



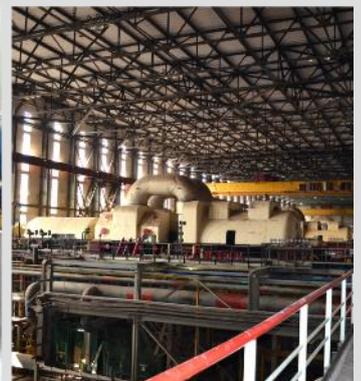
USAID
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USAID ENERGY POLICY PROGRAM

MONTHLY PROGRESS REPORT

January 2015



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USAID ENERGY POLICY PROGRAM

MONTHLY PROGRESS REPORT January 2015

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ACRONYMS

AEAI	Advanced Engineering Associates International, Inc.
CPPA	Central Power Purchasing Authority
DGPC	Directorate General Petroleum Concessions
DISCO	Distribution Company
EETPL	Elengy Terminal Pakistan, Ltd.
EPP	Energy Policy Program
ERU	Economic Reforms Unit
EWT	Extended Well Test
FARA	Fixed Amount Reimbursable Agreement
FSRU	Floating Storage and Regasification Unit
GENCO	Generation Company
GOP	Government of Pakistan
GTPS	Guddu Thermal Power Station
G2G	Government-to-Government
HDIP	Hydrocarbon Development Institute of Pakistan
ISGS	Interstate Gas System
JTPS	Jamshoro Thermal Power Station
KPI	Key Performance Indicator
KPK	Khyber Pakhtunkhwa
kV	Kilovolts
LNG	Liquefied Natural Gas
LSA	LNG Services Agreement
M&E	Monitoring and Evaluation
MOF	Ministry of Finance
MPNR	Ministry of Petroleum and Natural Resources
MTPS	Muzaffargarh Thermal Power Station
MW	Megawatt, unit of electrical power, 1 million watts,
MWP	Ministry of Water and Power
NEPRA	National Electric Power Regulatory Authority
NOC	No Objection Clearance Certificate
NPCC	National Power Control Center
NTDC	National Transmission and Dispatch Company
O&M	Operations and Maintenance
P&I	Protection and Instrumentation
PESCO	Peshawar Electric Supply Company
PIL	Project Implementation Letter
PowerSIM	Power Sector Integrated Model
PPA	Power Purchase Agreement
PQA	Port Qasim Authority
PPEPCA	Pakistan Petroleum Exploration and Production Companies Association
PTS	Petroleum Technology Solutions

RFP	Request for Proposal
SCADA	Supervisory Control and Data Acquisition
SPA	Sales Purchase Agreement
SBLC	Standby Letter of Credit
SSGC	Sui Southern Gas Company
SN&IT	Science and Technology and Information Technology
USAID	United States Agency for International Development
WAPDA	Water and Power Development Authority

EXECUTIVE SUMMARY

As of January 31, 2015, \$151.49 million has been disbursed to the Government of Pakistan (GOP) stakeholders, and 1439 MW¹ have been made available to Pakistan's national grid due the efforts of United States Agency for International Development (USAID) Energy Policy Program (EPP) under its implementing partner, Advanced Engineering Associates International, Inc. (AEAI).

EPP continues to provide monitoring and implementation support for the seven government to government (G2G) Signature Energy Projects: Gomal Zam Multipurpose Dam Project; Satpara Multipurpose Dam Project; Guddu Thermal Power Station Rehabilitation Project; Jamshoro Thermal Power Station Rehabilitation Project; Muzaffargarh Thermal Power Station Rehabilitation Project; Mangla Dam Hydro Power Plant Rehabilitation Project; and Tarbela Hydropower Plant Rehabilitation Project.

During January, EPP met with the Water and Power Authority (WAPDA) to expedite the procurement of equipment for Phase I at Mangla and Tarbela Dams and also to expedite the progress on the condition precedents for Tarbela Phase II. EPP also advised WAPDA on a fast-track schedule with the vendor in order to complete the project within the necessary time. When installation of digital governors at Tarbela units 1-10 is complete, EPP will inspect the governors and will certify the WAPDA/Tarbela invoice of \$300,000. EPP continued providing support to USAID on the amendment request for the Jamshoro, Guddu, and Muzaffargarh projects. WAPDA will be receiving bids next month for the construction of the Kaitu Weir and Affiliated Canals and Structures.

EPP continued working level discussions with JPCL regarding USAID support for improving the commercial and technical performance of select generation companies (GENCOs). At Guddu Thermal Power Station, EPP coordinated heat-rate tests with an independent engineering firm, Pakistan Engineering Services, to schedule the tests and to check the availability of units for testing. This effort supports Guddu in revising its tariffs to facilitate sustainable operations.

The EPP team worked closely with Senior Management at the Ministry of Water and Power (MWP), the Ministry's Energy Wing, and the National Transmission and Despatch Company (NTDC) on a number of policy areas, including improving the policy implementation process and strengthening the capacity of USAID funded government agencies. The performance contracts for GENCOs and NTDC have been finalized after a rigorous consultation process with all the relevant stakeholders, and the final contracts were submitted for signature. EPP assisted in developing a Strategic Plan for NTDC in January with a presentation on the planning process and the timeline. A series of interactive meetings was held with Senior Management of NTDC to get their feedback and suggestions on the plan; the interactive nature of the meetings was highly appreciated by the Senior Managers.

The EPP oil and gas team continued its support to the Ministry of Petroleum and Natural Resources (MPNR) providing support in the areas of Liquefied Natural Gas (LNG) imports, shale gas resource assessment, and upstream oil and gas to the Directorate General Petroleum Concessions (DGPC). The final draft of the LNG Master Sales and Purchase Agreement was submitted to the GOP. EPP commercial and legal consultants accompanied the GOP delegation to Doha, Qatar to support them in negotiating with Qatargas. Continued support was provided to Port Qasim Authority (PQA) in LNG specific areas and in monitoring the LNG terminal and pipeline construction, which is expected to reach completion during February 2015.

EPP monitored progress on the Kaitu Weir Project during January and assisted USAID Project Manager in meetings with WAPDA in Lahore. EPP also developed its Due Diligence Report on the Golan Gol Project during the month and sent it to USAID.

¹ 1013 MWs of added/saved through generation interventions, 10.1 MWs of added/saved through transmission interventions, and 415.9 MWs of throughput capacity through transmission interventions total to 1439 MWs total.

During January, EPP installed 42 cooling fans and repaired two damaged transmission line towers at the Peshawar Electric Supply Company (PESCO). The procurement actions for providing oil filtration plants, power transmission and grid equipment, personal protective equipment, and other technical equipment are also underway. In addition, procurement actions are underway for provision of Real Time Digital Simulators (RTDS), auto-transformers, and design center rehabilitation for NTDC. Under the Live-Line Training Program, EPP experts gave demonstrations on refurbishing hot sticks to NTDC staff in the Multan and Jamshoro regions. Hot sticks are used in live-live repairs to reduce the need to shut down power supplies. The trainees selected from MEPCO and SEPCO for the Live-Line Training Program were also finalized with training started on February 2, 2015.

EPP is currently planning to begin training the second group in Live-Line Maintenance for the four new power distribution companies (DISCOs) (MEPCO, SEPCO, QESCO, and LESCO) along with the Live-Line Maintenance refresher training for the five previously trained DISCOs (FESCO, GEPCO, HESCO, PESCO, and IESCO) in February 2015.

EPP's Communications activities promote and develop outreach strategies that highlight the program's ongoing efforts and achievements. During January six major reports were compiled and submitted to USAID for review.

During this reporting period, the cumulative number of people who have directly benefited from EPP's efforts stands at 14.83 million or 8.3% of the population. As of this reporting period, EPP's efforts have improved the financial performance of energy sector entities by \$626 million, which represents approximately 7.2% of the 2012 circular debt.

HIGHLIGHTS JANUARY 2015

COMPONENT 1: PROJECT MONITORING & IMPLEMENTATION

EPP met with WAPDA to expedite the procurement of equipment at Mangla and Tarbela (phase I) and also to expedite the progress on the condition precedents of Tarbela (phase II), which are critical before any disbursement. EPP also advised WAPDA to agree on a fast-track schedule with the vendor to complete the project within the time. Subsequent to the completion of installation of digital governors at Tarbela units 1-10, EPP will inspect the governors and will certify the WAPDA/Tarbela invoice of \$300,000. EPP continued providing support to USAID on the amendment request of Jamshoro, Guddu, and Muzaffargarh. EPP also provided the inquiry report of the fire incident that took place at unit 4 of Muzaffargarh on December 31, 2014 to USAID, which indicated that the damages were approximately \$24,000. EPP also visited Jamshoro to ensure that the installation of the remaining two items will be completed as per the schedule, as these items are critical for the reliability and sustainability of the power plant's operations.

EPP continued working level discussions with JPCL regarding USAID support for improving the commercial and technical performance of GENCOs. EPP coordinated with Guddu and an independent engineering firm, Pakistan Engineering Services, to check the availability of units for heat-rate testing in support Guddu's efforts to facilitate sustainable operations.

