide intensive workshop when study model is turned over to NTDC Power Planning (should be mid-November).

Testing Equipment for Grid System Operations

- Six out of eight shipments of testing equipment for NTDC GSO arrived at port. The exemption for two shipments was granted and their clearance is awaited. Upon delivery, the vendor will also demonstrate the testing equipment for NTDC staff.

Real Time Power System Simulator

- The installation and commissioning was completed on October 2, 2015 whilst, training started from October 5, 2015 and continued through October 29. The projects assigned to trainees are being evaluated.

Auto Transformer Program

- Commissioning of first 250 MVA transformer at 220kV Mardan GS completed.
- Installation of second 250 MVA transformer at 220kV Mardan GS started from October 27. The transformer is expected to be in service by Nov 20, 2015.
- Installation of first 160 MVA transformer at 220kV Nishatabad GS started. Pre-commissioning activities are in progress. The transformer is likely to be in service by Nov 20, 2015.
- Factory Acceptance Test (FAT) of repaired 220/132kV 160MVA transformer at HEC was unsuccessful again. A revised schedule will be shared later.
- The repaired 500/220kV 150MVA transformer's winding has been put back, oil filled and oil dehydration is in progress. Factory acceptance test call is awaited.

Grid System Information System

- Training on grid system information of Jamshoro and Guddu 500kV and 220kV circles was completed thereby making (89%) eight out of nine circles completed. Training of Quetta circles is scheduled next week.

Strategic Business Plan

- Final draft of strategic business plan was sent to NTDC on October 30, 2015.

Live Line

- Refresher onfield training of Hyderabad Electric Supply Company is underway and scheduled to end by October 30, 2015.
- Monitoring and evaluation of LESCO's live line crew was initiated on October 15 and will conclude on October 30, 2015.

PROGRAM SUPPORT ACTIVITIES

CAPACITY BUILDING

Live Line Maintenance. EPP compiled a Live Line Maintenance Batch II (i.e. MEPCO, SEPCO, QESCO and LESCO) comprehensive report for the training completed on September 18, 2015 at NTDC Tarbela Training Center. Refresher course training at HESCO has been completed on October 30th, 2015. To date EPP has completed all of the five refresher courses at IESCO, PESCO, FESCO, GEPCO, and HESCO; along with 14-weeks LLM training for MEPCO, SEPCO, QESCO and LESCO.

Real Time Power System Simulator Training (RTPSS): EPP completed RTPSS training on October 29th, 2015 at NTDC, Lahore. EPP trained total 24 participants from NTDC's system protection, design, planning department and Training Services Group (TSG) department. EPP conducted M&E session with Real Time Power System Simulator Training participants at NTDC, Lahore on October 27th - 28th, 2015.

GENDER ACTIVITIES

Increased Female Participation: EPP trained 27% females from NTDC in exchange visits. Between April – July 2015, EPP trained the following percentage of females during Design Center Training course at NTDC i.e. 36% in AUTOCAD, 21% in PLS-CADD, 23% in PLS-Tower, 20% in PLS- Pole, 20% in SAPS, 37% in SAGSEC, 25% in CAISON, 36% in ARCGIS, 33% in MS Project, and 27% in Bentley substation. EPP trained 25% of females during Real Time Power System Simulator training at NTDC, Lahore.

MONITORING & EVALUATION

Post-Trainings Evaluations: EPP conducted the post-training evaluation session and filed training evaluation forms with the Live Line Maintenance crew from Hyderabad Electric Supply Company (HESCO) on October 20th, 2015 at HESCO. EPP conducted post training evaluation sessions with Real Time Power System Simulator (RTPSS) training participants on October 27-28, 2015 at NTDC, Lahore.

Acknowledgement Letters: As of October 2015, EPP has obtained the following acknowledgement for its accomplished activities from its stakeholders:

CPGCL, NPGCL, JPGCL, Gomal Zam, Satpara, Tarbela, Planning Commission, MOF, ISGS, PQA, PESCO, NTDC, FESCO, IESCO, GEPCO, MEPCO, LESCO, SEPCO and HESCO.

