



USAID
FROM THE AMERICAN PEOPLE



USAID ENERGY POLICY PROGRAM



WORK PLAN

REVISION FEBRUARY 20, 2015

FEBRUARY 2015 – OCTOBER 2015

March 2015

This program is made possible by the support of the American people through the United States Agency for International Development (USAID)

USAID ENERGY POLICY PROGRAM

WORK PLAN

FEBRUARY 2015 – OCTOBER 2015

Submission Date: March 13, 2015

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

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

©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: jhicks@ep-ep.com.pk

DISCLAIMER

The contents of this document are the sole responsibility of Advanced Engineering Associates International, Inc. (AEAI) and do not necessarily reflect the views of USAID or the United States Government.

CONTENTS

ACRONYMS.....	III
WORK PLAN.....	I
Component I – Monitoring & Support of Project Implementation.....	I
Component II – Advice and Support of Energy Sector Reform.....	2
Component III – Advice and Assistance in the Development of Project Agreement Documents.....	2
Component IV – Transmission & New Activities	3
Overall Program Support	3
Remaining Activities After the Energy Policy Program.....	4
FINANCIAL PROJECTIONS.....	6
PROCUREMENT PLAN	7
LEVEL OF EFFORT	9
ANNEX I: ACTIVITY SHEETS FOR COMPONENT I.....	11
Monitoring and Implementation Support.....	11
Support to Hydels	13
Support to GENCOs.....	14
ANNEX II: ACTIVITY SHEETS FOR COMPONENT II	15
Energy Sector Reform Advisory support.....	15
Support to Petroleum Sector	17
ANNEX III: ACTIVITY SHEETS FOR COMPONENT III.....	19
Selection, Planning, and Design of New projects.....	19
ANNEX IV: ACTIVITY SHEETS FOR COMPONENT IV	20
PESCO Turnaround DISCO	20
Technical Support to NTDC	22
Live-Line Maintenance Development.....	24
ANNEX V: ACTIVITY SHEETS FOR OVERALL PROGRAM SUPPORT.....	26
Increased Public Awareness on Energy Sector Reform	26
Energy Sector Capacity Building	27
Gender Equality.....	28
ANNEX VI: FY2015 MONTHLY PIPELINE PROJECTION	29
ANNEX VII: EPP STAFF.....	32

LIST OF TABLES

Table 1: FY2015 Quarterly Financial Projections	6
Table 2: EPP Procurement Plan through October 2015	7
Table 3: EPP Staff Numbers for Full-time, Part-time, and To Be Determined (TBD) Positions	9
Table 4: FY2015 Existing Property	9
Table 5: Quarter 1 FY2015 Monthly Projections	29
Table 6: Quarter 2 FY2015 Monthly Projections	30
Table 7: Quarter 3 FY2015 Monthly Projections	30
Table 8: Quarter 4 FY2015 Monthly Projections	31
Table 9: Quarter 1 FY2016 Monthly Projection	31

ACRONYMS

AEAI	Advanced Engineering Associates International, Inc.
AEDB	Alternate Energy Development Board
CPPA	Central Power Purchasing Agency
DGPC	Director General Petroleum Concessions
DISCO	Distribution Company
EPP	Energy Policy Program
ERP	Enterprise Resource Planning
E&P	Exploration & Production
FARA	Fixed Amount Reimbursable Agreement
FSA	Fuel Supply Agreement
G2G	Government to Government
GENCO	Generation Company
GEPCO	Gujranwala Electric Power Company
GIS	Geographic Information System
GOP	Government of Pakistan
HESCO	Hyderabad Electricity Supply Company
IESCO	Islamabad Electricity Supply Company
IPP	Independent Power Producer
LESCO	Lahore Electricity Supply Company
LNG	Liquefied Natural Gas
MCF	Thousand Cubic Feet
MOF	Ministry of Finance
MPNR	Ministry of Petroleum and Natural Resources
MW	Megawatt
MWP	Ministry of Water and Power
NEPRA	National Electric Power Regulatory Authority
NICRA	Negotiated Indirect Cost Agreement
NPCC	National Power Control Center
NTDC	National Transmission and Dispatch Company
OGDCL	Oil and Gas Development Company, Ltd.
O&M	Operations and Maintenance
PC	Planning Commission
PEI	Performance Efficiency Improvement
PPIB	Private Power and Infrastructure Board
PSE	Public Sector Entity
QESCO	Quetta Electricity Supply Company
SCADA	System Control and Data Acquisition
SNGPL	Sui Northern Gas Pipeline Company, Ltd.
SPA	Sales and Purchase Agreement
SSGC	Sui Southern Gas Company Ltd.
USAID	United States Agency for International Development
USG	United States Government
WAPDA	Water and Power Development Authority

WORK PLAN

This Energy Policy Program (EPP) Work Plan covers the period from February 27, 2015 to October 15, 2015, which is currently EPP's final project year. While EPP will continue to strengthen Pakistan's power generation and transmission systems and promote relevant policy reform, this work plan will focus on integrating best practices and sustainable solutions to support the previous years' work and better enable counterpart entities to continue the reform process more independently. EPP will taper off activities supporting the current contract by the end date of October 15, 2015.

As a result of United States Agency for International Development (USAID) assistance and EPP's monitoring efforts, 1,013 MWs of generation, 479 MWs of transmission throughput capacity, and 12.2 MWs of transmission have been added or saved to date. These 1,504.2 MWs added or restored through generation and transmission improvements will bolster the reliability of the system and improve the economic and social stability of Pakistan. This additional power is sufficient to provide electricity to more than 15 million beneficiaries and generate \$663 million in sector-wide financial performance improvement.¹

All of EPP's proposed activities under this Work Plan are geared towards addressing Pakistan's energy shortfalls, a major limit to the country's economic progress. To that end, EPP's Work Plan will complete activities that provide the people of Pakistan and its energy sector with the tools, technical support, capacity building, and more strengthened institutions that will promote stability, economic development, and security in the region. EPP's ultimate goal is to deliver targeted support that helps Pakistan expand its indigenous production capacity, eliminate the need for subsidies, and mitigate pressures contributing to the country's current energy crisis.

To achieve anticipated MW gains and to maintain a strong energy policy framework, EPP will complete the following activities under the two intermediate result (IR) areas identified under *Development Objective 1: Increased Sustainable Energy Supplied to the Economy*. Activities will contribute to either *IR 1.1 Increased Energy Supply* or *IR 1.2 Improved Energy Sector Governance*.

COMPONENT I – MONITORING & SUPPORT OF PROJECT IMPLEMENTATION

See **Annex I – Activity Sheets for Component I** for comprehensive activity details, including estimated timelines and associated staff.

Activity 1.1 – Monitoring and Implementation Support

EPP will continue to monitor and implement support of Government to Government (G2G) projects for the three GENCOs, the two remaining hydel programs (Tarbela and Mangla), and a run-of-the-river project. The G2G agreements for the GENCOs will be completed by July 2015 with minimal procurement items remaining. Hydel support for Tarbela Phase I will be complete in December 2015; the Tarbela Phase II Activity Agreement continues through December 2016 and the Mangla Activity Agreement continues through December 2017. EPP will support Tarbela Phase I, Tarbela Phase II, and Mangla and Golen Gol through October 2015 and hand the remaining activities over to USAID.

Activity 1.2 – Support to Hydels

To support equipment installations and increased capacity, EPP will improve hydel capacity by providing on-site training to Water and Power Development Authority (WAPDA) staff that will

¹ EPP calculates 9,262 beneficiaries per generation MW (1013) and 12,798 beneficiaries per transmission MW (428 throughput capacity and 12 added/saved for a total of 440 MW). Calculation methodology available in EPP's Monitoring and Evaluation Plan – October 2014.

increase efficiency and operate the hydro power plants at a maximum capacity. Once participants have completed the on-site Operations and Maintenance (O&M) training, EPP will follow up with the participants and their managers to review training impacts and identify follow-up activities. Training will be targeted toward technicians and operators responsible for day-to-day O&M improvements. This on-site training will take place in May 2015 with monitoring and evaluation to follow through in October 2015.

Activity 1.3 – Support to GENCOs

Support to the GENCOs includes NEPRA tariff revisions for fuel costs, as well as thermal and hydro best practices in O&M. EPP will conduct a site visit to an Independent Power Producer (IPP) with GENCO staff to witness best practices and observe demonstrations to improve O&M. In addition, EPP will complete implementation of the Performance Efficiency Improvement (PEI) project for the thermal power plants to better ensure that G2G funding for installations and equipment will be sustainable when United States Government (USG) assistance subsides. To date, EPP assisted Jamshoro in the NEPRA tariff petition and will attempt to file with Muzaffargarh and Guddu before October 2015. Due to GOP delays, the process for the two GENCOs could extend past the program end date.

COMPONENT II – ADVICE AND SUPPORT OF ENERGY SECTOR REFORM

See **Annex II – Activity Sheets for Component II** for comprehensive activity details, including estimated timelines and associated staff.

Activity 2.1 – Energy Sector Reform Advisory Support

EPP will complete on-going energy reform activities at the Ministry of Finance (MOF), Ministry of Water and Power (MWP), NTDC, and the Planning Commission – Energy Wing in October 2015. Specifically, EPP will finalize its assistance in the following areas: power purchase agreements, fuel supply agreements, embedding technology and management improvements, monitoring NTDC’s human resources process review and providing recommendations for improved organizational efficiency and effectiveness, implementing energy sector-wide modeling tools to improve financial performance and develop sustainable policies using the Power System Integrated Model (PowerSIM) and Long-Range Energy Alternatives Planning System (LEAP), updating the NTDC strategic plan, updating the Planning Commission’s 11th Five-Year Plan, and revising the 2013 Electricity Act. All policy activities will be completed by October 2015 as detailed in Annex IV.

Activity 2.2 – Support to Petroleum Sector

To address Pakistan’s energy crisis, the EPP will establish Government of Pakistan (GOP) expertise and an improved policy framework for new petroleum sector opportunities, including LNG and the development of shale gas production. EPP will complete facilitation of the development of a supply chain for LNG import, shale gas capacity determination, and Exploration and Production (E&P) policy development. Particular emphasis will be paid to the upstream oil and gas infrastructure. These activities, which will support the implementation of the August 2012 E&P Policy, will primarily involve policy and technical advisory services for MPNR, as well as public and private sector oil and gas stakeholders.

COMPONENT III – ADVICE AND ASSISTANCE IN THE DEVELOPMENT OF PROJECT AGREEMENT DOCUMENTS

See **Annex III – Activity Sheets for Component III** for comprehensive activity details, including estimated timelines and associated staff.

Activity 3.1 Selection, Planning, and Design of New Projects

If requested by USAID, EPP will continue to perform due diligence for potential donor-funded transmission and hydel projects as advised by USAID. EPP will finalize all due diligence efforts related

to candidate projects through stages I and II as directed by USAID. The due diligence efforts by EPP will result in more MWs added to the energy sector and improved reliability should the recommended development of new projects and rehabilitation of existing projects move forward as planned.

COMPONENT IV – TRANSMISSION & NEW ACTIVITIES

See **Annex IV – Activity Sheets for Component IV** for comprehensive activity detailing, including estimated timelines and associated staff.