COMPONENT 2: POLICY AND REFORM

The performance contracts for GENCOs and NTDC were finalized after a rigorous consultation process with all the relevant stakeholders and have been submitted to MWP and BODs of respective companies for signature. A presentation was delivered to the Board and Senior Management of NTDC at the beginning of January to discuss the strategic planning process and the timeline. A series of interactive meetings were held with Senior Management of NTDC to obtain feedback and suggestions on the plan; the interactive nature of the meetings has been highly appreciated by the Senior Managers. EPP has also initiated work on implementing E-Governance in the Energy Wing for which meetings were conducted with relevant officials in the Planning Commission. This will help in improving functioning of the government by decreasing the need for paper processing and allowing routine inquiries to be handled electronically.

The EPP oil and gas team continued its support to the MPNR during January 2015. This support covered LNG imports, shale gas resource assessment, and upstream oil and gas support to DGPC.

The final draft of the LNG Master Sales and Purchase Agreement (SPA) was submitted to the GOP. EPP commercial and legal consultants accompanied the GOP delegation to Doha, Qatar to support them in negotiating the draft SPA terms with Qatargas. Port consultants continued their support to PQA in LNG specific areas and in monitoring the LNG terminal and pipeline construction, which is expected to reach completion next month.

Confidential well core data for additional 14 wells released by OGDCL and Hydrocarbon Development Institute of Pakistan was shipped to NuTech labs in Houston, where it is being evaluated for inclusion in the shale gas resource assessment study. As desired by Secretary MPNR, financial impact on GOP due to inclusion of crude oil/condensate provisions in the Model Onshore Supplemental Agreement was calculated based on information provided by DGPC. The report has been forwarded to DGPC for further discussion. Regular support to DGPC on various commercial, legal, and regulatory matters also continued throughout January.

COMPONENT 3: NEW PROJECTS, PLANNING AND DEVELOPMENT

EPP kept USAID regularly updated on activities and progress on the Kaitu Weir Project during January and assisted USAID Project Manager in meetings with WAPDA in Lahore. EPP developed its Due Diligence Report on the Golan Gol Project during the month and sent it to USAID.

COMPONENT 4: NEW ACTIVITIES

EPP installed 42 cooling fans and repaired two damaged transmission line towers at PESCO. The procurement actions for providing Oil Filtration Plants, Transmission and Grids (T&G) equipment, Personal Protective Equipment (PPE), and Earth Sets are also underway. Similarly, procurement actions are underway for provision of RTDS and auto-transformers. Under the Live-Line program, EPP experts gave demonstrations on refurbishing hot sticks to NTDC staff in Multan and Jamshoro regions. The trainees from MEPCO and SEPCO selected for the Live-Line Training Program were also finalized – the training starts on February 2, 2015.

FACTS & FIGURES AT A GLANCE

PROGRESS IN NUMBERS

Table 1: EPP Indicators and Achievement for January 2015

Indicator	Unit	LOP Target	Achieved in January 2015	Total Achieved as of January 2015	LOP % Achieved as of January 2015
1.a: GWh of energy sold	GWh	7880	0	8,627	109%
1.1.a: Number of beneficiaries with improved energy services due to United States Government assistance	Individuals	13,624,226	0	14,834,354	109%
1.1.b: GWh of energy availability	GWh	7880	0	8,627	109%
1.1.c: MW available to meet power sector demand as a result of USG assistance	MW	1,303	0	1,439	110%
1.1.1.a: MW of electrical power added or saved as a result of USG improvements	MW	875	0	1,023	117%
1.1.1.b: Efficiency of thermal power plant tests completed	No.	3	0	2	67%
1.1.1.c: Number of USG supported installations and operations and maintenance improvements	No.	181	0	126	70%
1.1.1.d: Number of transmission bottlenecks resolved	No.	121	0	96	79%
1.1.4.a: Public and private funds leveraged by the USG for energy infrastructure projects	US \$	193.5 million	0	38.5 Million	20%
1.2.1.a: Number of key policies and regulations in various stages	No.	12	0	19	158%
1.2.2.a: Number of policies following international best practices	No.	6	0	2	33%
1.2.2.b: Number of board recommendations following international best practices	No.	4	0	0	0%
1.2.3.a: Number of best practice-driven systems created, improved, and implemented	No.	10	0	5	50%
1.2.4.b: Number of public forums resulting from USG assistance in which government officials and citizens interact	No.	12	0	5	42%

COMPONENT-WISE SUMMARY

Table 2: EPP Indicators by Component January 2015

Indicator	Unit	Component	LOP Target	Achieved in January 2015	Total Achieved as of January 2015	LOP % Achieved as of January 2015
I.1.a: Number of beneficiaries with improved energy services due to United States Government assistance	Individuals	Total	13,624,226	0	14,834,354	109%
		I-Generation	7,993,106	0	9,382,406	117%
		IV-Transmission Throughput Capacity	5,477,544	0	5,322,688	97%
		IV – Transmission Added/Saved	153,576	0	129,260	84%
I.1.b: GWh of energy availability	GWh	I & IV	7880	0	8,628	109%
		I-Generation	4,796	0	5,642.29	118%
		IV-Transmission Throughput Capacity	2999.4	0	2,914.6	97%
		IV – Transmission Added/Saved	84	0	70.7328	84%
I.1.c: MW available to meet power sector demand as a result of USG assistance	MW	I & IV	1,303	0	1,439.00	110%
		I-Generation	863	0	1,013	117%
		IV-Transmission Throughput Capacity	428	0	415.9	97%
		IV – Transmission Added/Saved	12	0	10.1	84%
I.1.1a: MW of electrical power added or saved as a result of USG improvements	MW	I & IV	875	0	1023.1	117%
		I-Generation	863	0	1,013	117%
		IV – Transmission Added/Saved	12	0	10.1	84%

COMPONENT ACTIVITY DETAILS

COMPONENT I

PROJECT MONITORING AND IMPLEMENTATION

As of January 31, 2015, \$151.49 million has been disbursed to GOP implementing partners, and 1013 MW have been added to Pakistan’s national grid. Results achieved through the successful monitoring and implementation of G2G projects are illustrated in Table 3 below:

Table 3: Results Achieved through G2G Projects

Projects	USG Funding (\$USD Million)	Paid (\$USD Million)	Completion Date	MW Gains/Benefits	
				Target	Achieved (Jan 31, 2015)
Tarbela (Phase I)	\$16.50	\$13.95	12/31/15	128.0 MW	128.0 MW
Jamshoro	\$19.32	\$19.32	12/31/14*	150.0 MW	270.0 MW
Guddu	\$19.12	\$18.91	12/31/14*	75.0 MW	80.0 MW
Muzaffargarh	\$15.77	\$15.31	12/31/14*	475.0 MW	500.0 MW
Gomal Zam	\$45.00	\$45.00	Completed	17.4 MW	17.4 MW
Satpara	\$26.00	\$26.00	Completed	17.6 MW	17.6 MW
Mangla	\$150.00	\$13.00	12/31/2017	90 MW	In Progress
Tarbela (Phase II)	\$25.00	Signing of PIL is in progress	12/31/2016	20 MW	Signing of PIL is in progress
Total	\$316.71	\$151.49		973 MW	1013 MW

*EPP anticipates contract extension to complete work in 2015.

REHABILITATION OF TARBELA HYDROPOWER PLANT

Phase I

The rehabilitation work (Phase I) to date has resulted in restoration of 128 MW at Tarbela Hydropower Plant. Replacement of the generator windings at units 1, 3, and 4; installation of digital governors at units 1-10; and replacement of relief valve seals, guides, and pumps are now complete. Subsequent to the installation and commissioning of digital governors at all the ten units, EPP engineers are planning to visit the power plant early in February to physically inspect the working of digital governors at units 1-10; following the inspections they will certify WAPDA’s reimbursement request of \$300,000 on completion of installation of digital governors, as per the Activity Agreement.



Figure 1: Installed digital governors at Tarbela Hydro Power Station

On request of WAPDA, USAID extended the Activity Completion Date for one year until December 31, 2015, and also replaced the request for one-third spare winding with a request for Rotor Poles, which are currently more essential; WAPDA already has one spare winding available in their inventory that had been left unutilized. The remaining three procurement activities are

important for the reliability and sustainability of the power station: (1) Rotor Poles, (2) up-gradation of SCADA system, and (3) one dewatering pump. EPP met with WAPDA to expedite the procurement of these items and advised WAPDA to agree a fast-track schedule with the vendor.

Phase II

USAID is also funding \$25 million for Tarbela Phase II out of which \$10 million is sub-obligated under an Activity Agreement. This funding will aid the replacement of additional equipment that will add to the reliability and sustainability, and enhance the life of Tarbela hydro power plant by at least 15-20 years. An additional 20 MWs of energy per year and oil savings of \$12 million per year is also expected with this replacement.

For Phase II of the Tarbela Project, WAPDA has opened a separate bank account for operation and maintenance, and opening of an assignment account is under process to meet the conditions precedents set forth in the signed Activity Agreement as these are necessary before any disbursement. EPP met with WAPDA to expedite the progress on the condition precedents. The Phase II project will be implemented after the signing of a separate Project Implementation Letter (PIL).