PakInfo: EPP has completed data entry for the fourth quarter of FY2015; following IP submission on October 30, 2015.

Confidential information redacted

PROCUREMENT AND PURCHASE ORDERS

Item	Achieved or Completed	Targets LOP	% Completion
Procurement contracts (\$ million)	\$36.02 million	\$36.02 million	100.00

During the month of October 2015, EPP procurement department completed and issued three (03) Purchase Orders amounting above \$10,553/-. EPP also worked on the following procurements:

- 1 no. 250MVA auto-transformer installed and commissioned successfully at Mardan Grid Station.
- 1 no. 40MVA Power Transformer delivered installed and commissioned successfully at Mardan Grid Station.
- Duty Free Customs Clearance and Delivery of 31 Nos. Circuit Breakers for PESCO and Mardan Grid Station. Total amount USD686,100.
- Factory Acceptance Test of Repaired 160MVA Auto-transformer at Heavy Electrical Complex, Hattar.
- Factory Acceptance Test of Power Cable and Incoming Panels for 3 Nos. 40MVA Power Transformers at Pak Elektron Ltd (PEL) Lahore.
- Successful delivery USAID Property non-expandable items to NTDC Lahore and PESCO Peshawar as per USAID approval.

PROGRESS IN NUMBERS

Table 3 below provides EPP indicators, targets, and achievements for October 2015. **Table 4** presents EPP Indicators by component for October 2015.

Table 3: EPP Indicators and Achievements for October 2015

Indicator	Unit	LOP Target	Achieved in October 2015	Total Achieved as of October 2015	LOP % Achieved as of October 2015
I.a: GWh of energy sold	GWh	7880	728.8	10,107	128%
I.1.a: Number of beneficiaries with improved energy services due to United States Government assistance	Individuals	13,624,226	1,330,992	17,537,292	128%
I.1.b: GWh of energy availability	GWh	7880	728.8	10,107	128%
I.1.c: MW available to meet power sector demand as a result of USG assistance	MW	1,303	104	1,650.2	127%
I.1.1.a: MW of electrical power added or saved as a result of USG improvements	MW	875	0	1,027.2	117%
I.1.1.b: Efficiency of thermal power plant tests completed	No.	3	0	3	100%
I.1.1.c: Number of USG supported installations and operations and maintenance improvements	No.	181	2	171	94%
I.1.1.d: Number of transmission bottlenecks resolved	No.	121	3	130	107%
I.1.4.a: Public and private funds leveraged by the USG for energy infrastructure projects	U.S. \$	193.5 million	0	178.5 million	92%
I.2.1.a: Number of key policies and regulations in various stages	No.	12	4	50	417%
I.2.2.a: Number of policies following international best practices	No.	6	0	4	67%
I.2.2.b: Number of board recommendations following international best practices	No.	4	0	3	75%
I.2.3.a: Number of best practice-driven systems created, improved, and implemented	No.	10	1	10	100%
I.2.4.b: Number of public forums resulting from USG assistance in which government officials and citizens interact	No.	12	0	9	75%