Activity 4.1 – PESCO Turnaround DISCO

EPP will finalize the 82 PESCO substation audits and prepare a final summary report and data base to be given to PESCO; repair and/or install remaining power transformers; procure required grid equipment; install remaining cooling fans; and handover bucket trucks, crane trucks, oil dehydration trailers, and live-line equipment. These measures add capacity to PESCO's grid, which in turn, will result in more regular revenue collection and improved energy delivery. In addition to baseline equipment purchases to turn around PESCO, EPP will have instituted new regimens for power transformer and system maintenance that will in turn deliver power to more customers in a critical region.

Activity 4.2 – Technical Support to NTDC

Through rehabilitation and installation of equipment, human capacity building, and the introduction of new management systems, EPP will have improved NTDC's efficiency, implemented best-practice-driven systems, and assisted in the removal of transmission bottlenecks and improved system reliability. Specifically, EPP will complete 45 technical audits that will lead to a prioritized intervention list for NTDC grid station reliability improvements. EPP needs to complete studies for system load-flows and the integration of intermittent renewable energy supplies, implement a Real Time Digital Simulator, rehabilitate the Design Center, continue advising NPCC for day-to-day dispatch operations and training on the grid code, provide an ERP data center in coordination with NTDC's ERP software implementation, and finalize the implementation of an SMS/SCADA system. EPP anticipates completion of activities by October 2015 and recommends follow-on activities as identified in the Executive Summary.

Activity 4.3 – Live-Line Maintenance Development

EPP will complete live-line training on 132 kV and 66 kV transmission lines for nine DISCOs that will improve efficiency and delivery of energy services. As a result of EPP's assessment of the Tarbela training center to ensure a safe and sustainable training environment for the live-line training, EPP will continue to work with NTDC to monitor the improvements to the training center. At the completion of training, each crew will receive the trucks, trailers, live-line tools, and the personal protective equipment needed to conduct live-line maintenance in their region without having to de-energize the transmission lines. EPP started the refresher course in March 2015 for completion by August for five DISCO crews. Two DISCO crews are in training at the NTDC Tarbela training center scheduled for May completion, and the two final DISCOs are scheduled for October completion. All nine DISCOs will finish training by October 2015; therefore, EPP recommends USAID continue monitoring and evaluation support for one year after training to ensure that sustainable practices are being followed.

OVERALL PROGRAM SUPPORT

See **Annex V – Activity Sheets for Overall Program Support** for comprehensive activity details, including estimated timelines and associated staff.

Activity PS.I – Increased Public Awareness on Energy Sector Reform

EPP will disseminate key activity results and highlight ongoing program efforts through public forums. The public forums will use professional memberships, technical interest groups, and government stakeholders to discuss pertinent energy issues such as hydroelectricity, LNG imports, renewable

energy introduction to the grid, and gender equality in the energy sector. EPP will complete seven forums by October 2015 as required in the Monitoring and Evaluation Plan – October 2014.

Activity PS.2 – Energy Sector Capacity Building

EPP will complete activities dedicated to human capacity building across generation, transmission, oil and petroleum, and policy initiatives by October 2015 in conjunction with other Work Plan activities. To date EPP has completed: O&M best practices training designed to improve management and day-to-day O&M practices for all three GENCOs and seven hydels; two out of three exchanges to the United States for NTDC staff to learn about improved transmission operations; and on-site training for NTDC, MPNR, MWP, and the Planning Commission (PC) for improved modelling and technology tools (see Annex IV). Through capacity building, EPP will have developed and increased sustainable best practice methodologies across selected Public Sector Entity (PSEs) to increase the efficiency and the amount of energy delivered to consumers.

Activity PS.3 – Gender Equality Assessment

EPP completed a baseline assessment of gender integration as it currently exists in Pakistan’s energy sector and a strategy that outlines recommendations for future policy changes and potential projects and program regimens to be delivered by EPP or other donor-funded programs. EPP will complete a public forum dedicated to gender equality in the energy sector once the assessment and strategy inputs are finalized with USAID. The forum will disseminate assessment findings and suggested strategy recommendations among stakeholders and start a dialogue about next steps. Due to a lack of funding and time, EPP’s remaining gender interventions include the gender forum and continued efforts to increase female participation in planned capacity building programs by October 2015. At the conclusion of this important program, EPP will have contributed substantially toward reducing the immediate energy shortages and helping the country achieve longer term energy independence.

REMAINING ACTIVITIES AFTER THE ENERGY POLICY PROGRAM

As of February 2015, EPP forecasts that certain activities will require additional time beyond EPP’s current contract expiration date. Due to security concerns resulting from protests in the area of EPP’s Islamabad office located in G-6/3, it was shut down from August 14 through September 8. The security situation caused delays in procurement, site visits, and difficulty in preparing paperwork as the servers were not accessible. Additionally, USAID offices were closed during a portion of the protests, which delayed approvals. EPP recommends that USAID consider follow-on activities or continued assistance for:

- **Component I**

Monitoring and Implementing Support. Currently EPP advises on three G2G projects expected to conclude after EPP’s contract. The Mangla Dam rehabilitation will be completed in early 2017, Tarbela Dam Phase I will be completed in December 2015, and Tarbela Dam Phase II will be completed in December 2016. In addition, due diligence stage I has been completed for the Golen Gol run-of-the-river project, which will be completed after EPP ending date.

Performance Efficiency Improvement. EPP continues to support the GENCOs in revised NEPRA tariff petitions; however, GOP delays could extend the process after October 2015. EPP recommends continued technical support for the GENCOs to file revised NEPRA tariffs.

- **Component II**

Central Power Purchasing Authority Separation. EPP has continued to support NTDC and WAPDA in the formulation of a power purchasing authority to allow for CPPA’s separation from NTDC as an independent body. EPP anticipates that CPPA will require continued advisory support after October 2015 before becoming wholly independent.

Director General Petroleum Concessions Support. The Ministry of Petroleum and Natural Resources, Director General Petroleum Concessions (DGPC) division continues to request support for shale gas, conventional, and non-conventional work. EPP will complete the shale gas framework by August 2015; however, implementation of such a framework will require continued support after EPP.

- **Component IV**

Live-Line Maintenance. Due to procurement delays in purchasing tools and trucks and lack of availability of NTDC Tarbela training center, the live-line maintenance program was re-started in February 2015 and will be completed in October 2015. As part of the sustainability of live-line maintenance, EPP recommends monitoring and evaluation of all live-line crews for the minimum of one year after training. The recommended timeline is detailed in **Annex IV**.

Enterprise Resource Planning. NTDC will pay for the software and hardware upgrades required for ERP; however, NTDC requires technical advisory support for procurement and implementation. EPP's current ERP advisory will assist NTDC in initial procurement details, but EPP recommends that USAID continue NTDC support for ERP after October 2015.

National Power Control Center. Due to recent power outages, NPCC welcomed EPP back into their offices after a long delay. EPP will conduct dispatcher training and continue on-site assistance until October 2015. Given the management failures at NPCC, EPP recommends USAID continue intervention after October 2015 to guarantee reliable and legal dispatch.

PESCO Breakers. EPP prioritized PESCO's requests for equipment, rehabilitation, and installations, and recommends that the request for four additional breakers to be transferred through NTDC should be addressed. EPP will provide USAID with a complete list of PESCO requests and recommendations before October 2015.

Gender Equality Integration. EPP will host a stakeholder forum, but buy-in from the GOP will require intensive policy interventions and a dedicated budget for gender equality. EPP recommends that donors continue to pursue gender equality in the energy sector using EPP's strategy.

Confidential information redacted

PROCUREMENT PLAN

Table 2: EPP Procurement Plan through October 2015

Description	Amount Payable USD	Start Date	End Date
PROCUREMENT ISSUED			
Heat-rate testing thermal power plants, GENCOs 1,2, and 3 at Muzaffargarh, Jamshoro, and Guddu	72,220	11-Apr-13	10-May-15
4 Nos. telescopic bucket trucks	83,265	12-Aug-14	31-Mar-15
Supply and delivery of 220/132kV 250MVA 3 Phase Auto PTF	2,265,760	18-Sep-14	24-Mar-15
Tools and equipment for PESCO T&G Department	647,252	15-Oct-14	15-Jun-15
Repair of damaged towers	153,071	15-Oct-14	28-Feb-15
Replacement, commissioning, and installation of 31.5/40MVA, 132/66 KV Elta repaired PTF at Chakdara GS with dismantling and placement of existing PTF at PESCO	18,500	27-Oct-14	28-Feb-15
Hardware for NTDC Design Department	20,691	28-Oct-14	28-May-15
Real Time Digital Simulator	1,708,200	29-Oct-14	28-Sep-15
Study to deal with renewable energy	233,042	1-Dec-14	30-Jun-15
Supply and delivery of 4 sets of 220kV and 27 sets of 132kV CBs for NTDC & PESCO.	548,880	21-Nov-14	31-May-15
Personal Protective Equipment (PPE) for live-line trainers	25,325	18-Nov-14	18-Mar-15
Installation and commissioning of capacitor banks	28,600	18-Nov-14	18-Mar-15
Insurance of Toyota Vigos 9 Nos.	3,293	17-Nov-14	11-May-15
Supply & delivery of bus disconnecters, current transformers, and surge arresters for Mardan & Nishatabad to NTDC warehouse Gatti	273,870	25-Nov-14	25-Jun-15
Preparation of side agreement to remove CPPA functions from the WAPDA/NTDC Power Purchase Agreements.	3,000	1-Dec-14	25-Dec-15
Supply and delivery of hardware connectors and conductors for NTDC Mardan and Nishatabad Grid Stations	440,819	16-Dec-14	16-Jun-15
Oil purification plants	231,073	19-Dec-14	19-Jun-15
Fire protection system	164,800	15-Dec-14	15-May-15
Supply and delivery of live-line tools	71,055	12-Dec-14	12-Mar-15
Duty-free customs clearance and transportation of tools and equipment for T&G, PPE, and live-line tools and equipment	3,985	9-Jan-15	9-Apr-15
Short-term legal services for power sector	3,500	22-Jan-15	2-Feb-15
Power transformer oil	4,540	12-Jan-15	22-Feb-15
2 No. 40 MVA power transformers	1,351,460	11-Feb-15	15-Jul-15
Software for NTDC Design Department	456,800	10-Feb-15	10-Jul-15
Supply of server, laptop, desktop, ups, printer, scanner, network switches for NTDC IT Department.	119,095	11-Feb-15	15-Aug-15
Translation of live-line training manuals	2,911	9-Dec-14	9-Mar-15
Advisory service for unconventional shale gas	951,098	26-Jun-13	26-Jun-15
Legal advisory services for LNG procurement	959,093	15-Jul-14	31-Jul-15
Commercial and technical advisory services for LNG procurement	383,555	15-Jul-14	31-Aug-15

