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FOURTEENTH QUARTERLY PROGRESS REPORT

JANUARY - MARCH 2014

PRODUCED BY:

USAID POWER DISTRIBUTION PROGRAM

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IRG, USAID contractor for the Power Distribution Program

House 23, Street 19, F-6/2

Islamabad, Pakistan

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ACRONYMS

ABC	Aerial Bundled Cable
AMR	Automatic Meter Reading
AT&C	Aggregate Technical and Commercial
BOD	Board of Directors
CCTV	Closed Circuit Television
CEO	Chief Executive Officer
CFL	Compact Fluorescent Lamp
CIS	Customer Information System
COP	Chief of Party
CoS	Cost of Service
CoSS	Cost of Service Study
CPOP	Commercial Process Optimization Project
CPPA	Central Power Purchasing Agency
CSP	Completely Self-Protected
DISCO	Government-Owned Power Distribution Company
DSM	Demand Side Management
ELR	Energy Load Reduction
ERP	Enterprise Resource Planning
FCA	Fuel Cost Adjustment
FESCO	Faisalabad Electric Supply Company
GENCO	Generation Company
GEPCO	Gujranwala Electric Power Company

GIS	Geographic Information System
GOP	Government of Pakistan
HESCO	Hyderabad Electric Supply Company
HHU	Handheld Unit
HR	Human Resource
HRIS	Human Resources Information System
HT	High Tension
IAPO	Internal Audit Process Optimization
IESCO	Islamabad Electric Supply Company
IMR	Improved Meter Reading
IRG	International Resources Group
IT	Information Technology
KP	Khyber Pakthunkhwa Province
KPI	Key Performance Indicator
KV	Kilo Volt
KVA	Kilo Volt Amperes
kW	Kilowatt
kWh	Kilowatt-hour
LDI	Load Data Improvement
LESCO	Lahore Electric Supply Company
LOP	Life of Project
LT	Low Tension
MCO	Meter Change Order
MD	Managing Director

MIS	Management Information System
MEPCO	Multan Electric Power Company
MVAR	Million Volt Ampere Reactive
MW	Megawatt
MWP	Ministry of Water and Power
NAB	National Accountability Bureau
NEPRA	National Electric Power Regulatory Authority
NESC	National Electric Safety Codes
NTDC	National Transmission and Dispatch Company
NPCC	National Power Control Center
P&E	Planning & Engineering
PDC	Power Distribution Center
PDP	USAID Power Distribution Program
PEC	Pakistan Engineering Council
PEPCO	Pakistan Electric Power Company
PESCO	Peshawar Electric Supply Company
PO	Purchase Order
QESCO	Quetta Electric Supply Company
RF	Radio Frequency
RFP	Request for Proposal
SEPCO	Sukkur Electric Power Company
TA	Technical Assistance
TESCO	Tribal Areas Electric Supply Company
US	United States

USG	United States Government
USAID	United States Agency for International Development
VFD	Variable Frequency Drive
VSD	Variable Speed Drive
VVO	Volt/Var Optimization

SECTION 1: PROGRAM OVERVIEW

The thirteenth Quarterly Report of the United States Agency for International Development (USAID) Power Distribution Program (PDP) covers the continuing efforts of USAID and International Resources Group (IRG) to implement improvements affecting the overall commercial performance of participating government-owned power distribution companies (DISCOs), the Ministry of Water and Power (MWP), and the National Electric Power Regulatory Authority (NEPRA). Under Component 1, PDP conducted operational audits of MWP, all nine DISCOs and NEPRA, and developed Action Plans for future interventions and demonstration projects. Components 2 and 3 are have focused on the execution of jointly-selected interventions identified in Action Plans as codified in the approved PDP Work Plan, with the goal of improving sustainability in the power sector.

Support for the Multan Electric Power Company (MEPCO) corporate turnaround activity kicked-off this quarter with the permanent relocation of 12 PDP technical advisors to Multan. Recognizing that a fast start-up is essential to program success, PDP worked aggressively with MEPCO senior management and Board of Directors (BOD) to finalize intervention designs covering a range of technical areas. MEPCO demonstrated their commitment to PDP delivery by pledging over $2 million in match in the form of equipment, labor for installation, office space, and other assistance. The procurement process for 80% of all services and equipment has been initiated, and several Technical Assistance (TA) activities (organizational redesign, anti-theft initiatives, Customer Information System (CIS) delivery, system mapping, etc.) have already kicked-off.