Table 4: EPP Indicators by Component October 2015

Indicator	Unit	Component	LOP Target	Achieved in October 2015	Total Achieved as of October 2015	LOP % Achieved as of October 2015
I.1.a: Number of beneficiaries with improved energy services due to United States Government assistance	Individuals	Total	13,624,226	1,330,992	17,537,292	128%
		I-Generation	7,993,106	0	9,382,406	117%
		IV-Transmission Throughput Capacity	5,477,544	1,330,992	7,973,154	146%
		IV – Transmission Added/Saved	153,576	0	181,732	118%
I.1.b: GWh of energy availability	GWh	I & IV	7880	728.8	10,107	128%
		I-Generation	4,796	0	5,642.29	118%
		IV-Transmission Throughput Capacity	2999.4	728.8	4,365.97	146%
		IV – Transmission Added/Saved	84	0	99.50	118%
I.1.c: MW available to meet power sector demand as a result of USG assistance	MW	I & IV	1,303	104	1,650.2	127%
		I-Generation	863	0	1,013	117%
		IV-Transmission Throughput Capacity	428	104	623	146%
		IV – Transmission Added/Saved	12	0	14.2	118%
I.1.1a: MW of electrical power added or saved as a result of USG improvements	MW	I & IV	875	0	1027.2	117%
		I-Generation	863	0	1,013	117%
		IV – Transmission Added/Saved	12	0	14.2	118%

ANNEX I

ANNEX I: LIST OF KEY MEETINGS

Table 5: List of Key Meetings Conducted in October 2015

Meeting with	Date	Location	Purpose	Outcome/Result
Component 1: Project Monitoring & Implementation				
CEO Jamshoro	Oct 5, 2015	Jamshoro Thermal Power Station	To expedite the installation of remaining equipment's	Installation of remaining equipment expedited to ensure that it will be complete by project completion
CEO Muzaffargarh	Oct 30, 2015	Muzaffargarh Thermal Power Station	To expedite the installation of remaining equipment's	Installation of remaining equipment expedited to ensure that it will be complete by project completion date.
Component 2: Policy and Reform				
MPNR, USAID, EPP, LMKR & KMR	Oct 08, 2015	MPNR Offices, Block A, Secretariat, Islamabad	Presentation on key findings of Milestone – 5 covering technology, infrastructure water availability and breakeven well head cost of Shale Gas exploitation	<ul style="list-style-type: none"> The presentation was made to MPNR and USAID on Milestone – 5 of Shale Gas/Oil assessment program. GOP will review the option of undertaking a pilot program through the public sector E&P companies to verify the potential preferably on the sweet spots identified as a result of the evaluation. A forum will be arranged by USAID and MPNR where the final presentation on the program will be held by the consultants.
Cross Cutting				
Real Time System Simulator Training(RTPSS)	Oct 27-28, 2015	NTDC, Lahore	Conducted an M&E Post-RTPSS training session	EPP's M&E team conducted an M&E post -RTPSS training session with 16 out of 24 participants from NTDC's Design, Planning and Technical support services group departments who completed their training course on October 29, 2015. M&E session included feedback forms and knowledge assessment session highlighting trainee's individual training experiences followed by a two-minute soundbite.

Meeting with	Date	Location	Purpose	Outcome/Result
USAID/Pakistan M&E 2 nd Coordination Meeting	Sept 30, 2015	Kohinoor Hall Marriott Islamabad	USAID hosted an M&E 2 nd Coordination meeting for PIRs (performance indicator) collection, record keeping, analysis, and reporting	EPP attended 2 nd quarterly meeting arranged by USAID on September 30, 2015 at Marriott. The purpose was to meet the M&E coordinators for PIRs (performance indicator) collection, record keeping, analysis, and reporting
Participant Training Working Group (PTWG) members	Oct 9, 2015	The United States Educational Foundation in Pakistan (Fulbright Commission)	Participant Training Working Group (PTWG) – VCS issues related to In country, host country and third country trainings.	EPP attended the training focused on the In Country trainings and problems, challenges encountered in the implementation.
Hyderabad Electric Power Company	Oct 20, 2015	Hyderabad Electric Power Company	Conducted a M&E Post – LLM training session	EPP's M&E team conducted a post LLM training session with 9 linemen from HESCO at HESCO who will be completing their refresher course on October 30, 2015. M&E session included feedback forms highlighting linemen individual training experiences followed by a two-minute soundbite and group photo session with the Superintendent Engineer HESCO and EPP's Live Line Coordinator.

www.ep-ep.com.pk
info@ep-ep.com.pk