Description	Amount Payable USD	Start Date	End Date
Consultancy and construction supervision services for PQA for LNG terminal	1,077,562	15-Oct-14	15-Oct-15
Rapid environmental analysis of transmission system	50,128	1-Dec-14	15-Mar-15
Full Mission Bridge Simulation studies	102,600	4-Feb-15	4-Mar-15
Upstream oil and gas consultancy services	1,272,275	13-Jan-14	15-Oct-15
LNG business management intensive training program	338,029	30-Dec-14	31-Aug-15
Live-line training	41,930	3-Feb-15	8-May-15
Executive exchanges to US for NTDC	60,000	28-Mar-14	31-Mar-15
TOTAL PROCUREMENT ISSUED	14,171,277		
PROCUREMENT IN PROCESS			
Transformer rehab/reconditioning NTDC Grid Station	505,358	Feb, 2015	Jun, 2015
Testing equipment and instruments for Grid System Operations (GSO) Department NTDC	2,239,000	Jun, 2015	Sep, 2015
Crane-mounted trucks	400,000	Apr, 2015	Jul, 2015
Duty-free Customs clearance transportation and transit insurance	160,000	Apr, 2015	Jul, 2015
Installation of 20 CB in PESCO	55,000	May, 2015	Jul, 2015
Training for NPCC dispatchers	200,000	May, 2015	Jul, 2015
Grounding sets and PPEs for PESCO	150,000	Apr, 2015	Aug, 2015
Legal services	50,000	Mar, 2015	Oct, 2015
GENCO operations and maintenance on-site training	300,000	May, 2015	Sep, 2015
Policy and regulatory framework for shale gas	650,000	Jun, 2015	Sep, 2015
RFP for petroleum consultant	79,000	Apr, 2015	Sep, 2015
TOTAL PROCUREMENT ISSUED	4,788,358		
PROCUREMENT UNDER PLAN			
Customs clearance and transit Insurance	50,000	May, 2015	June, 2015
Rapid Environmental Analysis of transmission system for Golen Gol	30,000	May, 2015	Aug, 2015
Live-line maintenance training for two DISCOs	30,000	May, 2015	Sep, 2015
Hydel operations and maintenance on-site training	300,000	May, 2015	Sep, 2015
TOTAL PROCUREMENT UNDER PLAN	410,000		

LEVEL OF EFFORT

As of February 21, 2015, EPP has 110 full-time and 4 part-time staff positions across multiple departments. EPP anticipates hiring 10 positions in FY2015 in policy, transmission, and generation; the status of positions by department is given in Table 3 below:

Table 3: EPP Staff Numbers for Full-time, Part-time, and To Be Determined (TBD) Positions

EPP Department	Full-Time Staff	Part-Time Staff	TBD Part-Time	TBD Full-Time	Total Positions
Communications	6	2	0	0	8
Cross-Cutting	4	0	0	0	4
Due Diligence	3	0	0	0	3
Finance & Administration	36	0	0	0	36
Generation	5	1		2	8
Management	2	0	0	0	2
Policy	17	0	0	3	20
Procurement	4	1	0	0	5
Security	2	0	0	0	2
Transmission	30	0	0	5	35
Total	109	4	0	10	123

Annex IV-EPP Staff provides a list of all EPP existing and anticipated staff by name, title, full or part time, expatriate or CCN, location, and department. EPP staff has begun downsizing as projects are completed and will continue to downsize accordingly until October 2015.

To be compliant with item C.4.9 USG Pakistanization Policy of EPP's contract, EPP will continue to minimize the use of expatriate managers and advisors. Of the 123 staff (existing and anticipated), there are 11 expatriates with 9 full time and 2 part time, which is 90% local staff across Pakistan offices and US based employees.

EPP properties for FY2015 are listed in Table 4. EPP anticipates closing all offices in October 2015 given ongoing work in Islamabad, Peshawar, and Lahore through the end of the contract.

Table 4: FY2015 Existing Property

Location	Guesthouse	Office Space	Anticipated Office Space	Total
Islamabad	2	1	0	3
Peshawar	1*	0	0	1
Lahore	0	1	0	1
Total	3	2	0	5

*As of November 2014, EPP's Peshawar office is consolidated with its guesthouse.

ANNEXES

ANNEX I: ACTIVITY SHEETS FOR COMPONENT I

MONITORING AND IMPLEMENTATION SUPPORT

Completion of existing government to government activity agreements	
Contract Link	Principal Stakeholders
<ul style="list-style-type: none"> Component I 	<ul style="list-style-type: none"> GENCOs I, II, III (Jamshoro, Guddu, Muzaffargarh) WAPDA hydels (Tarbela, Mangla)
Activity Description & Rationale	
Completion of existing G2G activity agreements for three GENCOs and continue advisory support for Mangla and Tarbela (Phase I and II) through the end of the EPP.	
Outputs	Expected Results
<ul style="list-style-type: none"> G2G activity agreements completed All funding dispersed Equipment installed and operational MW's restored/added at GENCOs I, II, and III and all four hydel plants 	<ul style="list-style-type: none"> A total of 1,123 MW of resorted/available generation capacity in 2017 (1013 MW for October 2015) A total of US\$ 316.7 million in G2G funding dispersed
Activity Tasks	
<ul style="list-style-type: none"> Mangla Dam Rehabilitation Project EPP will monitor and evaluate the \$150 million USAID-funded dam project regarding procurement of major equipment, installation, and operations and maintenance improvements. The Activity Agreement extends past the EPP, until December 31, 2017; therefore, the EPP will hand over G2G monitoring of Mangla to USAID. The project will eventually result in 90 MW added or saved. Tarbela Hydropower Plant Rehabilitation – Phase I To date, the EPP added or saved 128 MWs and 80% of equipment has been installed at Tarbela; however, two items remain in procurement to complete the G2G agreement. The Activity Agreement extends past the EPP, until December 31, 2015; therefore, the EPP will hand over G2G monitoring of Tarbela (Phase-I) to USAID. Tarbela Hydropower Plant Rehabilitation – Phase II EPP will monitor and evaluate the \$25 million USAID-funded rehabilitation project for the replacement of equipment to increase plant sustainability and reliability. The Activity Agreement extends past the EPP, until December 31, 2016; therefore, the EPP will hand over G2G monitoring of Tarbela (Phase II) to USAID. The project will eventually result in 20 MW added or saved. EPP will provide support to USAID in developing project documentation for Golen Gol run-of-the-river hydro power project. Jamshoro (GENCO I) To date, the EPP added or saved 270 MWs and 96% of equipment has been installed at GENCO I; however, two items remain in procurement to complete the G2G agreement. USAID extended the Activity Agreement and the EPP will complete all G2G obligations by July 2015. Guddu (GENCO II) To date, the EPP added or saved 80 MWs and 95% of equipment has been installed at GENCO II; however, one item remains in procurement to complete the G2G agreement. USAID extended the Activity Agreement and the EPP will complete all G2G obligations by July 2015. Muzaffargarh Thermal Power Station (GENCO III) To date, the EPP added or saved 500 MWs and 95% of equipment has been installed at GENCO III. The EPP is working with GENCO III's management to reallocate funding for the remaining equipment and prioritize installations. USAID is in the process of extending the Activity Agreement and the EPP will complete all G2G obligations by July 2015. Environmental Compliance EPP's experts will ensure environmental compliance as per GOP and USG regulations through environmental site audits and environmental assessment reports 	

Name	Title/Justification	Level of Effort				
Talha Javed	DCOP/ Director of Project Monitoring & Implementation Support	Full Time				
Ghulam Abbas Malik	Senior Energy Expert-GENCO	Full Time				
M. Saleem Paracha	Senior Energy Expert- Hydro	Full Time				
M. Sadaf Iqbal	Environmental Expert	Full Time				
Asif Majeed	Senior Projects Monitoring & Implementation Engineer	Full Time				
TBD	Associate Engineer	Full Time				
TBD	Environmental Specialist	Full Time				
M. Idrees	Electrical Engineer	Full Time				
Results Framework						
I.1.a – Number of beneficiaries with improved energy services due to USG assistance						
I.1.b – GWh of energy availability						
I.1.c – Power (MW) available to meet power sector demand as a result of USG assistance						
I.1.1.a – MW of electrical power added or saved						
I.1.1.c – Number of USG supported installations and O&M improvements						
Activity Timeline						
Task	Start Date	End Date	FY 2015			
			Q1	Q2	Q3	Q4
Jamshoro	May 2010	Jul. 2015				
Guddu	May 2010	Jul. 2015				
Muzaffargarh	May 2010	July 2015				
Mangla	Aug. 2013	Dec. 2017				
Tarbela Phase I	Apr. 2010	Dec. 2015				
Tarbela Phase II	Oct. 2014	Dec. 2016				

SUPPORT TO HYDELS

Improve hydel plant capacity and sustainability						
Contract Link		Principal Stakeholders				
<ul style="list-style-type: none"> Component 1 Component 4 Task 5.6 		<ul style="list-style-type: none"> WAPDA hydels (Tarbela, Satpara, Gomal Zam, Mangla) 				
Activity Description & Rationale						
Provide on-site O&M training to WAPDA staff to efficiently manage the operation of hydro power plants at maximum capacity and ensure that G2G gains are sustainable.						
Outputs			Expected Results			
<ul style="list-style-type: none"> Staff skills upgraded regarding O&M best practices in a sustainable manner 			<ul style="list-style-type: none"> Operating costs reduced at hydels Best practice system developed and implemented 			
Activity Tasks						
<ul style="list-style-type: none"> O&M On-Site Training As a result of post-training evaluations with participants of the “Best Practices in Hydel O&M”, EPP will deliver an on-site training curriculum for operations staff (i.e. foremen, operators, sub-engineer) to improve operations and maintenance. Training will take place at one of the hydels with staff from visiting plants for two weeks, anticipated in Q3 FY2015. 						
Name		Title/Justification			Level of Effort	
Talha Javed		DCOP/ Director of Project Monitoring & Implementation Support			Full Time	
Mohammed Saleem Paracha		Senior Energy Expert			Full Time	
Ghulam Abbas		Senior Advisor Hydro			Full Time	
Asif Majeed		Senior Projects Monitoring & Implementation Engineer			Full Time	
TBD		Associate Engineer			Full Time	
Results Framework						
I.2.3.a – Number of best-practice-driven systems created, improved, and implemented						
Activity Timeline						
Task	Start Date	End Date	FY2015			
			Q1	Q2	Q3	Q4
On-Site training implementation	Mar. 2015	Aug. 2015				

SUPPORT TO GENCOS

Improving the financial performance of GENCOS I, II, and III through efficiency improvements of plant technical and commercial business operations						
Contract Link		Principal Stakeholders				
<ul style="list-style-type: none"> Component I Component 4 Task 5.6, Task 6 Task 7.1 		<ul style="list-style-type: none"> GENCOs Holding Company Ltd. GENCOs I, II, III (Jamshoro, Guddu, Muzaffargarh) 				
Activity Description & Rationale						
GENCO activity tasks are designed to sustain the MW gains achieved through USAID funded rehabilitation by making GENCOS financially viable entities with sustainable best practices.						
Outputs			Expected Results			
<ul style="list-style-type: none"> Standard operating procedure protocols for fuel oil management Upgraded metering after meter calibrations Heat-Rate testing for all units of GENCOS I, II, III – new tariff petition sent to NEPRA as a result 			<ul style="list-style-type: none"> Improved O&M practices reduce operating costs Financial performance of GENCOS I, II, III improved through new tariff determinations Best practice systems developed for sustainable management of each GENCO 			
Activity Tasks						
Performance Efficiency Improvement Program (PEI Program)						
<ul style="list-style-type: none"> Heat Rate Test and NEPRA Filing Guddu Thermal Power Plant (GENCO II) completed the heat rate test in Q2 FY2015 and the final report will be made available in the same quarter. EPP will not undertake any future heat rate tests and will have fulfilled indicator I.1.1.b. One of the purposes of determination of Heat Rate was to enable GENCOS to comply with NEPRA requirement and to file a tariff petition to secure such tariff that would provide for the required revenue. EPP through its expertise and interaction with GENCOS will help in filing of tariff petition to improve the commercial operations of the GENCOS. To date, Jamshoro tariff petition has been filed and EPP intends to complete Muzaffargarh and Guddu by October 2015 or will request continued USAID assistance. O&M On-Site As a result of post-training evaluations with participants in the Best Practices in Thermal O&M Training, EPP will deliver an on-site training curriculum for operations staff and visit neighboring IPPs to observe demonstrations. Training will take place at one of the GENCOS with staff from visiting plants for two weeks, anticipated in Q3 FY2015. 						
Name	Title/Justification			Level of Effort		
Talha Javed	DCOP/ Director of Project Monitoring & Implementation Support			Full Time		
Ghulam Abbas Malik	Senior Energy Expert			Full Time		
Sheikh Naveed Siddique	Power Performance Expert			Full Time		
Asif Majeed	Projects Monitoring & Implementation Engineer			Full Time		
Amir Bashir	Generation Expert – Jamshoro			Part Time		
TBD	Associate Engineer			Full Time		
Results Framework						
I.1.1.b – Efficiency of thermal power plants						
I.1.1.c – Number of USG supported installations and O&M improvements						
I.2.3.a – Number of best practice – driven systems created, improved, and implemented						
Activity Timeline						
Task	Start Date	End Date	FY 2015			
			Q1	Q2	Q3	Q4
GENCO II Heat Rate Test	Sept. 2014	Feb. 2014				
NEPRA Tariff Filing	Sep. 2014	Oct. 2015				
O&M On-Site Training	Dec. 2014	Sept. 2015				