MUZAFFARGARH THERMAL POWER STATION REHABILITATION

USAID funded rehabilitation at Muzaffargarh Thermal Power Station (MTPS) has restored 500 MW to the National Grid, which is sufficient to supply electricity to 4.63 million individuals. The restored 500 MW exceeds the project objective of 475 MW given in the Agreement.

At MTPS, about 95% of the equipment has been procured and installed, while procurement of the remaining items is underway. The management of Muzaffargarh Power Plant is committed to complete the outstanding works and



Figure 2: Muzaffargarh Thermal Power Station

have requested USAID to extend the project completion as installation and testing of the remaining items will go beyond December 2014 and require another six months. In addition, Muzaffargarh Thermal Power Station has requested that the PIL amount allocated for Item 5: Modification of Excitation System be re-allocated to the much needed Item 33: Distributed Control System (DCS) for Turbine Governing System and Boiler Turbine Auto Regulation System. The request was made since the bid price received by Muzaffargarh for Item 33 is much higher than the allocated amount in the PIL, due to price escalation in the market since the rehabilitation started in 2010. Item 33 is critical and is required for reliability and sustainability; however, due to financial constraints the procurement of the item has been delayed. Therefore, the plant management has requested that the amount of Item 5 be adjusted to Item 33, so that the procurement and installation of the critical Item 33 could be completed by June 30, 2015. The amendment request of Muzaffargarh is with USAID and decision is awaited. EPP provided support to USAID on the amendment request.

During the reporting month, EPP updated USAID on the fire incident that took place at Unit 4 of Muzaffargarh. Later, EPP provided the inquiry report to USAID, which indicates that the damages due to the fire were approximately about \$24,000. Repair work on the unit is underway to recover its operating capacity of 270 MW.

JAMSHORO THERMAL POWER STATION REHABILITATION PROJECT

At Jamshoro Thermal Power Station (JTPS), about 96% of the equipment has been procured and installed, while procurement of the remaining two items (6 & 17) is underway. Delays in procuring the remaining equipment have generally been the result of complex negotiations with vendors; therefore, Jamshoro has requested USAID to extend the activity completion date as installation and testing of these items will require another six months beyond December 2014. The completion of the remaining two items is critical for the reliability and sustainability of the power plant operations. The amendment request of Jamshoro is with USAID and decision is awaited.



Figure 3: Jamshoro Thermal Power Station

EPP visited Jamshoro to ensure that the installation of the remaining items (major overhauling of unit 1 and distributed control system) will be completed as per the revised schedule, as these items are critical for the reliability and sustainability of the power plants operations.

REHABILITATION OF GUDDU THERMAL POWER STATION

At Guddu Thermal Power Station (GTPS), about 95% of the equipment has been procured and installed, while procurement of remaining items is underway. Therefore, Guddu requested USAID to extend the activity completion date of the rehabilitation project as installation and testing of one item (Item 4) will go beyond December 2014 and require another six months. The amendment request of Guddu is with USAID and decision is awaited.

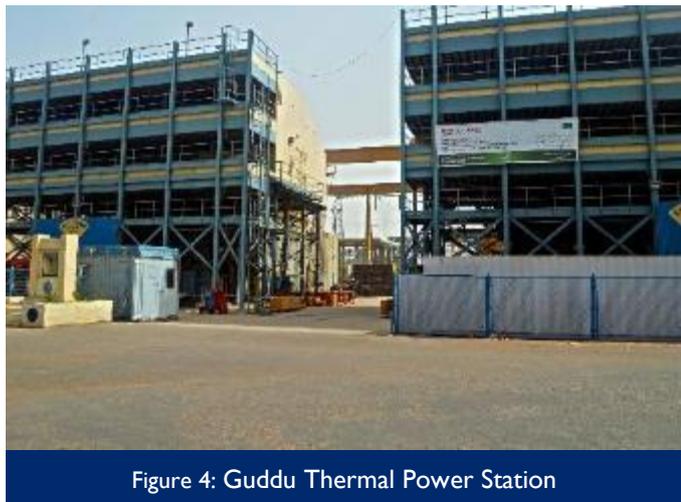


Figure 4: Guddu Thermal Power Station

MANGLA DAM REHABILITATION PROJECT

The procurement of major equipment (turbines and generators for Units 5 and 6) was initiated by WAPDA in February 2014, but in December 2014, WAPDA decided to cancel the current tender due to the bid security issues. WAPDA plans to tender the bid again in April 2015. EPP expected a six-month delay in the procurement due to the re-tendering and will request WAPDA to agree to a fast-track schedule with the selected vendor to achieve completion by December 2017. As



Figure 5: Mangla Power Station

per the Activity Agreement, the project completion date is December 31, 2017 and the total amount disbursed to GOP as of January 2015 is \$13 million.

GENCOs Heat Rate Tests

EPP is coordinating with Guddu and an independent engineering firm (Pakistan Engineering Services) to perform heat-rate tests at Guddu Thermal Power Station. The effort has been undertaken to support Guddu in revising its tariffs to facilitate sustainable operations.

CURRENT STATUS

- Procurement of remaining equipment at Jamshoro, Muzaffargarh, and Guddu Project: EPP facilitated Jamshoro, Muzaffargarh, and Guddu in developing schedules for the remaining items. The amendment request to extend the completion date of Jamshoro, Muzaffargarh, and Guddu is with USAID and decision is awaited.
- Procurement of remaining equipment at Tarbela project: EPP provided support to USAID on WAPDA's request to extend the completion date and replacement of one-third spare winding with a more immediately needed item, Rotor poles. The request is with USAID and decision is awaited.
- Need for WAPDA to meet the conditions set forth in the signed Activity Agreement for the Tarbela Phase II, which is critical before any disbursement. EPP met several times with WAPDA to expedite the procurement.
- Procurement of equipment at Mangla project: EPP met with WAPDA to expedite the procurement.

COMPONENT 2

POLICY AND REFORM

SUPPORT TO MINISTRY OF WATER AND POWER

EPP met with Additional Secretary and Joint Secretary, Policy (MWP) to discuss the on-going and proposed activities with the Ministry. EPP is involved in the following activities:

NTDC Human Resource Management/Organizational Development Consultant: EPP team followed up with NTDC on the proposals for Human Resources Consultants in response to the Request for Proposal (RFP) for Organizational Transformation and Restructuring. The NTDC Evaluation Committee is reviewing the technical proposals.

NTDC Performance Contract: MWP extended the time for NTDC and GENCOs after EPP had submitted the final documents. EPP subsequently played a pivotal role in negotiating the contract between MWP and NTDC. Based on the meetings held with NTDC Board and senior management during the month, EPP revised and finalized the contract. The final performance contract has been submitted to MWP and NTDC BOD for signature.

WAPDA/NTDC Power Purchase Agreement: In order to allow for and to facilitate the transition of Central Power Purchasing Authority (CPPA) to a stand-alone entity, the specific payment and settlement issues must be reconciled. EPP has drafted a new Power Purchase Agreement (PPA) and is working with the entities to finalize it.

GENCO Performance Contract: EPP team worked with GENCOs and GENCO Holding Company to finalize their concerns and sign the contracts. The deadline for signing the contract, as given by IMF, was December 25, 2014 but was extended to incorporate comments and concerns of GENCOs. The contract was reviewed and finalized based on the feedback given by GENCOs. EPP team submitted the final contracts to MWP on January 30, 2015.

SUPPORT TO NTDC

Strategic Plan: The NTDC Strategic Plan development was initiated at the NTDC Board kickoff meeting January 1, 2015. EPP team provided the Board with a presentation laying out the strategic planning process for NTDC, key elements of the plan, role of the board, and the timetable.

In January, three Strategic Plan meetings were held for the management and staff of NTDC on January 10, 16- 17, and 24 2015. The first meeting focused on development of the vision and mission. At the January 16-17 meetings, the vision and mission statements were completed and ready for Board approval. The group developed the initial strategic objectives and proposals for the tasks/initiatives to achieve the strategic objectives at the January 17 meeting. The Strategic Plan group will hold additional meetings to continue work on the strategic objectives as completion was delayed due to delays in obtaining the required No Objection Clearance (NOC) Certificate for travel to Lahore.

At the January 24 meeting at NTDC Islamabad, the Chairman of the Board requested an overview of the proposed Key Performance Indicators (KPIs). The Financial/Economic advisor presented a proposed format for the KPIs to be included in the Strategic Plan. The Planning Committee accepted the format of the KPI tracking.

Circular Debt Paper: EPP team is working on a Circular Debt paper as requested by the Additional Secretary, Water and Power. The aim of this paper is to define the circular debt and its components and to identify and elaborate on how it accumulates. The policy report recommends a number of measures for solving the problem of Circular Debt.

SUPPORT TO MINISTRY OF PLANNING AND DEVELOPMENT

Policy Analysis and Planning: EPP continued to provide advisory support to the Ministry's Energy Wing throughout the month on a variety of tasks as requested by Member and Secretary. A presentation was prepared for the Secretary on current status of upcoming power generation projects in the country. EPP prepared and updated a daily power supply demand scenario for the NTDC system. EPP also assisted the Energy Wing in updating the power generation plan 2015-24 and the status of projects was updated in light of data and information provided by stakeholders.