PDP continued to see improved financial and operational performance at Peshawar Electric Supply Company (PESCO) as the DISCO confirmed an additional $12.2 million in increased revenue / decreased losses over the first seven months of the DISCO's fiscal year. PESCO's Aggregated Technical and Commercial (AT&C) losses reduced an additional, 1.7% as compared with the same period last year while collections increased by 2.5%. This can be viewed as a strong indicator that FY 2012-13 results are being sustained into FY 2013-14.

PDP helped PESCO, NEPRA and the MWP win an important victory this quarter as the Pakistan Supreme Court overturned the Peshawar High Court's decision blocking PESCO from charging its customers a fuel cost adjustment (FCA) charge. As a result of the Supreme Court's decision, PESCO will now be able to collect approximately $420 million in revenues and subsidies. PDP played an essential role through:

- Highlighting to MWP and NEPRA the FCA issue in the 2012 Circular Debt Report
- Revising roles and responsibilities related to the tariff determination/notification process
- Providing advice and support to the legal advisor appealing the FCA decision related to background financial data, legal tactics and the framing of the pertinent legal issues.

We hope you enjoy the detail provided in our thirteenth quarterly report, and look forward to continue delivering a program that provides real results and impacts the lives of millions of people in Pakistan.

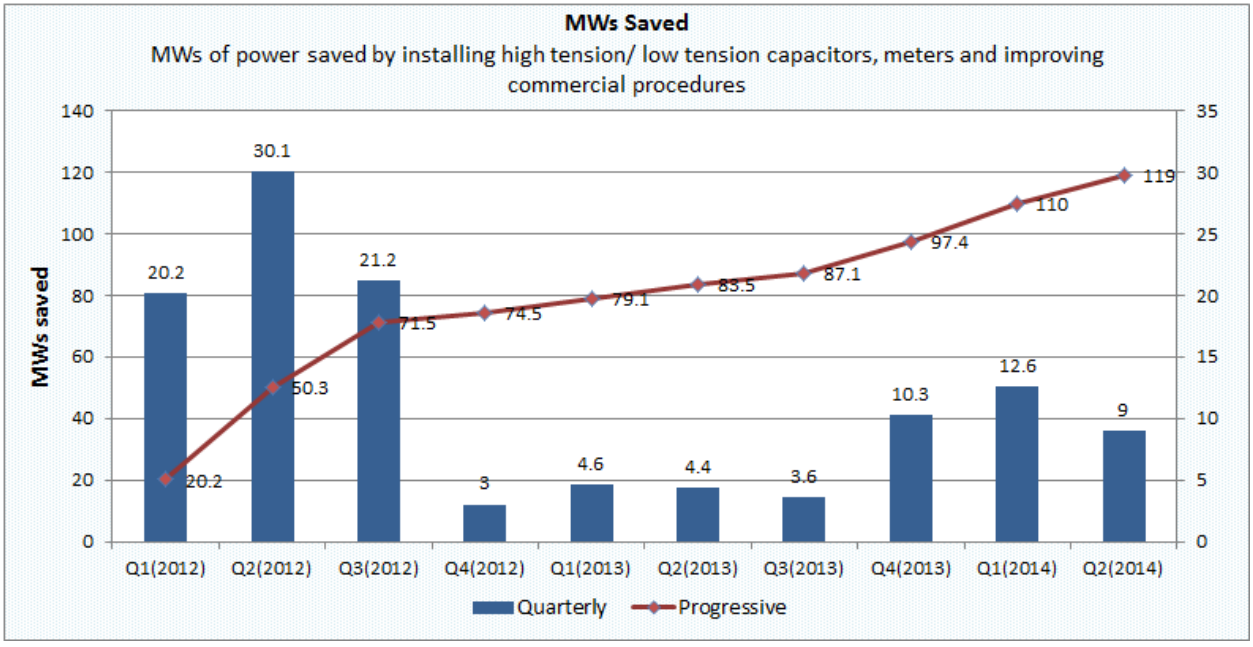
Best Regards,

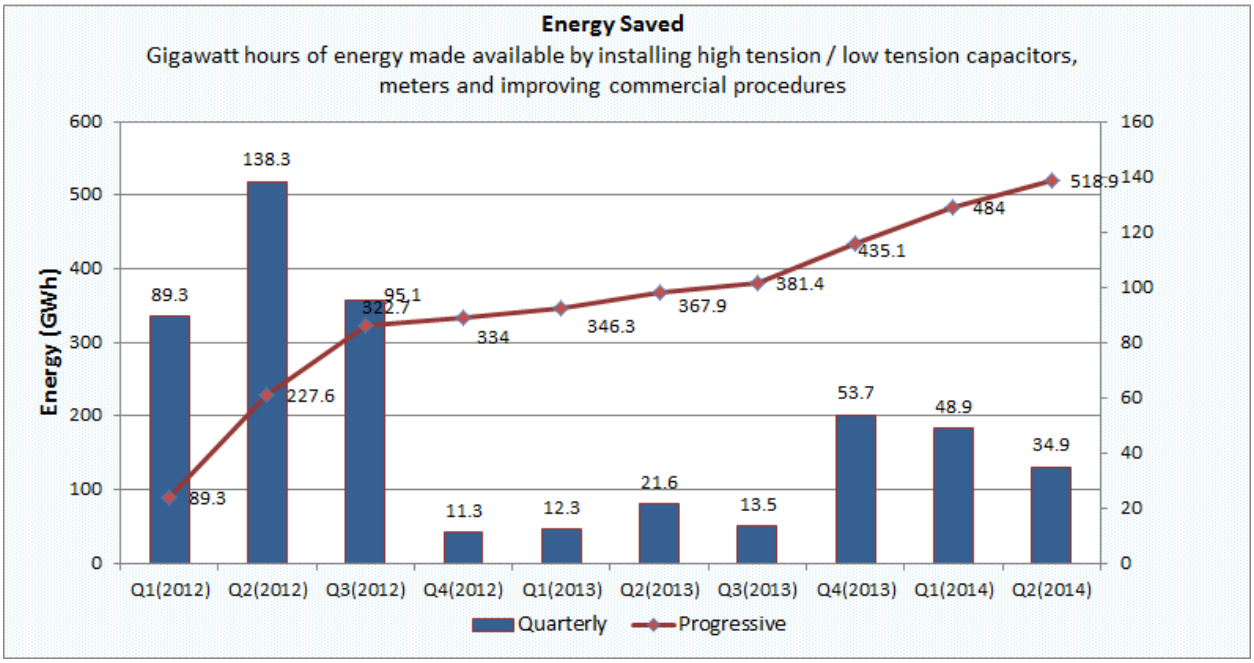
Craig R. VanDevelde
Chief of Party

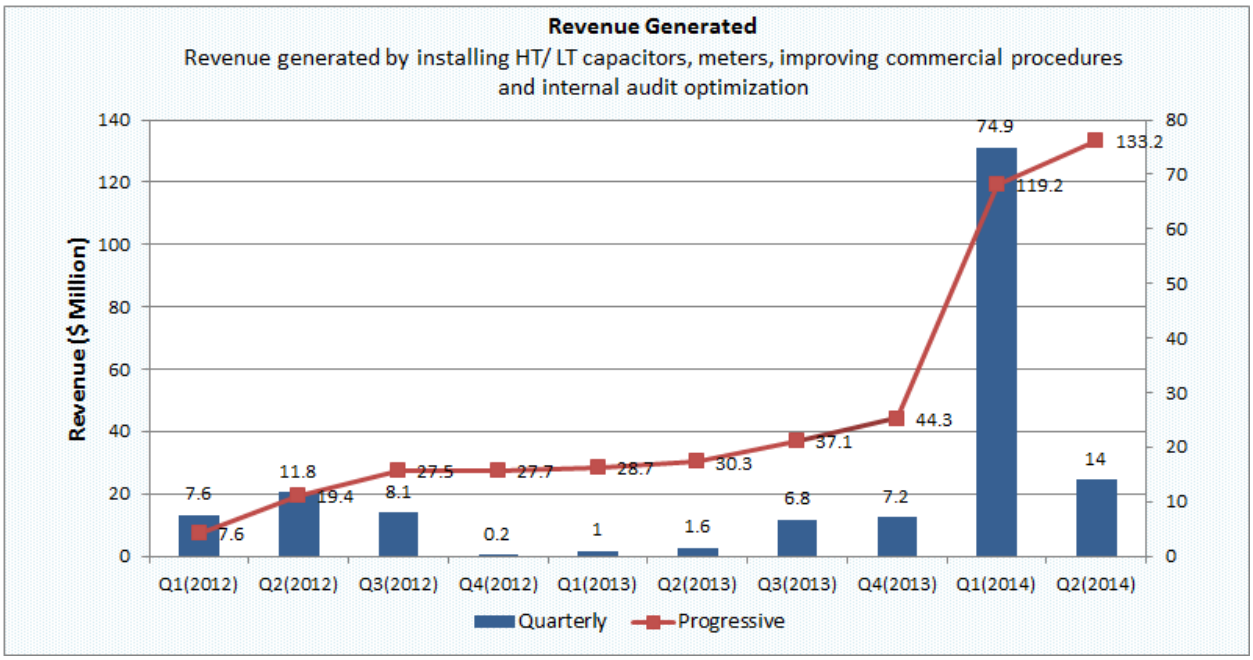
FINANCIAL SUMMARY

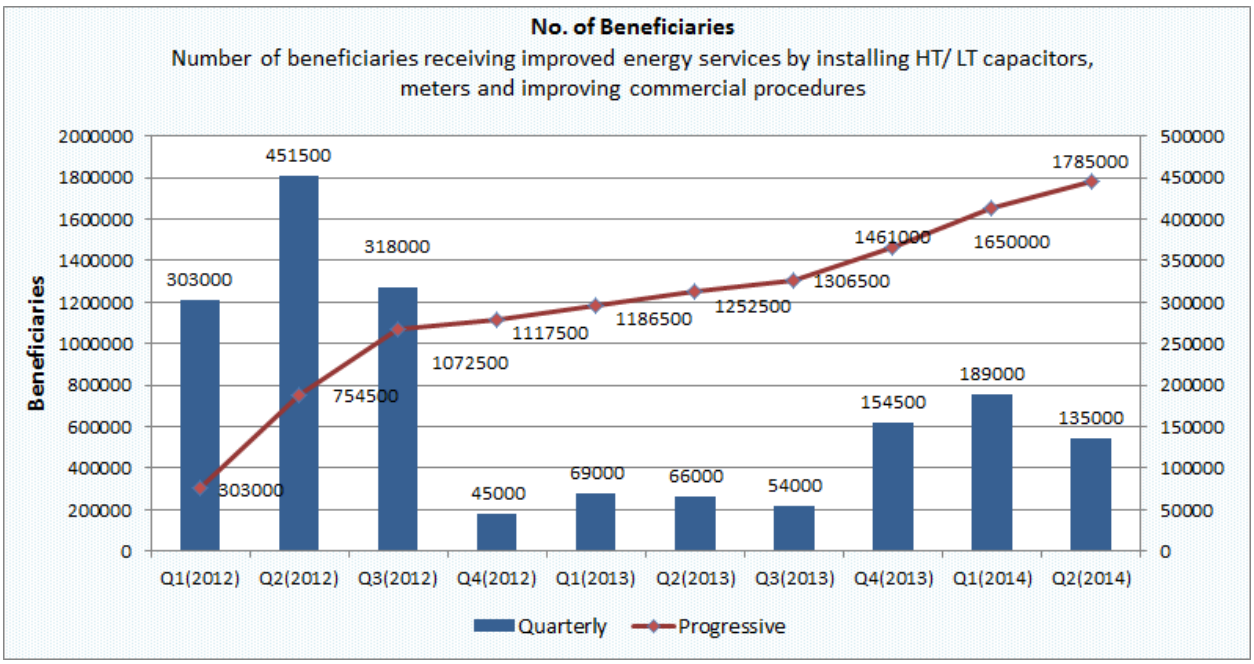
Contract No:	EPP-1-00-03-00006-00, Task Order 13
Date of Issuance of Task Order:	September 17, 2010
Amount Obligated Under Task Order:	US $141,699,409
Total Project Funds Expended to Date:	US $106,085,843
Project Funds Expended During the Quarter:	US $14,104,323