ANNEX II: ACTIVITY SHEETS FOR COMPONENT II

ENERGY SECTOR REFORM ADVISORY SUPPORT

Provide advisory support to key Ministries and PSEs	
Contract Link	Principal Stakeholders
<ul style="list-style-type: none"> Component 2 Component 4 Task 2 Task 5.7 Task 7.4 	<ul style="list-style-type: none"> Key Ministries: Ministry of Water and Power (MWP), Planning Commission – Energy Wing, and Ministry of Finance (MOF) Energy Public Sector Entities: NTDC, GENCOs
Activity Description & Rationale	
<p>EPP will continue to complete on-going energy reform activities while addressing the policy matrix issues, including: circular debt, insufficient supply of affordable electricity, inefficient power sector operations and excessive sector energy losses, poor governance and management of public energy sector entities, and excessive load shedding. Specifically, EPP will work with GENCO I (Jamshoro) to develop a pilot program approach to power purchase agreements (PPAs), fuel supply agreements (FSAs), and the revised NEPRA tariff.</p>	
Outputs	Expected Results
<ul style="list-style-type: none"> PPA and FSA for GENCO – I Develop Performance Contracts for NTDC and the GENCOs Cogeneration Policy Load Management Policy Reorganize and support Human Resources transformation at NTDC including separation with CPPA Enable Planning Commission – Energy Wing to act as an integrating body across energy sector 	<ul style="list-style-type: none"> Improved energy sector governance framework Improved policy implementation More autonomous energy sector entities Improved capacity of USAID-supported energy PSEs
Activity Tasks	
<ul style="list-style-type: none"> Ministry of Water and Power NTDC Performance Contract. The EPP provides advisory support to MWP for negotiations with NTDC for the performance contract. When signed by the MWP and NTDC Boards of Directors, the EPP will complete assistance on this project – anticipated in Q2 FY2015. WAPDA-NTDC Power Purchasing Agreement. In order to allow for and facilitate the transition of the Central Power Purchase Authority (CPPA) to a stand-alone entity then a power purchase agreement must be agreed upon by WAPDA and NTDC. The EPP provides advisory support to MWP in facilitating CPPA power purchase agreement and will complete support in Q4 FY2015. GENCO Performance Contract. The EPP provides advisory support to GENCO Holding Company and the GENCOs in negotiating their performance contracts. To date, EPP submitted the final contracts to MWP and will monitor progress of the contract agreements as needed. Electricity Act. The EPP advises MWP on the re-drafting of the Electricity Act 2013 to make sure it can pass through the stakeholder process. Drafting will complete in Q2 FY2015 and EPP will facilitate adoption through the end of the program in October 2015. Generation Companies (GENCOs) Power Purchase Agreements. EPP developed a model power purchase agreement for Jamshoro (GENCO I) and is using the template for Muzaffargarh (GENCO III). The power purchase agreements will lead to a revised NEPRA tariff and are anticipated to be complete by the end of the EPP. Fuel Supply Agreements. As an IMF requirement, the EPP prepared inputs for the fuel supply agreement between Jamshoro (GENCO I) and Pakistan State Oil (PSO). The fuel supply agreement will result in reliable supply for GENCO I and improved efficiency. The EPP advisory support will be completed by October 2015. Performance Efficiency Improvement. Sustainable Commercial Operations (SCO) will focus on facilitating and guiding GENCOs towards adoption of best commercial practices, including: executing power 	

purchase agreements, fuel supply agreements, and finance matters specific to tariff filing and determination. EPP will work with Private Power and Infrastructure Board (PPIB) as well to revise the MWP approved power purchase agreements. PEI support will be completed by October 2015.

- National Transmission and Despatch Company

Strategic Plan. EPP started drafting NTDC's strategic plan towards a competitive trading bilateral contract market with an initial draft anticipated in April 2015. After submitted to NTDC, EPP will work with the board of directors and staff for adoption of the strategic plan with anticipated support continuing until October 2015.

Human Resources Improvement. The EPP assisted in NTDC's procurement and selection of Human Resource Improvement Study consultants. The study will evaluate potential organizational transformation and restructuring during NTDC's transitional phase towards a competitive market. EPP will assist NTDC in monitoring progress until October 2015.

- Planning Commission – Energy Wing

Long-Range Energy Alternatives Planning System. Using LEAP software, the EPP continues to develop Pakistan's energy reference system for improve policy analysis and climate change mitigation. EPP anticipates this activity continuing until October 2015 with eventual hand over to the planning commission. .

11th Five Year Plan. The EPP provided quality control for the Energy Wing's development of the 11th Five Year plan, using PowerSIM and advisory support. The EPP will finish plan support once adopted by the Planning Commission or October 2015.

E-Governance. The EPP assessed hardware needs for the conversion to an e-office system for the Energy Wing. The EPP will advise the Energy Wing on strategy and procurement of required hardware and software. The EPP will provide advisory support until installation or October 2015.

PowerSIM. The EPP completed training for relevant Planning Commission participants and the Energy Wing continues to the use the PowerSIM tool for running various policy scenarios. The EPP advisors will continue to educate energy sector stakeholders on the benefits of PowerSIM and applications.

- Ministry of Finance

The EPP will continue to provide assistance to the MOF Corporate Finance Wing in the form of comments and drafting of presentations for ministry staff.

Name	Title/Justification	Level of Effort
Akbar Yusuf	Director of Policy Reform	Full Time
M.W. Addison	Senior Energy Policy Advisor	Full Time
Faraz S. Khan	Project Development Advisor – MWP	Full Time
Muhammad Razi Abbas	Project Development Advisor – MOF	Full Time
Imran Haider Janjua	Policy Support – PC	Full Time
Saluhddin Rifai	Senior Energy Expert	Full Time
Munir Ahmed	Energy Policy & Program Specialist	Full Time
Aman Ullah Mangrio	Assistant Financial Analyst – NTDC	Full Time
TBD	Load Research Specialist	Full Time
Saadia Qayyum	Policy Specialist	Full Time
Robert Vodzack	Finance/Economic Specialist - NTDC	Full Time
TBD	Regulatory Specialist	Full Time

Results Framework

1.2.1.a – Number of key policies and regulations in development stages of analysis, drafting, stakeholder consultation, legislative review, approval, or implementation as a result of USG assistance.

1.2.2.a – Number of policies following international best practices developed and implemented

1.2.3.a – Number of best-practice-driven systems created, improved, and implemented

Activity Timeline

Task	Start Date	End Date	FY 2015			
			Q1	Q2	Q3	Q4
MWP Support	Oct. 2012	Oct. 2015				
NTDC Support	Jan. 2014	Oct. 2015				
GENCO Support	Oct. 2014	Oct. 2015				
Planning Commission Support	Oct. 2014	Oct. 2015				
MOF Support	Oct. 2014	Oct. 2015				

SUPPORT TO PETROLEUM SECTOR

Provide advisory services to LNG import supply chain, exploitation and policy framework of unconventional gas, and implementation of the E&P policies	
Contract Link	Principal Stakeholders
<ul style="list-style-type: none"> Component 4 Task 4 	<ul style="list-style-type: none"> Key Ministries: MPNR, Ministry of Ports and Shipping (MOPS) Oil and Gas Stakeholders: Sui Southern Gas Company Ltd. (SSGCL), Inter-State Gas Systems (ISGS), Port Qasim Authority (PQA)
Activity Description & Rationale	
<p>To assist the GOP in expanding the fuel supply, EPP will lend support to MPNR and other stakeholders in developing a supply chain for importation of LNG, provide support in resource technology and development of a policy framework for unconventional gas, support development of an overall upstream oil and gas regulatory framework, and support policy implementation with particular reference to conventional gas.</p>	
Outputs	Expected Results
<ul style="list-style-type: none"> Establish an LNG import supply chain through competitive bidding for LNG import facilities and targeted capacity building Shale gas resources and technology assessment and policy framework Improvement in upstream oil and gas regulatory and policy framework, and effective policy implementation. Removing backlog of permits at Director General Petroleum Concessions (DGPC) 	<ul style="list-style-type: none"> LNG import contracts signed and port capabilities enhanced to handle LNG Up to 2,200 MW of new power generation if 50% of LNG imports (400 MMCFD LNG) allocated to the power sector Improved institutional capacity Accelerated production of indigenous gas and oil from effective policy implementation
Activity Tasks	
<ul style="list-style-type: none"> LNG Import Program EPP's LNG advisors will support policy and legal efforts to deliver LNG on a fast-track timeline. EPP will monitor the tender process and assist in the initiation of competitive bidding for a tolling terminal to be developed by the private sector. Additionally, EPP will provide support to PQA in the form of technical advisory services and construction implementation. Finally, EPP will support GOP's LNG procurement through legal and commercial advice. LNG procurement will be conducted through international markets and EPP will advise on related Sales and Purchase Agreements (SPAs). Shale Gas Exploration and Production (E&P) EPP will conduct and monitor a geological assessment of shale gas resources in Pakistan using existing well data, focusing on the lower and middle Indus basin - no new drilling is envisaged under this program. EPP will assist MPNR in identifying the appropriate extraction technology, infrastructure needs, environmental needs, and E&P costs. EPP's inputs from the shale gas work will assist in the formulation of a shale gas policy framework which is a pre-requisite to promoting the effective exploitation of this vital resource – to be covered under a separate USAID EPP program for the upstream oil and gas sectors. Support to Upstream Oil and Gas EPP provides specialized industry experts to assist the GOP in the upstream oil and gas sector. The experts will focus on the effective implementation of upstream policies for conventional gas as well as review of rules, improvements therein, regulatory framework, and expending E&P activity to increase local production. The program also covers liaison with the shale gas program and formulation of a shale gas policy, as well as promote policies for the granting of concessions. 	