Long-Range Energy Alternatives Planning System (LEAP): EPP team is working on developing Pakistan's energy reference system in LEAP software, which is a widely used software tool for energy policy analysis and climate change mitigation assessment developed at the Stockholm Environment Institute. EPP team will be developing this model for addressing planning needs of Pakistan's energy sector for MWP and MPNR. In order to gather demand data for input in LEAP, EPP team met with Pakistan Bureau of Statistics to discuss the availability of data. Next steps are to chart out timelines for LEAP.

PowerSIM Training: EPP team conducted a series of training sessions for nominated officials of the Energy Wing, Planning Commission on PowerSIM. The Energy Wing has been increasingly using Power SIM for running various policy scenarios.

Implementation of E-Governance: A meeting was held with Deputy Director for Information Technology, National Telecommunication Corporation on implementation of E-office system in the Energy Wing, Planning Commission. A meeting was also held with Member Science and Technology & Information Technology, Planning Commission, to discuss E-office training of selected officials of Energy Wing, and discussions were held with officials of the Ministry of Information Technology on the training of E-office in the Planning Commission. The next step is to meet with Ministry of Information Technology officials to discuss installation of fiber optics at the premises of government entities.

Support to Ministry of Finance

MWP proposals: EPP provided comments for the Corporate Finance Wing (CFW) responses to respond to MWP's guarantee for opening of Standby Letter for Credit by the distribution companies for purchase of power from onsite IPPs based on interim gas supply. Additionally, EPP briefed the Secretary of Finance and Senior Joint Secretary CFW on an amendment to the policy framework regarding the establishment of onsite IPPs based on interim gas supply.

DISCO Payments: Ministry of Finance CFW was assisted in preparation of the views/comments on the issues relating to payment of long outstanding electricity dues by AJK Government to three distribution companies: IESCO, PESCO, and GEPCO.

Ministry of Finance CFW was assisted in preparation of a statement on behalf of Ministry of Finance to be filed before the Supreme Court. The statement was to be filed with reference to the appeal filed by the PESCO regarding the decision of the Peshawar High Court disallowing monthly fuel adjustment in case of PESCO consumers.

Assistance was provided to Ministry of Finance CFW in finalizing the Term Sheet for TFC's amounting Rs.40 billion arranged for the distribution companies for payment to CPPA to pay against their arrears of power purchase cost. The amount will further be provided to PSO to discharge the liabilities of fuel purchase by IPPs from PSO. This loan has been arranged by Ministry of Finance through Power Holding Company under Ministry of Water and Power.

Gas Supply: Ministry of Finance CFW was assisted in working out the fuel requirement and financial impact for supply of fuel by PSO to GENCOs and IPPs for the remaining days of the current month and for February 2015.

Electricity Availability: Assistance was provided to Ministry of Finance CFW for preparation of a presentation regarding availability of electricity during the first quarter of the current year. The presentation included an integrated plan for generation of electricity and availability of financing to provide fuel to IPPs and GENCOs Demand and supply position of the power sector for the first quarter of calendar year 2013-14 was prepared for Secretary Finance.

SUPPORT TO MINISTRY OF PETROLEUM AND NATURAL RESOURCES

LNG Imports

LNG Procurement: Work on finalizing Option and Direct Agreements under the LNG Services Agreement (LSA) Conditions Subsequent continued during the month. Various conference calls were held among the legal counsels of the stakeholders involved to finalize the Option and Direct Agreements under the LSA Conditions Subsequent. Final draft of the Master SPA was submitted by WFW/FGE to the GOP for review. EPP supported the GOP entities (PSO and Interstate Gas System (ISGS)) in negotiating draft SPA terms with Qatargas in Doha from January 19-29. Inputs on technical clauses of the SPA were provided by Granada.

LNG PQA Support: Weekly progress monitoring meetings were held at Elengy Terminal Pakistan, Ltd. (EETPL) site office. The following activities undertaken by EPP:

Simulation Study: Granada submitted its review/analysis of Full Mission Bridge Simulation Study (conducted by EETPL) to PQA. PQA request for sponsoring the Full Mission Bridge Simulation study with additional scope of work has been processed for obtaining USAID approval.

Environmental Reports: ECIL comments on EETPL's environmental reports for September, October, and November 2014 were submitted to PQA.

Port Tariff: Several meetings were held between ECIL and PQA to formulate port tariff for LNG carriers.

Port Dimensions: Issues related to LNG terminal raised by ECIL-Granada were circulated among all stakeholders. Issues Paper prepared to highlight limitations regarding dimensions of LNG Carriers' with regards to the existing port parameters at PQA was submitted to ISGS and is being reviewed by GOP. PQA is considering an appropriate response for resolution of these issues. Additionally, the mooring layout verification and mathematical modeling study sponsored by EETPL is being reviewed by Granada. Detailed gap analysis for compliance with Society of International Gas Tanker and Terminal Operators (SIGTTO) guidelines and World Association for Waterborne Transport Infrastructure (PIANC) codes were submitted by Granada, which were provided to PQA for further necessary action.

Port Compliance: Granada input on use of flexible hoses for LNG transfer from LNG carrier to Floating Storage and Regasification Unit was forwarded to PQA and ISGS.

Granada provided response to the Conditions Precedent highlighted by Qatargas that need to be satisfied prior to bringing in the commissioning cargo.

Shale Gas

DGPC requested OGDCL and HDIP to release the confidential well core samples to EPP, which are to be analyzed as part of the final Milestone-4 report (resource assessment). Following DGPC directions, HDIP and OGDCL released the confidential well core samples to EPP and samples were shipped to Houston, where the evaluation process is underway.

EPP is revising the Executive Summary for Milestone-4 (incorporating a table of resource numbers for all the geological formations).

A meeting was held on January 21 with EPP's subcontractor, LMKR, and KMR to discuss all outstanding matters and future timelines related to the program. Further action was initiated in respect of Component-2, shale gas resource assessment study (Milestone-4), issues arising from Milestone-3 report, OGDCL invoice for previous confidential wells etc. Data collection exercise under Component-2 is being discussed with DGPC.

Upstream Oil and Gas

Advisory work on day-to-day issues of DGPC continued. Specific cases included extension of Sui mining lease, gas price incentive as per 2012 Policy for incremental production increase, grant of lease to a company, notice on non-payment of royalty by a specific company, reference of a case to Law Division on indexation of license/lease rentals, tight gas framework, and unauthorized flaring of gas. Weekly progress review meetings with Petroleum Technology Solutions were held throughout the month.

EPP reviewed Pakistan Petroleum Exploration and Production Companies Association response was received on the revised draft reference regarding indexation of surface rent of licenses and leases to be sent to Law Division for advice by DGPC. The draft reference was submitted to DGPC after making necessary changes.

Following a meeting chaired by Additional Secretary MPNR on January 5, Secretary MPNR chaired another stakeholders meeting convened by Minister MPNR to discuss the Onshore Model Supplemental Agreement on January 14. Advisor and Parliamentary Secretary MPNR also attended. Issues regarding crude oil/condensate, pricing/windfall levy, international arbitration, and application of conversion policy to gas or both oil and gas were discussed. Secretary desired that the financial impact on GOP due to inclusion of crude oil/condensate provisions in the Agreement may be worked out. Secretary also directed consideration of other issues regarding arbitration and Extended Well Test (EWT) production bonus. As requested by Secretary MPNR in January 14 the meeting regarding the Onshore Model Supplemental Agreement, a meeting was held with DGPC on January 21 to secure the relevant information to estimate the financial impact on GOP due to inclusion of crude oil/condensate provisions in the Agreement.

The financial impact of incorporation of provisions regarding crude oil/condensate in the Onshore Model Supplemental Agreement was worked out on the basis of the information provided by DGPC as well as other assumptions agreed upon. This financial impact was handed over to DGPC for further in-house discussions. DGPC is yet to convene a meeting to discuss the Offshore Model Supplemental Agreement for conversion of policies.

PTS revised report on regulatory framework for tight gas, low Btu gas, and marginal gas fields, was reviewed by EPP. EPP has advised PTS to make a presentation to DGPC for their agreement on regulatory framework for tight gas, low Btu gas, and marginal gas fields before finalizing the report. PTS has been requested to make a presentation to DGPC on regulatory framework for tight gas, low Btu gas and marginal gas fields. Confirmation of date and time is awaited from DGPC office.

DGPC and PTS held a series of meetings with Pakistan Petroleum Ltd. (PPL) regarding re-grant of Sui lease to PPL. On the basis of discussions held with DGPC and PTS regarding re-grant of Sui lease, PPL has sent a response, which is being examined. Report on minimum organizational setup for DGPC has been forwarded to USAID for clearance before sending to MPNR. Draft flare gas guidelines have been modified in light of comments received from the provincial governments and others, and handed over to DGPC. Induction of professionals in the Implementation Unit for DGPC is in process.



RLNG Pipeline 24" dia placed on trestle on access bridge of EVTL

CURRENT STATUS

MWP

EPP continues working with the senior management at MWP including the Additional Secretary on a number of assignments. A room has been allocated to EPP team in the Ministry and is manned by one or more team members at all times. During the month, EPP team spent a large share of the time in the Ministry addressing queries and requests given by the senior management.