Name	Title/Justification		Level of Effort			
Akbar Yusuf	Director of Policy Reform		Full Time			
Tahawar Hussain	Policy Advisor		Full Time			
Shahid Ahmad	Oil and Gas Advisor		Full Time			
Khurram Aftab Qazi	Oil and Gas Specialist		Full Time			
Masood Bhatti	LNG Advisor		Full Time			
Humzah Qamar Yazdani	Legal Specialist		Full Time			
Sarah Awan	Legal Advisor		Full Time			
Ishaq Saqi	Downstream Gas Specialist		Full Tim			
TBD	DGPC Commercial Advisor		Full Time			
Results Framework						
1.1.4.a – Public and private funds leveraged by the USG for energy infrastructure projects						
1.2.1.a – Number of key policies and regulations in development stages of analysis, drafting, stakeholder consultation, legislative review, approval, or implementation as a result of USG assistance						
1.2.2.a – Number of policies following international best practices developed and implemented						
1.2.3.a – Number of best-practice-driven systems created, improved, and implemented						
Activity Timeline						
Task	Start Date	End Date	FY 2015			
			Q1	Q2	Q3	Q4
LNG Fast Track	Aug. 2013	Apr. 2015				
LNG PQA Support	Sep. 2014	Oct. 2015				
LNG Procurement	Jul. 2014	Mar. 2015				
Shale gas technology assessment with production costs	Aug. 2014	Dec. 2014				
Shale gas policy framework, promotion, and grant of concessions	Jan. 2015	Oct. 2015				
Improvement in upstream oil and gas regulatory and policy framework, rules, and institutional improvement	Mar. 2014	Oct. 2015				

ANNEX III: ACTIVITY SHEETS FOR COMPONENT III

SELECTION, PLANNING, AND DESIGN OF NEW PROJECTS

Continue due diligence of potential government to government projects						
Contract Link		Principal Stakeholders				
<ul style="list-style-type: none"> Component 3 		<ul style="list-style-type: none"> WAPDA, Provincial entities, electricity customers, and rest of population through system expansion and improvement Transmission partners (NTDC) 				
Activity Description & Rationale						
The due diligence staff will continue to review and recommend select energy projects that fulfill the USG Energy Strategy requirements at the request of USAID. EPP will be able to support rehabilitation or development depending on those projects selected.						
Outputs			Expected Results			
<ul style="list-style-type: none"> G2G candidates screened to ensure they are consistent with USG priority criteria Perform Step I and II due diligence to reduce USG risks and develop Project Implementation Agreements for selected projects 			<ul style="list-style-type: none"> USAID projects developed and expedited implementation MW added, saved, or restored to energy sector and reliability of energy supply increased 			
Activity Tasks						
Perform due diligence for USAID on GOP priority projects when requested. The projects proposed by the GOP and accepted by USAID will undergo a Step I due diligence process. Based on the outcome of Step I, USAID will decide if moving to Step II due diligence is required. Through the due diligence process, high priority projects for the energy sector will be reviewed and prioritized for future government-to-government funding. Due diligence activities support programs in different provinces, per USAID advisement.						
Name	Title/Justification			Level of Effort		
Mian Shahid Ahmad	Director, New Projects			Full Time		
Ghulam Abbas	Senior Hydro Specialist			Full Time		
Tariq Qazi	Senior Advisor Transmission			Full Time		
Results Framework						
Not applicable						
Activity Timeline						
Task	Start Date	End Date	FY 2015			
			Q1	Q2	Q3	Q4
Due Diligence Process	Mar. 2012	Oct. 2015				

ANNEX IV: ACTIVITY SHEETS FOR COMPONENT IV

PESCO TURNAROUND DISCO

Rehabilitate, procure, and develop best practices to turnaround PESCO	
Contract Link	Principal Stakeholders
<ul style="list-style-type: none"> Component 4 Task 1.1 	<ul style="list-style-type: none"> Peshawar Electric Supply Company (PESCO)
Activity Description & Rationale	
EPP will complete assistance for PESCO through final audit reports, power transformer procurement and rehabilitation, and hand over of equipment. These measures will add capacity to PESCO's grid, which, in turn, will result in improved revenue collection and delivery of power. New regimens for power transformer health and system maintenance will deliver power to more customers in a critical region.	
Outputs	Expected Results
<ul style="list-style-type: none"> Reactive power improvements, load management options, and investment upgrades defined Additional capacity on the PESCO grid through rehabilitation and addition of power transformers, cooling fans, and ancillary equipment 	<ul style="list-style-type: none"> Identification of defective components of 132 kV transmission system More energy availability to PESCO consumers, which will lead to increased revenue generation
Activity Tasks	
<ul style="list-style-type: none"> Grid Station Audits To date, all 82 technical audits were completed and reports compiled for PESCO. EPP will deliver the final, comprehensive report to PESCO by Q2 FY2015. The reports will identify shortcomings and bottlenecks found and recommend preventative and corrective measures to improve PESCO's delivery services. Power Transformer Program EPP is in the process of procuring two oil filtration plants for PESCO's operations and maintenance staff. EPP requested that PESCO change policy that will allow PESCO's Grid Systems Operation staff to use the oil filtration plant of the Grid Systems Construction department until the new plants are in service. EPP anticipates implementation will be complete by October. Capacitor Bank Rehabilitation All installation and testing of the capacitor banks was completed. The final testing and commissioning remains as of February 2015 and PESCO will replace the damaged isolator that is required for successful commissioning of the bank. EPP anticipates the work to be completed by Q2 FY2015. Tower Repair EPP completed repair work on 54% of the towers as of February 2015. EPP anticipates 100% completion by June 2015. The prioritized towers will increase system reliability and safety. Transmission and Grid Equipment EPP awarded the supply of transmission and grid equipment (i.e. bucket trucks, personal protective equipment, maintenance equipment) and anticipates delivery by February 2015. With delivery, PESCO will be equipped with standard equipment to carry out preventative and on-going maintenance and operations. Cooling Fans To date, 100% of the cooling fans were installed and approved by EPP and PESCO. Through EPP installations, 260.5 MWs of through-put capacity was made available to PESCO and improvements made to 69 grid stations on 104 power transformers. Moving forward, PESCO will maintain cooling fans and install this required equipment as and when needed. 	

Name	Title/Justification		Level of Effort			
Rufus Kellam	Transmission Department Manager		Full Time			
Muhammad Riaz	Project Manager – PESCO		Full Time			
Saeed Ahmad	Protection Engineer		Full Time			
Amjad Ali	Project Technical Assistant		Full Time			
Moazzam Shafique	Project Technical Assistant		Full Time			
Mohammad Rehan	Project Technical Assistant		Full Time			
Zenab Ali	Assistant Engineer		Full Time			
Wajahat Ali Butt	Assistant Engineer		Full Time			
Abdullah	Assistant Electrical Engineer		Full Time			
Waqas Ahmad	Assistant Electrical Engineer		Full Time			
Sufdur Hayat	Assistant Electrical Engineer		Full Time			
Azmat Khan	Assistant Electrical Engineer		Full Time			
M. Sohail Khan	Protection Engineer		Full Time			
Results Framework						
I.1.a – Number of beneficiaries with improved energy services due to USG assistance						
I.1.b – Gigawatt-hours (GWh) of energy availability						
I.1.c – Power (MW) available to meet power sector demand as a result of USG assistance						
I.1.1.a – MW of electrical power added or saved						
I.1.1.c – Number of USG support installations and O&M improvements of generation plants and transmission networks						
I.1.1.d – Number of transmission bottlenecks resolved						
I.1.1.e – MW of throughput capacity available to meet power sector demand as a result of USG supported transmission improvements						
I.2.3.a – Number of best-practice-driven systems created, improved, and implemented						
Activity Timeline						
Task	Start Date	End Date	FY 2015			
			Q1	Q2	Q3	Q4
Circuit Breaker Program	May 2013	Apr. 2015				
Tool/Equipment provisions for transmission lines and grid stations	Jan. 2014	Apr. 2015				
Oil purification trailers	Aug. 2014	Apr. 2015				
Bucket trucks	May 2014	Mar. 2014				
Crane-mounted trucks	Sep. 2014	May. 2015				
Technical audit	Jan. 2013	Mar. 2015				
Oil sampling and testing	Jan. 2013	Mar. 2015				

TECHNICAL SUPPORT TO NTDC

Improving organization and efficiency of national transmission company	
Contract Link	Principal Stakeholders
<ul style="list-style-type: none"> Component 4 Task 5.1 Task 5.3 Task 5.4 Task 5.5 Task 5.6 Task 7.1 	<ul style="list-style-type: none"> National Transmission and Dispatch Company (NTDC)
Activity Description & Rationale	
Through rehabilitation, installation, participant training, and introduction of new management systems, NTDC will develop improved efficiency standardized systems, and assist in the removal of transmission bottlenecks.	
Outputs	Expected Results
<ul style="list-style-type: none"> Human Resource process improvements developed 41 substation reports with prioritized list of action items to improve system Effective fault analysis, risk mitigation, and stability studies Optimal use of currently available network determined Increased capacity of design center to generate revenue Mardan autotransformer and retrofits project 	<ul style="list-style-type: none"> Identification of defective components of 220 and 500 kV transmission system System due diligence completed, upgrade investments identified, and load management options defined Commercial functions enhanced and business processes improved In-house design services of a higher quality Enhance transmission capacity Improved energy sector governance through human resource process improvements
Activity Tasks	
<ul style="list-style-type: none"> Technical System Audits To date, all 39 grid stations audit reports have been completed from the initial scope of work. An additional 6 grid stations were added, of which 3 reports completed as of January 2015. EPP anticipates 100% completion by March 2015. Through the audits, EPP will review and collect technical specifications for line and transformer bays for 45 total stations that will be compiled into a detailed assessment and lead to a priority action list for system improvements. System Studies Series Compensation Load Flow. EPP will complete load flow studies for fault analysis, stability studies, economic load dispatch, and finding optimal power flow mechanism using the load flow model. After running the model, EPP will compile a report on study findings with recommendations for current system improvements and future expansion requirements. EPP is awaiting NTDC approval and will complete the study before October 2015. Intermittent Supply. To identify challenges and barriers to adding renewable energy and intermittent generation to NTDC's grid, EPP selected a vendor to conduct a study to be given to NTDC. EPP will complete the study before October 2015 for NTDC review. Real Time Digital Simulator EPP will test equipment and software during commissioning to adapt to Pakistan's power system. EPP will then train appropriate NTDC engineers in the O&M of the simulator system. To date, the contractor was awarded and data is being delivered from NTDC. EPP anticipates the complete installation, training, and implementation by October 2015. Design Department Rehabilitation EPP purchased software and hardware for the rehabilitation of NTDC's design department accompanied by staff training. Additionally, EPP will review current design department organization and budget to develop a revenue sustainability plan. All installations will be completed by April and training completed by June 2015. Repair and Rehabilitation of Transformers EPP will purchase two new 250 MVA transformers to replace two existing 160 MVA transformers at NTDC's Mardan Grid Station and add a spare transformer from Mardan Grid Station at Nishatabad Grid Station. Additionally, EPP will repair one, 160 MVA autotransformer damaged at NTDC. Full delivery, inspection, and installation anticipated by October 2015. EPP will no longer take requests for transformer installations or rehabilitations given the program timeline. NPCC Training EPP currently provides advisors to NPCC to assist economic dispatch functions and reduce planned and 	

unplanned load-shedding. This will include dispatcher training for NPCC staff to be delivered in FY2015 Q3. EPP recommends USAID continue assistance to NPCC after October 2015.

- Enterprise Resource Planning
NTDC decided to purchase ERP equipment and work with EPP to best implement the program. EPP's ERP advisors will work with NTDC management on an implementation plan, IT center, and procurement. EPP recommends that USAID will continue work on NTDC's ERP implementation after October 2015.
- SMS SCADA
EPP will upgrade and rehabilitate NTDC's radio and communication network for all grid stations using SCADA. With procurement, installation, and training, EPP will complete work by October 2015 and recommends USAID continue to work with NTDC to embed best practices and maintenance.

Name	Title/Justification	Level of Effort
Rufus Kellam	Transmission Department Manager	Full Time
Tariq Qazi	Senior Advisor Transmission	Full Time
Mohammad Rehan	Project Technical Assistant	Full Time
Zenab Ali	Assistant Engineer	Full Time
Wajahat Ali Butt	Assistant Engineer	Full Time
Moazzam Shafique	Project Technical Assistant	Full Time
Kevin Thomas	Project Manager – NPCC Advisory	Full Time
Salahuddin Rifai	Senior Energy Expert	Full Time
Shan H. Zaidi	Transmission Procurement Advisor	Full Time
Khan Bahadar	Transmission Engineer	Full Time
Khalid Hussain Rai	Project Manager	Full Time
Ch. Tauqir Ahmed Chowhan	Transmission Engineer	Full Time
Muhammad Iqbal Anwar Khan	Transmission Engineer	Full Time
Sehrish Riaz	Assistant Engineer	Full Time
Hafiz Sultan Mobeen	Junior Engineer	Full Time
Muhammad Zubair Malik	Junior Engineer	Full Time
Syed Shams-ud-Din Ahmad	Lead ERP Advisor	Full Time
Syed Kashif Jehan	ERP Advisor	Full Time
Buland Akhtar Siddiqui	ERP Advisor	Full Time

Results Framework

1.1.1.d – Number of transmission bottlenecks resolved

1.2.3.a – Number of best-practice-driven systems created, improved, and implemented

Activity Timeline

Task	Start Date	End Date	FY 2015			
			Q1	Q2	Q3	Q4
Technical substation audits and reports	Aug. 2013	Mar. 2015				
SMS for DISCOs	Dec. 2013	Oct. 2015				
Load flow studies	Dec. 2013	May 2015				
Series compensation study	Mar. 2014	May 2015				
RTDS install and training	Oct. 2013	Oct. 2015				
Design center rehab and training	Apr. 2014	May 2015				
Mardan autotransformer project	Apr. 2014	Oct. 2015				
Autotransformer repairs	Apr. 2014	Oct. 2015				
NPCC dispatcher training	Dec. 2014	Oct. 2015				
Enterprise Resource Planning	May 2014	Oct. 2015				

LIVE-LINE MAINTENANCE DEVELOPMENT

Create standard live line maintenance system nationwide		
Contract Link	Principal Stakeholders	
<ul style="list-style-type: none"> Component 4 Task 3 	<ul style="list-style-type: none"> Nine DISCOs including: PESCO, FESCO, GEPCO, HESCO, MEPCO, SEPCO, LESCO, IESCO, and QESCO 	
Activity Description & Rationale		
<p>EPP procured hot tools, trucks, trailers, and personal protective equipment to provide all nine DISCOs with kits to service live lines and decrease maintenance disruptions to the transmission system. EPP will continue to train DISCO crews on 132 kV and 66 kV transmission lines that will improve efficiency and delivery of energy services.</p>		
Outputs	Expected Results	
<ul style="list-style-type: none"> Live-line crews from nine DISCOs will be trained using best practices New live-line hot tools will lead to uninterrupted maintenance that will generate more revenue Monitoring of crews and tools after training during contract More generation delivered 	<ul style="list-style-type: none"> Tools and training will lead to a more reliable network Revenue will increase when lines do not need to be shut down Sustainable practices for live-line maintenance 	
Activity Tasks		
<ul style="list-style-type: none"> Refresher Course for Five DISCOs EPP will conduct four, on-site refresher courses for those linemen previously trained at PESCO, GEPCO, FESCO, IESCO, and HESCO. The refresher course will use newly procured tools, trailers, and trucks to demonstrate techniques and refresh linemen training over four weeks. All trailers, trucks, tools, and trained crews will be completed by June 2015. EPP will monitor the crews until October 2015. Assessment of NTDC Tarbela Training Center EPP will conduct a thorough assessment of the Training Center curriculum, techniques, facilities, and materials before proceeding with the remaining training. The assessment will be conducted by international experts and recommendations will be shared with NTDC in Lahore for improvements. Training for Four DISCOs EPP will conduct two, 16-week sessions for the four remaining DISCOs. MEPCO and SEPCO are currently being trained with a graduation date of May 8. LESCO and QESCO will complete training on October 2. The training will include classroom and field demonstrations for all line crews. During the training, EPP will distribute the tools, trucks, and trailers to be housed at the DISCOs during the training. Monitoring and Evaluation EPP will hire full-time monitoring and evaluation experts to circulate among the trained DISCO crews to ensure that best practices are being used, all equipment is being used properly, and management is using the live-line crews effectively. The monitoring and evaluation staff will support the crews through the end of EPP's contract. 		
Name	Title/Justification	Level of Effort
Rufus Kellam	Transmission Department Manager	Full Time
Sher Ahmed	Live-Line Coordinator	Full Time
Kevin Thomas	Project Manager	Full Time
Mohammad Rehan	Project Technical Assistant	Full Time
Zafar Ali Khan	Live-Line Demonstrator	Full Time
TBD	Live-Line M&E Expert	Full Time
TBD	Live-Line M&E Expert	Full Time
TBD	Live-Line M&E Expert	Full Time
TBD	Live-Line Demonstrator	Full Time
TBD	Live-Line Demonstrator	

Results Framework						
I.I.I.d - Number of transmission bottlenecks resolved						
Activity Timeline						
Task	Start Date	End Date	FY 2015			
			Q1	Q2	Q3	Q4
IESCO LLT Refresher	Mar 2015	Apr. 2015				
IESCO M&E	Apr. 2015	Apr. 2016*				
PESCO LLT Refresher	Apr. 2015	May 2015				
PESCO M&E	May 2015	May 2016*				
FESCO LLT Refresher	May 2015	Jun. 2015				
FESCO M&E	Jun. 2015	Jun. 2016*				
GEPCO LLT Refresher	Jun. 2015	Jul. 2015				
GEPCO M&E	Jul. 2015	Jul. 2016*				
HESCO LLT Refresher	Jul. 2015	Aug. 2015				
HESCO M&E	Aug. 2015	Aug. 2016*				
MEPCO and SEPCO LLT	Feb. 2015	May 2015				
MEPCO and SEPCO M&E	May 2015	May 2016*				
LESCO and QESCO LLT	Jul. 2015	Oct. 2015				
LESCO and QESCO M&E	Oct. 2015	Oct. 2016*				

* EPP recommends at least one year of M&E to ensure sustainability and best practices in place.

ANNEX V: ACTIVITY SHEETS FOR OVERALL PROGRAM SUPPORT

INCREASED PUBLIC AWARENESS ON ENERGY SECTOR REFORM

Disseminate program results through reports, events, and promotional materials						
Contract Link		Principal Stakeholders				
<ul style="list-style-type: none"> Component 4 Task 7.2 Task 7.3 		<ul style="list-style-type: none"> Energy Policy Program activities Key Ministries: MWP, MPNR, MOF Energy Public Sector Entities: NTDC, WAPDA, PESCO, GENCOs 				
Activity Description & Rationale						
Through targeted public relations for ongoing EPP activities, the communications team will disseminate key activity results. EPP communications will allow key stakeholders in energy sector reform and development to interact with the public.						
Outputs		Expected Results				
<ul style="list-style-type: none"> Public forums on priority policy issues 		<ul style="list-style-type: none"> Improved public awareness of energy sector successes and challenges USAID visibility increased in assistance to energy sector crisis 				
Activity Tasks						
<ul style="list-style-type: none"> Reporting Compliance and Disbursement EPP will continue to make sure that all contract reports and program deliverables are submitted on time and correspond to the USAID branding and marking plan. Reports include weekly, monthly, and quarterly reporting to USAID on progress as well as program deliverables for due diligence, transmission, generation, petroleum, and cross-cutting activities. Public Forums EPP will host public events to support program activities and accomplish indicator 1.2.4.b through public forums. Forum themes potentially include: LNG Imports Forum, Women in Pakistan's Power Sector Forum, Shale Gas in Diversification of Pakistan's Fuel Mix Forum, Economic Impacts of Load Shedding Forum, Hydroelectric Generation Forum, Pakistan's Transmission Network Forum, and Increasing Electricity through Repair and Rehabilitation Forum. All forums will be delivered by October 2015. 						
Name	Title/Justification			Level of Effort		
Makbul Shah	Communications Manager			Full Time		
Sharon Rasmussen	Quality Control Manager			Full Time		
Mina Sohail	Communications Specialist			Full Time		
Alhan Farooq	Events Specialist			Part Time		
M. Zafar Taj	Assistant Communications Specialist/ Graphic Designer			Full Time		
Amir Hadi	Senior Software Engineer			Full Time		
Russ Profozich	Senior Writer			Part Time		
Wajid Hussain	Communications Assistant			Full Time		
Results Framework						
1.2.4.b – Number of public forums resulting from USG assistance in which government officials and citizens interact						
Activity Timeline						
Task	Start Date	End Date	FY 2015			
			Q1	Q2	Q3	Q4
Reports Support	2012	Oct. 2015				
Public Forums	Jul. 2014	Oct. 2015				

ENERGY SECTOR CAPACITY BUILDING

Promote sustainability in program components through participant training						
Contract Link		Principal Stakeholders				
<ul style="list-style-type: none"> Components 1, 2, 4 (all tasks) 		<ul style="list-style-type: none"> Key Ministries: MWP, MPNR, MOF, MPNR Energy Public Sector Entities: NTDC, WAPDA, GENCOs, Hydels, DISCOs 				
Activity Description & Rationale						
EPP will deliver participant training activities across select PSEs to increase stakeholder efficiency and reinforce sustainable practices. EPP will streamline its capacity building approach and participant training programs to guarantee contract compliance and donor impact.						
Outputs			Expected Results			
<ul style="list-style-type: none"> Increased use of best practices across all components Support sustainability of EPP activities and installations Collaboration with other USAID and donor funded programs (Training for Pakistan Gender Equity Program, and Power Distribution Program) to maximize donor impact 			<ul style="list-style-type: none"> Improved energy services delivered Efficiency of current stakeholder organizations increased Sustainability of donor funded projects 			
Activity Tasks						
<ul style="list-style-type: none"> LNG Business Management Certificate EPP will deliver a two-week intensive business management workshop for LNG partners to better understand port and commercial operations in June 2015. The program will provide an opportunity for LNG stakeholders to work together on simulations and case studies before returning to Pakistan's new LNG sector. Operations and Maintenance On-Site Training EPP will deliver on-site, O&M training for hydels and GENCOs with demonstrations and simulations to build on the best practices learned in the previous year's classroom training. As a result of the training, EPP will identify GENCO and hydel requirements for continued capacity building interventions and additional technical assistance at the linemen, foremen, and sub-engineer level. Delivery anticipated in Q3 FY2015. NTDC Support Design Center. The Cross-Cutting Team will facilitate training for the Design Center rehabilitation, management exchange visits to the United States, Storage Area Network delivery, and Real Time Digital Simulator training. Exchange Visits. To date, the market and grid operations exchange completed the US visit with one exchange left for commercial operations scheduled for March 2015. EPP will monitor progress of the participants until October 2015. Real Time Digital Simulator. EPP will work with NTDC to make sure all equipment and software is handed over with a sustainable training program attached. EPP anticipates training delivery before October 2015. Storage Area Network. To date, one training took place for CPPA staff; however, installation delays affected full implementation. EPP anticipates training and implementation to be completed by May 2015. 						
Name	Title/Justification					Level of Effort
Lauren Wygonski	Cross-Cutting Activities Advisor					Full Time
Rabia Abbasi	Cross-Cutting Activities Assistant					Full Time
Memona Naseer	Cross-Cutting Activities Coordinator					Full Time
Mahak Ali Bajwa	Cross-Cutting Activities Assistant					Full Time
Results Framework						
1.2.2.b – Number of board recommendations following international best practices implemented by public sector entities						
1.2.3.a – Number of best-practice-driven systems created, improved, and implemented						
1.2.4.b – Number of public forums resulting from USG assistance in which government officials and citizens interact						
Activity Timeline						
Task	Start Date	End Date	FY 2015			
			Q1	Q2	Q3	Q4
OM Thermal Support	Mar. 2014	Feb. 2015				
OM Hydel Support	Apr. 2014	Jun. 2015				
LNG Management Certificate	Jun. 2014	Apr. 2015				
NTDC Design Center Support	Jun. 2014	May. 2015				
NTDC Exchanges Support	Jul. 2014	Mar. 2015				
NTDC Storage Area Network	Oct. 2014	Oct. 2015				