The deadline to finalize the Performance Contracts of NTDC and GENCOs was extended to the end of January. This was the final deadline by IMF with no possibility of extension. EPP worked with GENCOs and NTDC to incorporate their concerns and submitted the finalized contracts to the MWP.

NTDC

EPP continues to liaise with Board of Directors and Senior Management of NTDC to improve operational processes at NTDC. EPP team has started meeting with key NTDC personnel in Lahore to gather baseline data to incorporate into the Strategic Plan and recommendations.

LNG

The bridge simulation review report has now been received from EETPL and reviewed by Granada. PQA has now informed EPP that in order to maneuver Q-Flex and other smaller vessels in Qatargas fleet under existing port conditions, Full Mission Bridge Simulation Study with additional scope of work (not covered under the previous study) is required. Qatargas has also linked this study with signing of LNG SPA with GOP. Due to the sensitivity and urgency of the issue, EPP has sent a request for consent to USAID for approval for conducting the simulation study upon PQA request.

Granada consultants require a NOC to commence work at PQA on account of being U.S. nationals. A request was sent to the Ministry of Interior in coordination with ISGS for issuance of NOCs for Granada consultants in early November. As a result of EPP follow-up, NOC has been issued to Granada consultants.

Shale Gas

DGPC raised an issue of evaluating Lower Goru formation through identification of different sub-units in line with the terminologies used by Exploration and Production Companies in Pakistan. EPP discussed the matter with DGPC and LMKR and it was suggested by EPP that LMKR will provide the currently employed methodology of evaluating the Lower Goru Formation potential to DGPC and any improvement in the same will be considered after further discussion and potential budget revision.

Upstream Oil and Gas Support

There is a serious constraint of manpower in DGPC. A proposal for DGPC manpower support including Implementation Unit was approved by USAID. Accordingly, after a limited response, a fresh RFP is being prepared. EPP has provided a report on the minimum re-organizational structure of DGPC to perform its tasks diligently to USAID for perusal and sharing with MPNR.

Due to subcontractor unwillingness to travel to Pakistan for the Shale Gas Policy formulation, a request for consent with a revised Delivery Order covering the revised scope of work has been sent to USAID for approval. This will enable EPP to re-appropriate funds under PTS contract to issue fresh RFP for formulation of Shale Gas Policy Framework with a new consultant to be selected.

In order to finalize the Model Supplemental Agreement for 2012 Policy terms, EPP met with MPNR and provided the commentary on the impact on GOP due to the inclusion of Windfall Levy on Condensate/Crude Oil in the Agreement to make a decision in finalizing the Agreement.

COMPONENT 3

NEW PROJECTS, PLANNING, AND DEVELOPMENT

EPP continued updating information on cost estimates, activity schedules for PIL agreement of Kaitu River and Affiliated Structures.

Kurram Tangi/Kaitu Weir Project

EPP kept USAID regularly updated on activities and progress on the Kaitu Weir Project during the month and assisted USAID Project Manager in meetings with WAPDA in Lahore.

WAPDA had advertised for bids to construct the Kaitu Weir and Affiliated Canals and Structures. On request of bidders, WAPDA arranged a site visit for them on January 14, 2015 amid tight security. WAPDA is expecting to receive bids next month.

EPP is working with USAID and WAPDA to identify eligible costs of works and develop project construction schedules to draft a completion milestone and associated payment plan. Next step would be finalizing of an Activity Agreement for signature by USAID and WAPDA following which a Project Implementation Letter (PIL) will be agreed to fund the Project.

Golen Gol Project

EPP developed its Due Diligence Report on the 106 MW Golan Gol Hydropower Project in Chitral during the month and sent it to USAID. USAID directed EPP to conduct Due Diligence on Golen. The effort involved meetings with WAPDA officials, analysis of project information, a site visit to Chitral, assessment of the project's technical and financial health and progress, identification of issues and risks, and recommendations for consideration by USAID. The Project is expected to provide 436 GWh of energy each year and by recently revised estimates will cost \$313 million. \$164 million had been committed in 2008 to the Project by the Saudi, Kuwait and OPEC funds while WAPDA's cost share has grown to \$149 million.

The Project is 31.6% complete and about \$144 million (46% of total cost) has been spent by December 2014. Project costs have escalated owing to procedural delays resulting in late payments and WAPDA is exploring options to arrange \$88 million to complete the project by 2017. Golen Gol is a viable project expected to yield annual revenue of over \$33 million and saving fuel oil import of about \$65 million per annum. The project will satisfy electric power demand in Chitral, stimulate local businesses, provide job opportunities to locals, and stimulate cottage industry in the remote areas besides connecting Chitral to the National Grid by a 300 MVA, 132kV transmission line, strengthening the existing 33 kV transmission line connection that sends a mere 5 MW to Chitral. The major construction has neither displaced villagers nor adversely impacted local population. However, till the GOP approves the Revised PC-I, further delays and cost escalation can be expected.

COMPONENT 4 NEW ACTIVITIES

TRANSMISSION

PESCO

Technical Audits: One hundred percent of the total of 82 reports have been compiled to-date. The reports highlight shortcomings and bottlenecks found and recommend preventive and corrective measures. EPP will complete the final summary report and share results with NTDC senior management.

Power Transformer Program: EPP is in the process of procuring two oil filtration plants for PESCO's operations and maintenance staff. EPP has asked PESCO to implement policy changes that will allow PESCO's Grid Systems Operation staff to use the oil filtration plant of Grid Systems Construction when it is not in use.

Capacitor Bank Rehabilitation: Installation and initial testing of Capacitor Banks along with the 145 kV capacitor bank at Tall 132 kV grid station has completed. The final testing and commissioning remains – PESCO is to replace the damaged isolator that is required for the successful commissioning of the bank.

Tower Repair: The repair works at 7 of 13 (~54%) tower locations have been completed.

Transmission and Grid Equipment: A Purchase Order has been awarded for supply of transmission and grid equipment. The contractor is to delivery equipment by February 2015.

Cooling Fans: The installation of 91 of 129 (~70.5) cooling fans is complete. EPP anticipates closing this project by end of February 2015.

NTDC

Technical Audits: To date, audit reports have been completed for all 39 grid stations in the initial scope of work . Six additional grid stations were recently commissioned and were added of which three of these have already been audited for a total of 42 out of 45 (~93%) complete. The 220 kV Okara Grid Station was audited in January.

System Studies: The Purchase Order was executed and work begun on integration of intermittent renewable resources with the National Grid.

Real Time Digital Simulator: The Purchase Order was awarded and the successful contractor is collecting the required data from the NTDC and other sources to begin their studies.

Auto-Transformer Program: The Purchase Order was awarded to for delivery of two 250 MVA, 220/132 kV Auto-Transformers; delivery is expected in mid-April 2015. The Purchase Order for Fire Protection System was awarded and delivery expected by mid-March 2015. Circuit breakers, conductors, connectors, and other ancillaries are likely to be delivered by mid-May 2015.

Design Center: The vendor has delivered all the hardware items for NTDC's Design Department. The procurement action is underway for software and training for NTDC's Design Department

Live-Line Maintenance: The live-line team refurbished hot sticks at Jamshoro 500 kV grid station and Multan 500 kV grid station. A demonstration session was held in which NTDC's live-line staff was taught how to perform this task. At the end of the session, a hot-stick refurbishment and cleaning kit was handed over to NTDC along with instructional videos.

Additional Live-Line tools are expected to be delivered by end of February 2015.

CURRENT STATUS

- Commissioning of 132/66kV power transformer at Chakdara Grid Station could not be completed in the reporting month because of shortage of oil in transformer. EPP is procuring new oil and commissioning of the transformer is scheduled to take place in coming months.
- On integration of intermittent renewable resources with national grid, NTDC has not shared all the Planning and Network Expansion data to date, which will result in an extension of the subcontractor timeline.

CROSS-CUTTING ACTIVITIES

CAPACITY BUILDING

Generation: The discussion of results and assignment monitoring report based on focus group discussion with participants from the best practices in thermal O&M training held during 2014 has been developed, and the report will be shared with USAID in February 2015.

Transmission (NTDC): EPP completed two of the three exchange visits to the United States focused on improving market operations on January 23, 2015, and continued preparations for the third exchange. Through these exchanges, EPP aims to improve transmission capacities in Pakistan's power sector while establishing professional relationships to draw upon after the conclusion of the program. EPP prepared a post-training evaluation report based on the feedback obtained from NTDC's Grid Operation training participants; a final report will be sent to USAID after the completion of all three exchange visits.

Transmission (Live-Line Maintenance): EPP is currently planning to kick off the second group of Live-Line Maintenance training for the four new DISCOs (MEPCO, SEPCO, QESCO, and LESCO) along with the Live-Line Maintenance refresher training for the five previously trained DISCOs (FESCO, GEPCO, HESCO, PESCO, and IESCO) in February 2015.

LNG INDUSTRY

Oil and Gas: IHRDC has been selected as a subcontractor for the LNG Business Management Intensive program. EPP anticipates MPNR's nominations in early February 2015. The program will host 15 participants in Kuala Lumpur in June 2015. The program will focus on improving MPNR, ISGS, PQA, and PSO port and commercial capacity related to LNG import.

EPP shared all the requested reference documents with Training for Pakistan (TFP) for its internship program, and it gave an orientation session on the selection process in January.

GENDER EQUITY

Strategy and Assessment: EPP delivered a Gender Strategy Report to USAID. The report follows the Gender Assessment Report provided to USAID in December 2014. The Gender Strategy Report provides concrete suggestions for enhanced gender integration in the energy sector in Pakistan.

Female Participation: As a result of exchange visit programs for NTDC and emphasis on female participation, EPP trained 5 women and 12 men in two of the three exchange visits program to the United States, achieving nearly 30% female participation for this activity.

MONITORING AND EVALUATION

Annual Report: EPP revised the FY2014 Annual Report with suggestions from the USAID Energy Office and submitted it for approval.

PakInfo: EPP continues to collect data for FY2015 Quarter I entry to be completed in February 2015 due to delays in the system opening.

Site Visits: EPP conducted a monitoring and evaluation visit to PESCO in January 2015 and had the acknowledgement letter signed for the FY2014 achievements of USG assistance.

COMMUNICATIONS

OUTREACH MATERIAL

To strengthen communications and outreach efforts, the Communications continued documenting achievements and putting together success stories and Fact Sheets. Revised Fact Sheets as well as newly developed success stories will be shared with USAID in February. In addition, it provided support for publication of several procurements and job advertisements in the local and international newspapers. Similarly, a variety of material is being uploaded on the official EPP website providing information on current and past activities and programs.

REPORTS

1. Policy Analysis Note: Economic Impact of Shutting Down Jamshoro and Muzaffargarh Thermal Power Stations
2. Interconnection Scheme for Dispersal of Power from 147 MW Patrind Hydropower Project – Step 2 Due Diligence
3. Rapid Environmental Analysis of Transmission System for Patrind Hydro Power Project
4. Rapid Environmental Analysis of Transmission System for Wind Power Projects
5. Interconnection Scheme for Dispersal of Power from 147 MW Patrind Hydropower Project – Step 2 Due Diligence
6. Golen Gol Hydropower Project – Chitral, Khyber Pakhtunkhwa (KPK) – Step II Due Diligence.

Confidential information redacted

Human Resources also performed activities needed to accomplish the following tasks:

- Leave Record (Islamabad, Peshawar and Lahore)
- Health Insurance and Card Issuance (Islamabad, Peshawar and Lahore)
- Monitoring of Mobile and OPD/IP Ceilings (Islamabad, Peshawar and Lahore)
- Interviews conducted for the positions advertised.
- P&I Engineer Peshawar
- Life Insurance of AEAI employees.

IT PROCUREMENT

During the reporting period IT procured following hardware/software Items for Islamabad, Peshawar, and Lahore offices:

- 2 Samsung Galaxy Grand II Cellular Phone for new inductions
- 1 HP LJ 400 MFP M425dn Printer for Ministry of Water and Power
- Printer supplies for AEAI-ISB and Lahore office
- LED replacement of 1 Samsung Galaxy Grand II cellular phone
- 2 PTCL Wingle Internet device for Islamabad office
- Miscellaneous IT Accessories like USB Optical Mouse, Cables, Power Adapters, Laptop bags, etc.

IT SUPPORT AND SERVICES

1. Installation, Configuration, and e-mail accounts setup for new inductions
2. Network printer setup at Ministry of Water and Power
3. Bio-metric time and attendance machine troubleshooting and centralized network management
4. QuickBooks Accounting and POS applications support for Islamabad and Peshawar office
5. Tracking of 23 official eVo Internet devices monthly recharges
6. E-mail Server management of **ep-ep.com.pk** domain and BlackBerry Services Administration and support for all Program Staff
7. Assisting Administration & Finance department to keep well-run database record for Travel Authorization and Leave Application Forms
8. Request for proposals and groundwork for all IT related procurements.

PROCUREMENT

Item	Achieved or Completed	Targets LOP	% Completion
Procurement contracts (\$ million)	28.87	39.65	72.80

In the reporting month of January 2015, EPP procurement department completed the financial evaluations of the following items:

- Two 40 MVA Power Transformers for PESCO
- Full Mission Bridge Simulation Study
- Supply of Hardware for NTDC IT department
- Static Guarding Security
- Consultancy for Legal expert for Power Sector
- Legal and Commercial Experts Hiring
- Budget Allocations of LNG Legal & Commercial Consultancies

Due to urgency of the procurement of 40 MVA Power Transformers for PESCO; Procurement completed the all processes of this procurement including financial evaluations, draft purchase order and obtained USAID approval within 57 working days from the date of receipt of Purchase Request Form. Completion of these all procurement processes within 57 days is a good achievement by the Procurement Department. Total amount of this Procurement is \$1,351,460. The complete delivery, installation, and commissioning of these Power transformers are within 4.5 months from the date of issuance of Purchase Order.

Another most urgent procurement is Full Mission Bridge Simulation Study, which was completed within one week. This procurement is urgently required prior to the scheduled startup of the LNG terminal by end March 2015. Chief of Party already sent the request for consent for this procurement.

Details of other procurements are mentioned below:

Purchase Orders Issued during the Month

The following Purchase Orders were issued during January 2015:

1. Subcontract/delivery order issued for LNG Business Management Intensive Training Program. Amount \$338,029. (Policy & Reform)
2. Purchase order issued for custom clearance and freight forwarding for live line tools and Tools and Equipment for T&G. Amount \$3,985. (PESCO)
3. Purchase order issued for supply and delivery of Power Transformer oil for 132 kV Grid Station Chakdara-KPK. Amount \$9,082. (PESCO)
4. Purchase order issued for supply and delivery of toners for AEAI offices. Amount \$19,662. (Admin.)
5. Purchase Order for short term legal consultancy for Power Sector. Amount \$3,500. (Generation)
6. Purchase order issued for stationery for AEAI office. Amount \$5,515. (Admin.)

Other Procurement Activities

1. Study for Enhancement of Transmission Capacity of NTDC: *USAID approval received. Approx. Amount \$359,000. Hold by Transmission Manager.*
2. Software for NTDC Design Department: *USAID ADS approved and consent sent to USAID. Amount \$440,900.*
3. Static Security Services: *Re-bidding in process for Static Security Services. Amount \$110,000.*
4. Servers, Laptops, Desktop Computers, UPS, Printers, Scanners, and Network Switches: *Technical and financial evaluations completed. Review request sent to ADS548 for approval. Amount \$119,090.*
5. Supply of 40MVA Power Transformers: *Consent sent to USAID for approval. Amount \$1.35 M.*
6. Legal Service for Electricity Sector: *Bid opened and Technical review in process for hiring Legal Services for Electricity Sector. Amount \$50,000.*
7. Consulting Services for Commercial/Regulatory Expert Implementation Unit: *Technical review in process for Consulting Services for Commercial/Regulatory Expert Implementation Unit. Amount \$75,000.*
8. Consulting Services for Legal Expert Implementation Unit: *Technical review in process for Consulting Services for Legal Expert Implementation Unit. Amount \$70,000.*
9. Supply of 04 Crane Mounted Trucks for PESCO: *Request for Proposal uploaded with bid submission date February 11, 2015. Amount \$300,000.*
10. Supply of Grounding Sets and PPE Equipment's for PESCO: *Request for Proposal uploaded with bid submission date February 11, 2015. Amount \$150,000.*
11. Full Mission Bridge Simulation: *Consent letter sent to USAID. Amount \$110,000.*
12. Live Line Training: *Request for Proposal sent to bidder with bid submission date January 29, 2015. Amount \$41,930.*
13. Custom Clearance: *Request for Proposal in process for custom clearance for 250 MVA Power Transformer, Circuit breakers, Bus Disconnectors, Current Transformers and Surge Arresters and Nitrogen Injection Explosion Prevention and Fire Protection System. Amount \$10,000.*

PLANNED ACTIVITIES FEBRUARY 2015

COMPONENT 1: PROJECT MONITORING & IMPLEMENTATION

- *Signing of the PIL for the Phase-II of the Tarbela Repair and Maintenance Project.*
- *Conduct heat-rate test at Guddu Power Station through independent engineering firm (Pakistan Engineering Services).*
- *EPP will certify Tarbela claim of \$300,000 on completion of installation of digital governors at all 10 units.*
- *Amendments of Jamshoro, Muzaffargarh, and Guddu that will extend their completion dates.*

COMPONENT 2: POLICY AND REFORM

Ministry of Water & Power:

- *EPP will continue providing advisory support to MWP as per requests from the Senior Management*
- *Finalize the JPCL PPA.*
- *Draft Fuel Supply Agreement for JPCL.*

NTDC:

- *Continue the meetings to complete the Strategic Goals and Initiatives.*
- *Perform a risk assessment of the Strategic Plan key priorities*
- *EPP team will prepare a draft NTDC Strategic Plan by the end of February. During February regular meetings will be held with the Chairman of the Board Planning Committee, NTDC Management, and EPP policy staff. The meetings will include a request that union representation be part of the planning process.*
- *EPP will continue providing assistance for understanding/improving the load forecasting capabilities.*
- *Assist NTDC in preparing for the handover of CPPA functions.*
- *Begin developing more precise Load Forecasting Methodology.*