GENDER EQUALITY

Improve gender equality in the energy sector through assessment and strategy development						
Contract Link		Principal Stakeholders				
<ul style="list-style-type: none"> Component 4 Task 2 		<ul style="list-style-type: none"> Key Ministries: MWP, MPNR Energy Public Sector Entities: NTDC, WAPDA, GENCOs, Hydels, AEDB, OGDCL, Sui Northern Gas Pipeline Company, Ltd (SNGPL) 				
Activity Description & Rationale						
To assist with gender considerations, EPP conducted a baseline assessment of gender integration currently in the Pakistan energy sector and provided recommendations for future policy changes, potential projects, and program regimens to be delivered by EPP or another donor program.						
Outputs			Expected Results			
<ul style="list-style-type: none"> Recommendations for short, medium, and long term solutions compiled in sector strategy 			<ul style="list-style-type: none"> Introduce gender equality policies to key ministries and PSEs for future program measures Increased participation of those currently not represented in the energy sector 			
Activity Tasks						
<ul style="list-style-type: none"> Gender Strategy EPP completed a gender equality strategy for the energy sector and submitted it to USAID in January 2015. With USAID inputs, EPP will publish the strategy and distribute to stakeholders for their review. Gender Equality in the Energy Sector Forum EPP will host a forum for disseminating the assessment results and gender strategy to stakeholder organizations, local gender specialists, and donor community. The forum will host a panel of specialist to discuss next steps in integrating gender in the energy sector. EPP anticipates the forum to be held in May 2015. 						
Name	Title/Justification					Level of Effort
Lauren Wygonski	Cross Cutting Activities Advisor					Full Time
Rabia Abbasi	Cross Cutting Activities Assistant					Full Time
Memona Naseer	Cross Cutting Activities Coordinator					Full Time
Mahak Ali Bajwa	Cross Cutting Activities Assistant					Full Time
Results Framework						
1.2.1.a – Number of key policies and regulations in development stages of analysis, drafting, stakeholder consultation, legislative review, approval, or implementation as a result of USG assistance.						
1.2.3.a – Number of best-practice-driven systems created, improved, and implemented						
Activity Timeline						
Task	Start Date	End Date	FY 2015			
			Q1	Q2	Q3	Q4
Gender Strategy Delivery	Dec. 2014	Mar. 2015				
Forum	Mar. 2015	May 2015				

ANNEX VI: FY2015 MONTHLY PIPELINE PROJECTION

Table 5: Quarter I FY2015 Monthly Projections

Description	Qtr. I			Qtr. I Total
	Oct.	Nov.	Dec.	
Sub-Obligation	44,993,410	44,993,410	44,993,410	44,993,410
Additional Sub-Obligations				
	44,993,410	44,993,410	44,993,410	44,993,410
Previously Reported Expenditure	32,246,835	34,370,622	36,019,925	32,246,835
Technical Assistance	314,549	255,530	335,272	905,350
Fringe Benefits	83,261	67,639	88,746	239,646
Allowances	57,780	50,409	55,010	163,199
Travel	101,501	129,680	100,024	331,205
ODC	125,604	144,186	206,444	476,234
Overheads	43,030	34,957	45,865	123,852
G & A	64,735	60,870	74,157	199,762
Capacity Building	60,210	93,064	90,210	243,484
Sub-Awards	698,322	441,643	279,561	1,419,526
Procurements	435,009	264,855	460,546	1,160,410
Material OH	19,574	13,113	13,617	46,304
FEE	120,214	93,357	104,967	318,538
NICRA Adjustment			(425,695.36)	(425,695.36)
Projected expenditure	2,123,788	1,649,303	1,428,724	5,201,815
Cumulative expenditure	34,370,622	36,019,925	37,448,650	37,448,650
Pipeline	10,622,788	8,973,485	7,544,760	7,544,760

Table 6: Quarter 2 FY2015 Monthly Projections

Description	Qtr. 2			Qtr. 2 Total
	Jan.	Feb.	Mar.	
Sub-Obligation	44,993,410	44,993,410	44,993,410	44,993,410
Additional Sub-Obligations				
	44,993,410	44,993,410	44,993,410	44,993,410
Previously reported Expenditure	37,448,650	39,198,056	40,699,316	37,448,650
Technical Assistance	352,394	329,523	348,711	1,030,628
Fringe Benefits	93,279	87,225	92,304	272,807
Allowances	69,682	67,635	66,920	204,237
Travel	48,682	52,773	54,858	156,313
ODC	154,241	129,162	163,046	446,449
Overheads	48,207	45,079	47,704	140,990
G & A	68,370	63,457	69,000	200,827
Capacity Building	64,669	80,965	-	145,634
Sub-Awards	408,396	236,030	352,745	997,170
Procurements	329,303	314,085	1,165,192	1,808,580
Material OH	13,159	10,350	24,894	48,403
FEE	99,023	84,977	143,122	327,122
NICRA Adjustment			-	
Projected expenditure	1,749,406	1,501,260	2,528,495	5,779,162
Cumulative expenditure	39,198,056	40,699,316	43,227,812	43,227,812
Pipeline	5,795,354	4,294,094	1,765,598	1,765,598

Table 7: Quarter 3 FY2015 Monthly Projections

Description	Qtr. 3			Qtr. 3 Total
	Apr.	May	Jun.	
Sub-Obligation	44,993,410	44,993,410	44,993,410	44,993,410
Additional Sub-Obligations				
	44,993,410	44,993,410	44,993,410	44,993,410
Previously reported Expenditure	43,227,812	47,803,662	52,013,958	43,227,812
Technical Assistance	393,302	389,304	407,162	1,189,769
Fringe Benefits	104,107	103,049	107,776	314,932
Allowances	74,398	71,016	74,398	219,813
Travel	53,858	51,595	49,773	155,226
ODC	170,438	171,690	287,815	629,943
Overheads	53,804	53,257	55,700	162,760
G & A	75,812	74,920	87,650	238,382
Capacity Building	-	159,768	251,409	411,177
Sub-Awards	477,518	832,610	856,949	2,167,078
Procurements	2,858,886	2,015,440	2,181,637	7,055,963
Material OH	54,717	49,328	53,956	158,001
FEE	259,010	238,319	264,854	762,183
NICRA Adjustment			-	
Projected expenditure	4,575,850	4,210,296	4,679,079	13,465,225
Cumulative expenditure	47,803,662	52,013,958	56,693,036	56,693,036
Pipeline	(2,810,252)	(7,020,548)	(11,699,626)	(11,699,626)

Table 8: Quarter 4 FY2015 Monthly Projections

Description	Qtr. 4			Qtr. 4 Total
	Jul.	Aug.	Sep.	
Sub Obligation	44,993,410	44,993,410	44,993,410	44,993,410
Additional Sub-Obligations				
	44,993,410	44,993,410	44,993,410	44,993,410
Previously reported Expenditure	56,693,036	60,574,560	64,866,678	56,693,036
Technical Assistance	331,516	291,978	207,653	831,147
Fringe Benefits	87,752	77,287	54,966	220,005
Allowances	62,224	53,262	52,079	167,565
Travel	44,858	42,858	39,545	127,260
ODC	144,772	247,258	146,163	538,193
Overheads	45,351	39,943	28,407	113,701
G & A	63,909	67,131	47,170	178,210
Capacity Building	251,409	251,409	75,000	577,817
Sub-Awards	948,802	973,762	493,400	2,415,964
Procurements	1,634,729	1,952,172	634,226	4,221,127
Material OH	46,493	52,108	19,723	118,325
FEE	219,709	242,950	107,900	570,559
NICRA Adjustment			-	
Projected expenditure	3,881,524	4,292,118	1,906,230	10,079,872
Cumulative expenditure	60,574,560	64,866,678	66,772,909	66,772,909
Pipeline	(15,581,150)	(19,873,268)	(21,779,499)	(21,779,499)

Table 9: Quarter I FY2016 Monthly Projection

Description	FY2015 TOTAL	October 2015	EPP Life of Program TOTAL
Sub-Obligation	44,993,410	44,993,410	44,993,410
Additional Sub-Obligations	-		
	44,993,410	44,993,410	44,993,410
Previously reported Expenditure	32,246,835	66,772,909	-
Technical Assistance	3,956,893	142,507	11,041,333
Fringe Benefits	1,047,390	37,722	2,967,607
Allowances	754,814	18,600	2,304,572
Travel	770,003	16,950	2,093,081
ODC	2,090,819	67,093	5,681,176
Overheads	541,303	19,495	1,881,573
G & A	817,181	26,971	2,790,213
Capacity Building	1,378,113	-	1,836,328
Sub-Awards	6,999,738	433,496	11,645,037
Procurements	14,246,081	-	21,317,450
Material OH	371,032	7,109	606,479
FEE	1,978,402	740,562	4,544,257
NICRA Adjustment	(425,695)	-	(425,695)
Projected expenditure	34,526,074	1,510,501	68,283,410
Cumulative expenditure	66,772,909	68,283,410	68,283,410
Pipeline	(21,779,499)	(23,290,000)	(23,290,000)