Ministry of Planning Commission:

- *Continued application of the PowerSIM for policy planning as per requests from Member Energy*
- *Continue assistance of Energy Wing on a variety of policy areas*
- *Complete training sessions of Energy Wing officials on PowerSIM*

Ministry of Petroleum and Natural Resources:

LNG: *Support to GOP in G2G negotiations for LNG procurement with Qatargas; support to PQA for monitoring construction of EETPL LNG Terminal and for specific LNG services; capacity building of GOP stakeholders; full mission bridge simulation study for PQA and training of PQA pilots/tug masters for maneuvering of LNGCs; continuation of provision of legal support to Sui Southern Gas Company (SSGC) for LSA open items.*

Shale Gas: *Continuation of work on Milestone 4–A (evaluation of additional confidential well data) and Component–2.*

Upstream Oil & Gas Support: *Final report on improvement of Policies and Regulatory framework; initiation of RFP for Shale Gas Policy consultants; continuation of work on improvement of Model Petroleum Concession and Production Sharing Agreements as well as formulation of SOPs for DGPC operations; finalization of new task order to cover the technical programs.*

COMPONENT 4: NEW ACTIVITIES

- *Technical audit of NTDC grid stations.*
- *Commissioning of Capacitor Bank at Tall.*
- *Repair of damaged Transmission Line Towers (132 kV & 66 kV) in KPK.*
- *Live-Line Training for linemen from SEPCO and MEPCO to start from February 2, 2015.*
- *Installation and commissioning of power transformer at Chakdara grid station is scheduled to take place*

CROSS-CUTTING

- *The Commercial Operation Exchange visit will be conducted in March 2015. Following the completion of the Exchange Visit, EPP will arrange a day-long debriefing of the trip by the participants for US Government officials in Islamabad.*
- *EPP to draft the comprehensive evaluation report outlining the responses gathered from the Market Operation training participants in February 2015.*
- *EPP will conduct focus group discussion sessions with all the three batches of O&M hydro participants one month after the training completion in February 2015.*
- *EPP will monitor and evaluate PowerSIM progress at MPNR and PC following the delivery of Power SIM model.*
- *EPP will work with USAID on the gender and energy forum after comments on the strategy and assessment are made.*
- *EPP will seek nominations from the remaining stakeholders for LNG Business and Management Intensive Training and after its review will obtain approval from USAID.*
- *EPP will report its accomplishments of Q1FY2015 into PakInfo for USAID review and approval.*
- *EPP will process the J-1 visas for the approved participants on the final transmission exchange visit focused on commercial operations.*

PROCUREMENT

- *Purchase order for Software with Training for NTDC Design Department.*
- *Purchase order for Static Security Services.*
- *Purchase order for Hardware for NTDC IT department.*
- *Purchase order for supply of 40MVA Power Transformers.*
- *Purchase order for 04 Crane Mounted Trucks for PESCO.*
- *Purchase order for Grounding Sets and PPE Equipment's for PESCO.*
- *Purchase order/Sub-Contract for consultancy for study of enhancement of transmission capacity of NTDC's 500 kV transmission system by the application of series compensation.*
- *Purchase order/Sub-Contract for Full Mission Bridge Simulation.*
- *Sub-contract/work order for LNG Business Management Intensive Training Program.*
- *Purchase order and Bid Evaluation for custom clearance for 250MVA Power Transformer, Circuit breakers, Bus Disconnectors, Current Transformers and Surge Arresters and Nitrogen Injection Explosion Prevention and Fire Protection System.*
- *Coordination for Inspections and Factory Acceptance Tests (FAT) for ongoing Purchase Orders in Pakistan and outside Pakistan for the following procurements:*
 - Real Time Digital Simulators: Canada*
 - 250MVA autotransformers: China*
 - Bud Disconnectors: China*
 - Fire Protection System: China*
 - Hardware Conductors and Connectors: China*
- *Inventory Tagging and arranging Material Receiving Report (MRR) for delivered goods.*

ANNEXES

ANNEX I: LIST OF KEY MEETINGS

Table 5: List of Key Meetings Conducted in January 2015

Meeting with	Date	Location	Purpose	Outcome/Result
Component 1 Project Monitoring & Implementation				
WAPDA Member Power, Member Water & Member Finance	Jan 6	WAPDA house Lahore	To discuss the progress on meeting the Conditions precedents set forth in Activity Agreement for Tarbela Phase II, and also the procurement status of Mangla and Tarbela Phase I.	<ol style="list-style-type: none"> WAPDA has opened a separate account for operation & maintenance and opening of assignment account is in progress. WAPDA was advised to meet the remaining condition at earliest. WAPDA/Tarbela will submit an invoice of \$300,000 against the installation of digital governor's at all ten units as per FARA. Further procurement of remaining equipment in underway. WAPDA cancelled the tender for the turbine generator of Mangla project due to the bid security issue. WAPDA will revise the tender documents and tender will again open in Apr 2015.
CEO Jamshoro 'Mr. Iftikhar Aziz'	Jan 9	Jmshoro Thermal Power Station	To discuss the progress on the installation of remaining items	EPP ensure that Jamshoro will complete the installation as per schedule.
CEO Guddu	Jan 20	EPP Office	To schedule the heat rate testing at Guddu Thermal power Station	Availability of units was discussed to schedule the heat rate testing at Guddu.
Pakistan Engineering services, CE Technical Director Muzaffargarh	Jan 28	Pakistan Engineering services office in Lahore	To discuss the Muzaffargarh concerns about the heat rate test report	Muzaffargarh concerns about the report have been resolved.
Component 2 Policy and Reform				
Additional Secretary, MPNR & DGPC	Jan. 05, 2015	MPNR, Block – A	Discussion on the provisions of the Onshore Model Supplemental Agreement	<ul style="list-style-type: none"> Addl. Secretary MPNR would seek the advice of the Secretary/Minister MPNR on issues raised (crude oil/condensate, pricing/windfall levy, international arbitration, application of conversion policy to oil & gas or just gas) in the draft document. <p>If the Model Agreement is to be revised as suggested by DGPC, PPEPCA input would be sought before the document is submitted for GoP approval.</p>

Meeting with	Date	Location	Purpose	Outcome/Result
Secretary, MPNR, Advisor, MPNR, DGPC, DG-Oil, DG-Gas & PPEPCA	Jan. 14, 2015	MPNR, Block – A	Discussion on the provisions of the Onshore Model Supplemental Agreement	<ul style="list-style-type: none"> Issues regarding crude oil/condensate, pricing/windfall levy, international arbitration, and application of conversion policy to gas or both oil & gas were discussed and the Secretary desired that the financial impact on GoP due to inclusion of crude oil/condensate provisions in the Agreement may be worked out. <p>Secretary also directed to consider other issues regarding arbitration and Extended Well Test (EWT) production bonus.</p>
USAID, EPP	Jan. 23, 2015	US Embassy, Islamabad	Progress update on LNG import program	<ul style="list-style-type: none"> USAID was apprised of the current status of the LNG import program. <p>Concerns related to negotiation of LNG Sales Purchase Agreement (SPA) with LNG suppliers and non-compliance of Port Qasim with SIGTTO/PIANC guidelines under existing conditions, were brought to the attention of USAID.</p>
Chairman PQA, EPP	Jan. 27, 2015	EPP Head Office, Islamabad	Review of status & issues related to LNG import terminal at PQA	<ul style="list-style-type: none"> EPP would support PQA in conducting a Full Mission Bridge Simulation study according to the scope of work requested by PQA and training its pilots/tug masters for safe maneuvering of LNG vessels to Port Qasim. PQA would revert to EPP with further information on the following issues: <ul style="list-style-type: none"> Provision of EETPL Terminal Operating Manual to EPP port consultants. PQA compliance with OCIMF guidelines. Response to Conditions Precedent under LNG SPA. <p>Response to Gap Analysis conducted by EPP port consultants.</p>
Additional Secretary, MPNR & DGPC	Jan. 05, 2015	MPNR, Block – A	Discussion on the provisions of the Onshore Model Supplemental Agreement	<ul style="list-style-type: none"> Addl. Secretary MPNR would seek the advice of the Secretary/Minister MPNR on issues raised (crude oil/condensate, pricing/windfall levy, international arbitration, application of conversion policy to oil & gas or just gas) in the draft document. <p>If the Model Agreement is to be revised as suggested by DGPC, PPEPCA input would be sought before the document is submitted for GoP approval.</p>

Meeting with	Date	Location	Purpose	Outcome/Result
NTDC Board of Directors and Senior Management	January 1 st	NPCC Office	Presentation to Board on Strategic Planning Process	1. Formation of Committee to monitor this task and nomination of focal person to assist with this task. Meeting with NTDC senior management in Lahore next week to get their feedback and to begin data gathering
Mr. Vaqar Zakaria (Chairman BoD NTDC)	January 5 th	Hagler Bailly Office	Briefing on Strategic Plan	1. Discussion on key items of Strategic Plan moving forward Discussion on key action items
Additional Secretary (Power)	January 6 th	MWP	Introductory meeting with Additional Secretary	EPP's Assistance to MWP on policy related matters was discussed and continued support in future.
Joint Secretary, MWP	January 6 th	MWP	Review of NTDC & GENCO Performance Contracts	Update on action items required from MWP
Company Secretary NTDC	January 8 th	NTDC Lahore	Introductory meeting on Strategic Plan	1. Discussion of key components of Strategic Plan Establishing Contact Points at NTDC to assist in preparation of Plan
GM Planning and his team	January 8 th	NTDC Lahore	Introductory meeting on Strategic Plan	1. Appointment of GM Planning as focal person for Plan Discussion with junior staff on major points
NTDC BoD & Senior Management	January 9 th	NTDC Lahore	Detailed review of Performance Contract	1. Review of key items in Performance Contract Comments from NTDC's side incorporated into Performance Contract
NTDC BoD and Senior Management	January 10 th	AVARI Hotel Lahore	Introductory Session on Strategic Plan Development	1. Discussion of key elements of the Strategic Plan Development of Vision and Mission Statement
NTDC BoD	January 10 th	NTDC Lahore	Short briefing to BoD on Introductory Session	1. Discussion with Board on Strategic Planning Process Feedback on action plan and timetable moving forward
Mr. Haseeb-ur-Rehman, Statistical Officer, Pakistan Bureau of Statistics	13 th January	Statistics Division, Islamabad	To discuss the type of data that is available on Energy demand.	1. Discussed how to obtain the data from statistical Division. And discussed the timelines to obtain the data. Discussed if any energy modelling attempts were made by Statistical Division.
NTDC Staff and Senior Management	January 17 th	PC Hotel, Lahore	Discussion on proposed Key Objectives	1. Development of Proposed Objectives Discussion on Key Initiatives and corresponding KPIs
Waseem Saadat, Manager Finance, NTDC Lahore	22 nd and 23 rd January	WAPDA House, Lahore	Gather baseline data on the operational processes of the department and the challenges they want seen addressed in the Strategic Plan	1. Obtained the latest financial statement and the flow of accounts presentation Discussed the issues faced by the Finance Department and possible solutions to address those issues

Meeting with	Date	Location	Purpose	Outcome/Result
NTDC Board Planning Committee	January 24 th	NPCC Office, Islamabad	Briefing on Strategic Plan and Performance Contract to BOD Planning Committee	I. Discussion on timelines of Strategic Plan Review of Final Performance Contract Draft
Mr. Dr Zia Ahmed, Engineering Advisor (power)	27 th January	Federal Flood Commission, Islamabad	To discuss the tariff differential Subsidy Issues	Obtained the requested data on subsidies.
Mr. Khurram Lalani, Advisor MOF	28 th January	Ministry of Finance	To discuss the TDS issues at MOF.	Gained understanding of the Tariff Differential Subsidy procedures applied at MOF.
Mr. Hammad, Director Finance NTDC Mr. Waseem Saadat, Manager Finance NTDC Mr. Khalid Saleem, Manager Finance NTDC	28 th January	NTDC, Lahore	To discuss their financial reporting mechanism	I. Obtained requested financial reports Got understanding of the delays in compilation of their annual financial report
Gulzar Shaikh, Director HR NTDC Hamid Moeen, Manager HR	29 th January	NTDC, Lahore	To gather more information on the HR issues and challenges	I. Discussed issues HR faced regarding hiring and NTDC's sanctioned strength vs available strength Discussion on technical evaluation of proposals for RFP
Component 4 New Activities				
CE PMU, PESCO	Jan 28, 2015	Peshawar	To share status of ongoing projects; Getting ack. letter on activities we have performed; Discussion on civil works required at Balakot and Garhi Habibullah Grid Stations	I. Arrange a follow-up meeting with EPP, NTDC and PESCO to discuss the necessary grid station upgrades required to connect Patrind Hydro Project. Civil works required at Balakot and construction of Garhi Habibullah Grid Stations need to be further discussed. Ack. letter: PESCO will get work done verified from field staff and send us back the ack. letter
SE/XEN GSO, MEPCO	Jan 21, 2015	Multan	To discuss upcoming live line training program	List of trainees was finalized

Meeting with	Date	Location	Purpose	Outcome/Result
XEN 220kV Multan, NTDC	Jan 19, 2015	Multan	To brief NTDC operations staff on importance of live line maintenance and latest practices	I. NTDC staff was briefed – Staff needs training. Knowing importance of live line maintenance, NTDC intends to train their staff in future. Already available sticks with NTDC were refurbished and NTDC staff was trained on refurbishing techniques and stick testing.
SE GSO, HESCO	Jan 15, 2015	Haiderabad	To discuss about refresher course and storage of live line T&P	Contents of refresher course were finalized and storage requirements at HESCO were accessed. Storage space of HESCO is found to be satisfactory.
XEN Dadu 500kV, NTDC	Jan 14, 2015	Jamshoro	Refurbishing and T&P checking	Sticks were refurbished and T&P was checked. NTDC staff was also trained on refurbishing live line T&P.
SE GSO, SEPCO	Jan 13, 2015	Sukkur	To discuss upcoming live line training program	List of trainees was finalized
Cross-Cutting				
Training for Pakistan (TFP)	January 7, 2015	AEAI Office, Islamabad	Briefing TFP on EPP's internship program.	TFP was given a presentation on EPP's internship program's selection process along with a briefing session on the hard and soft copies of documents given for reference.
PESCO	January 27 and 28, 2015	PESCO Office	Determine validity of PESCO MW and installation data for M&E	PESCO will process an acknowledgement letter to verify EPP's intervention.

ANNEX II: PROGRAM OVERVIEW

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

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

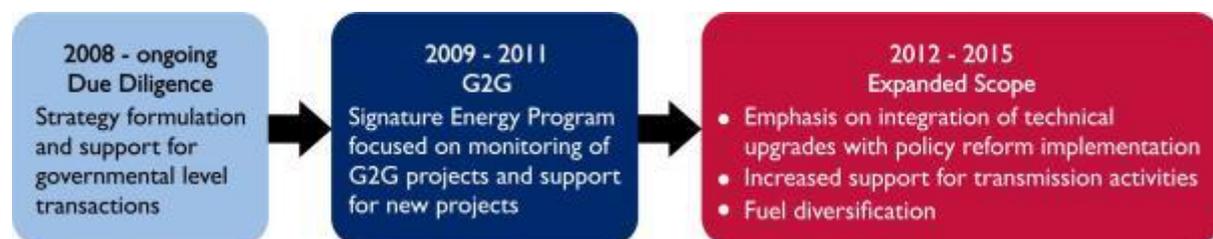


Figure 6: EPP Phases

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

Component 1 – Monitoring and Support of Project Implementation. EPP proactively advises and supports USAID and counterparts in the monitoring, implementation, and compliance of Fixed Amount Reimbursement Agreements (FARA) with the GOP. This includes monitoring and supporting timely counterpart compliance with all of the terms and conditions of FARAs and inspection and certification of deliverables.² Specifically, EPP provides monitoring and implementation support for seven signature energy projects: four repair and maintenance projects (three GENCOs and Tarbela); two multipurpose dam completion projects (Gomal Zam and Satpara); and one dam rehabilitation project (Mangla).

Component 2 – Advice and Support of Energy Sector Policy Reform. EPP actively supports energy sector reform by undertaking activities that are requested by one or more GOP entities and by the direct assignment of staff to work in the offices of the requesting entity as advisors and specialized support staff.³ In achieving the objectives of this component, EPP supports generation- and transmission-related studies and policy reform activities assigned by USAID with the support of the GOP.

Component 3 – New Projects, Planning, and Development. Based on frequently changing priorities and schedules of USAID and USG entities, EPP undertakes due diligence of projects and activities that are candidates for USG support.⁴ Specifically, EPP conducts and prepares due diligence reports on new projects under consideration for USG support in order to provide detailed

² C.4.2, Component One, pg. 8 of 46, Contract No: AID-EPP-I-00-03-00004

³ C.4.3, Component Two, pg. 11 of 46, Contract No: AID-EPP-I-00-03-00004

⁴ C.4.4, Component Three, pg. 12 of 46, Contract No: AID-EPP-I-00-03-00004

information, reduce USG risk, and set a basis for creating Project Implementation Agreements for the selected projects.

Component 4 – New Activities. As a result of Modification Number 2 to the EPP Task Order Award, EPP supports the following efforts: a turnaround power distribution company (DISCO); identification of new, high-impact opportunities that promote continued support for governance; live-line training for transmission linemen; technical assistance to the Ministry of Petroleum and Natural Resources (MPNR) (USAID pre-approved activities, including but not limited to, LNG, oil and gas (including shale gas), and advisory services to increasing natural gas supplies for power generation); targeted assistance to the National Transmission and Dispatch Company (NTDC) and the Natural Power Control Center (NPCC) to mitigate unscheduled shortages; help GENCOs to improve baseline efficiency measurements and improved operations and maintenance; and deliver technical assistance efforts in support of GOP and USAID activities that promote capacity building, increased public awareness, and targeted advisory services⁵. EPP’s capacity-building program facilitates sustainability by enhancing local capability in critical areas.

⁵ C.4.5.1, Component Four, pgs. 3-9, , Amendment/Modification No. 2 of Contract No: AID-EPP-I-00-03-00004

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