ANNEX VII: EPP STAFF

Name	Title/Justification	Status	Staff	Location	EPP Department
Jim R. Hicks	Chief of Party	Full Time	Expatriate	Islamabad	Management
Talha Javed	DCOP	Full Time	CCN	Islamabad	Management
Chris DuRaan	Security Specialist	Full Time	Expatriate	Peshawar	Security
Chris Kent	Security Director	Full Time	Expatriate	Islamabad	Security
Ms. Riaz Ayub	Procurement & Inventory Officer	Full Time	CCN	Islamabad	Procurement
Muhammad Asad Sardar	Senior Procurement Specialist	Full Time	CCN	Islamabad	Procurement
M. Khurram Nazar Kharal	Assistant Contracts Specialist	Full Time	CCN	Islamabad	Procurement
Shafqat Ismail	Assistant Procurement Specialist	Full Time	CCN	Islamabad	Procurement
Guy Knowle	SR Procurement Specialist	Part Time	Expatriate	Washington	Procurement
Mahak Ali Bajwa	Cross Cutting Activities Assistant	Full Time	CCN	Islamabad	Cross-Cutting
Memona Naseer	Cross Cutting Activities Coordinator	Full Time	CCN	Islamabad	Cross-Cutting
Rabia Abbasi	Cross Cutting Activities Assistant	Full Time	CCN	Islamabad	Cross-Cutting
Lauren Jean Wygonski	Cross Cutting Advisor	Full Time	Expatriate	Islamabad	Cross-Cutting
Amir Hadi	Senior Software Engineer	Full Time	CCN	Islamabad	Communication
Mohammad Zafar Taj	Assistant Communications Specialist	Full Time	CCN	Islamabad	Communication
Syed Makbul Ahmed Shah	Communications Manager	Full Time	CCN	Islamabad	Communication
Mina Sohail	Communication Specialist	Full Time	CCN	Islamabad	Communication
Alhan Farooq	Events Specialist	Part Time	CCN	Islamabad	Communication
Wajid Hussain	Communications Assistant	Full Time	CCN	Islamabad	Communication
Russell Profozich	Senior Writer	Part Time	Expatriate	Washington	Communication
Sharon Rasmussen	Quality Control Manager	Full Time	Expatriate	Islamabad	Communication
Asif Majeed	Senior Monitoring and Implementation Engineer	Full Time	CCN	Islamabad	Generation
Ghulam Abbas Malik	Senior Energy Expert	Full Time	CCN	Islamabad	Generation

Name	Title/Justification	Status	Staff	Location	EPP Department
Muhammad Saleem Paracha	Senior Energy Expert	Full Time	CCN	Islamabad	Generation
Naveed Siddique	Senior Energy Expert	Full Time	CCN	Islamabad	Generation
M. Idrees	Electrical Engineer	Full Time	CCN	Islamabad	Generation
TBD	Environmental Specialist	Full Time	CCN	Islamabad	Generation
Amir Bashir	Generation Expert - Jamshoro	Part Time	CCN	Jamshoro	Generation
TBD	Associate Engineer	Full Time	CCN	Islamabad	Generation
Akbar Yusuf	Director Policy Reform	Full Time	CCN	Islamabad	Policy
Aman Ullah Mangrio	Assistant Financial Analyst - NTDC	Full Time	CCN	Islamabad	Policy
Faraz Syed Khan	Project Development Advisor - MWP	Full Time	CCN	Islamabad	Policy
Humzah Qamar Yazdani	Legal Specialist	Full Time	CCN	Islamabad	Policy
Imran Haider	Policy Support - PC	Full Time	CCN	Islamabad	Policy
Khurram Aftab Qazi	Oil and Gas Specialist	Full Time	CCN	Islamabad	Policy
Masood Ahmed Bhatti	LNG Advisor	Full Time	CCN	Islamabad	Policy
TBD	DGPC Commercial Advisor	Full Time	CCN	Islamabad	Policy
Muhammad Razi Abbas	Project Development Advisor - MOF	Full Time	CCN	Islamabad	Policy
Munir Ahmad	Energy Policy & Program Specialist	Full Time	CCN	Islamabad	Policy
Salahuddin Rifai	Senior Energy Expert	Full Time	CCN	Islamabad	Policy
Shahid Ahmad	Oil and Gas Advisor	Full Time	CCN	Islamabad	Policy
Tahawar Hussain Syed	Policy Advisor	Full Time	CCN	Islamabad	Policy
Ishaq Saqi	Downstream Gas Specialist	Full Time	CCN	Islamabad	Policy
Saadia Qayyum	Policy Specialist	Full Time	CCN	Islamabad	Policy
TBD	Regulatory Specialist	Full Time	CCN	Islamabad	Policy
Sarah Awan	Legal Advisor	Full Time	CCN	Islamabad	Policy
Matthew Addison	Senior Energy Policy Advisor	Full Time	Expatriate	Islamabad	Policy
TBD	Load Research Specialist	Full Time	TCN	Islamabad	Policy

Name	Title/Justification	Status	Staff	Location	EPP Department
Robert Vodzack	Finance/Economic Specialist	Full Time	Expatriate	Islamabad	Policy
Ghulam Abbas	Senior Advisor Hydro	Full Time	CCN	Islamabad	Due Diligence
Mian Shahid Ahmad	Director New Projects	Full Time	CCN	Islamabad	Due Diligence
Mr. Sadaf Iqbal	Environmental Expert	Full Time	CCN	Islamabad	Due Diligence
Abdullah	Assistant Electrical Engineer	Full Time	CCN	Peshawar	Transmission
Amjad Ali	Project Technical Assistant	Full Time	CCN	Peshawar	Transmission
Buland A Siddiqui	ERP Advisor	Full Time	CCN	Lahore	Transmission
Hafiz Sultan Mobeen	Junior Engineer	Full Time	CCN	Lahore	Transmission
Moazzam Shafique	Project Technical Assistance	Full Time	CCN	Islamabad	Transmission
Mohammad Rehan	Project Technical Assistant	Full Time	CCN	Islamabad	Transmission
Muhammad Iqbal Anwar Khan	Transmission Engineer	Full Time	CCN	Lahore	Transmission
Muhammad Riaz	Project Manager	Full Time	CCN	Peshawar	Transmission
Muhammad Zubair Malik	Junior Engineer	Full Time	CCN	Lahore	Transmission
Saeed Ahmed	Protection Engineer	Full Time	CCN	Peshawar	Transmission
Sehrish Riaz	Assistant Engineer	Full Time	CCN	Lahore	Transmission
M. Shomail Khan	Protection Engineer	Full Time	CCN	Peshawar	Transmission
Shan H Zaidi	Transmission Procurement Advisor	Full Time	CCN	Lahore	Transmission
Sher Ahmed	Live Line Coordinator	Full Time	CCN	Islamabad	Transmission
Sufdar Hayat	Assistant Electrical Engineer	Full Time	CCN	Peshawar	Transmission
Syed Kashif Jehan	ERP Advisor	Full Time	CCN	Lahore	Transmission
Syed Shams Uddin Ahmad	ERP Lead Advisor	Full Time	CCN	Lahore	Transmission
Ch. Tauqir Ahmed Chowhan	Transmission Engineer	Full Time	CCN	Lahore	Transmission
Khan Bahadar	Transmission Engineer	Full Time	CCN	Lahore	Transmission
Azmat Khan	Assistant Electrical Engineer	Full Time	CCN	Peshawar	Transmission
Khalid Hussain Rai	Project Manager	Full Time	CCN	Lahore	Transmission

Name	Title/Justification	Status	Staff	Location	EPP Department
Tariq Qazi	Senior Advisor Transmission	Full Time	CCN	Islamabad	Transmission
TBD	Live Line M&E Expert	Full Time	CCN	Islamabad	Transmission
TBD	Live Line M&E Expert	Full Time	CCN	Islamabad	Transmission
TBD	Live Line M&E Expert	Full Time	CCN	Islamabad	Transmission
TBD	Live Line Demonstrator	Full Time	CCN	Islamabad	Transmission
TBD	Live Line Demonstrator	Full Time	CCN	Islamabad	Transmission
M. Shomail Khan	Protection Engineer	Full Time	CCN	Peshawar	Transmission
Hamid Khan	Systems Engineer	Full Time	TCN	Lahore	Transmission
Wajahat Ali Butt	Assistant Engineer	Full Time	CCN	Islamabad	Transmission
Waqas Ahmad	Assistant Electrical Engineer	Full Time	CCN	Peshawar	Transmission
Zafar Ali Khan	Live Line Demonstrator	Full Time	CCN	Islamabad	Transmission
Zenab Ali	Assistant Engineer	Full Time	CCN	Islamabad	Transmission
Kevin Thomas	Project Manager	Full Time	Expatriate	Islamabad	Transmission
Rufus Kellam	Transmission Manager	Full Time	Expatriate	Islamabad	Transmission
Adnan Hafeez	Admin Assistant	Full Time	CCN	Islamabad	Finance & Admin
Aman Ullah	Office Boy	Full Time	CCN	Peshawar	Finance & Admin
Aneela Sardar	Financial and Procurement Analyst	Full Time	CCN	Islamabad	Finance & Admin
Aniat Anthony Gill	Cook	Full Time	CCN	Islamabad	Finance & Admin
Anjum Sarfraz	Manager Admin & Finance	Full Time	CCN	Islamabad	Finance & Admin
Aslam Kanwal	Senior janitor	Full Time	CCN	Islamabad	Finance & Admin
Babar	Cleaner	Full Time	CCN	Peshawar	Finance & Admin
Bilal Saeed Jadoon	Administrative Assistant	Full Time	CCN	Peshawar	Finance & Admin
Faiza Mazhar	Administrative Assistant	Full Time	CCN	Islamabad	Finance & Admin
Imran Hussain	Driver	Full Time	CCN	Peshawar	Finance & Admin
Imran Masihi	Janitor	Full Time	CCN	Lahore	Finance & Admin

Name	Title/Justification	Status	Staff	Location	EPP Department
Jamil Gill	Office Assistant	Full Time	CCN	Islamabad	Finance & Admin
Kramat Hussain	Senior Driver	Full Time	CCN	Islamabad	Finance & Admin
Majid Sultan	Office Assistant	Full Time	CCN	Islamabad	Finance & Admin
Malik Jan	Driver	Full Time	CCN	Islamabad	Finance & Admin
Mohammad Arshad	Gardner	Full Time	CCN	Islamabad	Finance & Admin
Mohammad Saqib	Driver	Full Time	CCN	Islamabad	Finance & Admin
Mohammad Waqas	Office Boy	Full Time	CCN	Peshawar	Finance & Admin
Muhammad Akmal	Office Boy	Full Time	CCN	Lahore	Finance & Admin
Muhammad Awais Shabbir	IT Specialist	Full Time	CCN	Islamabad	Finance & Admin
Muhammad Danish Akhtar	Administrative Assistant	Full Time	CCN	Lahore	Finance & Admin
Muhammad Khan Hoti	Director Administration and Finance	Full Time	CCN	Islamabad	Finance & Admin
Muhammad Nadeem	Driver	Full Time	CCN	Lahore	Finance & Admin
Muhammad Rohail Bangash	Assistant IT Specialist	Full Time	CCN	Peshawar	Finance & Admin
Pervaiz Akhtar	Cook	Full Time	CCN	Peshawar	Finance & Admin
Qaiser Nadeem	Cook	Full Time	CCN	Islamabad	Finance & Admin
Rafi Roomi	Janitor	Full Time	CCN	Islamabad	Finance & Admin
Safan Bin Noman	Finance and HR (A)	Full Time	CCN	Islamabad	Finance & Admin
Safdar Hussain	Cook	Full Time	CCN	Islamabad	Finance & Admin
Samar Abbas	Cleaner	Full Time	CCN	Islamabad	Finance & Admin
Shoukat Mahmood	Senior Cook	Full Time	CCN	Islamabad	Finance & Admin
Syed Asad Riaz Shah	Assistant IT Specialist	Full Time	CCN	Islamabad	Finance & Admin
Syed Husain Al Azeem	Operation Specialist	Full Time	CCN	Islamabad	Finance & Admin
Nasir	Janitor - Islamabad	Full Time	CCN	Islamabad	Finance & Admin
Wali Ur Rahman	Driver	Full Time	CCN	Islamabad	Finance & Admin
Zeeshan Ahmad	Admin & Logistic Assistant	Full Time	CCN	Peshawar	Finance & Admin

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