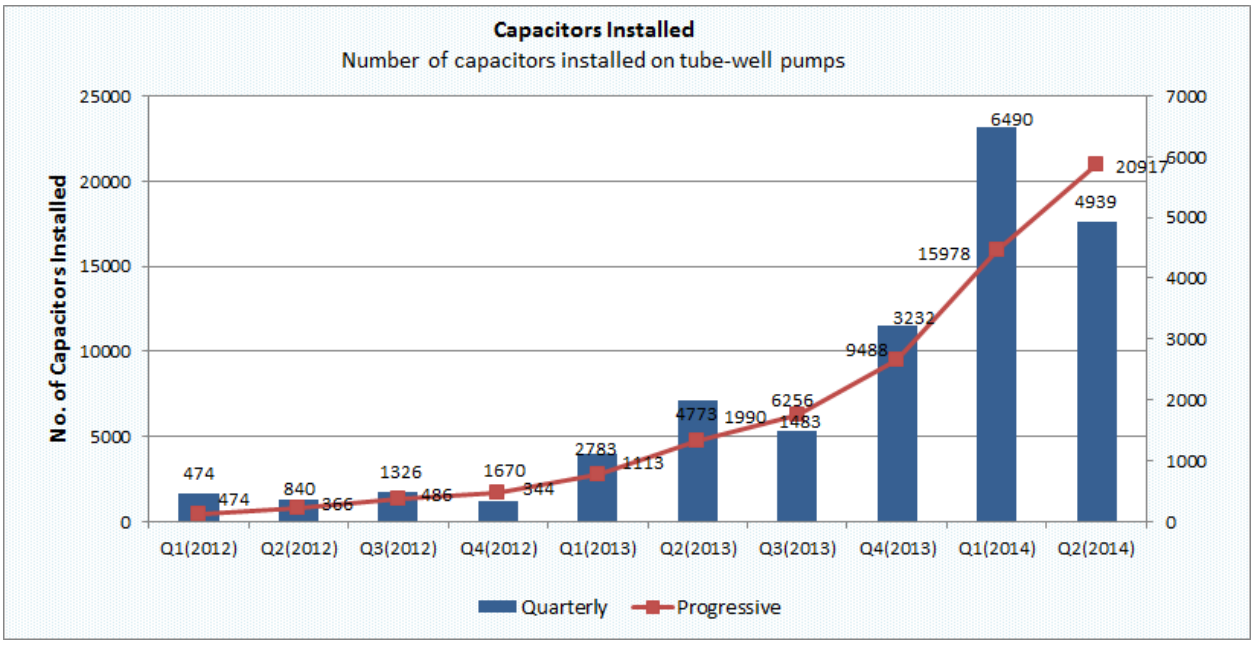
SECTION 2: PERFORMANCE

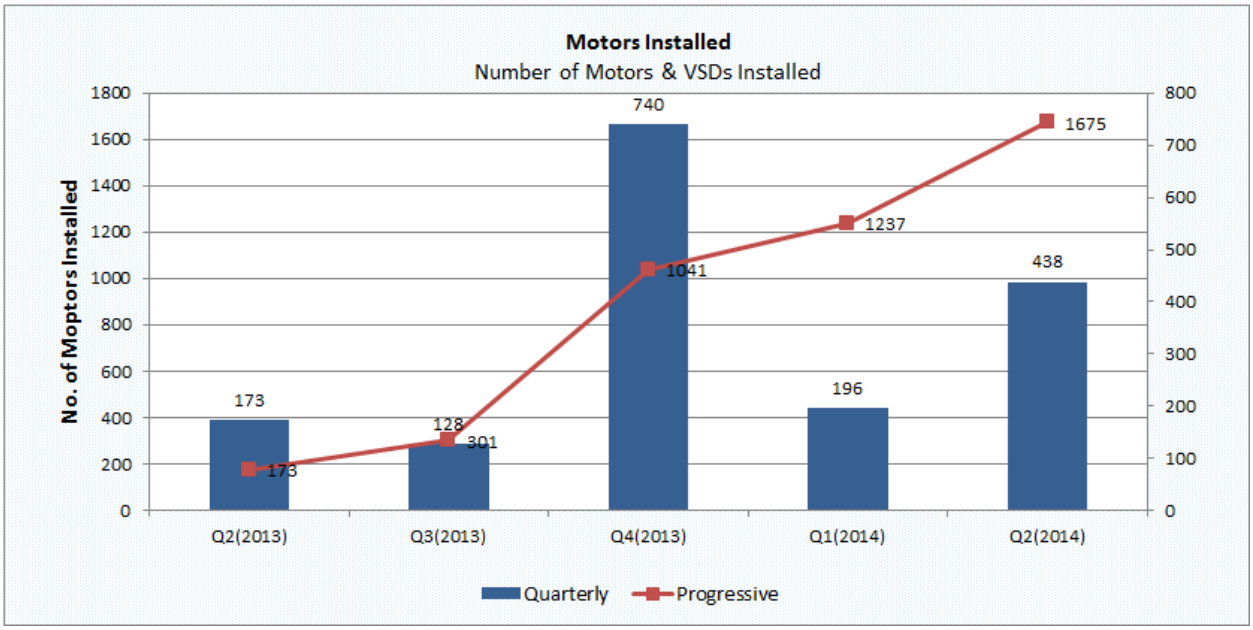


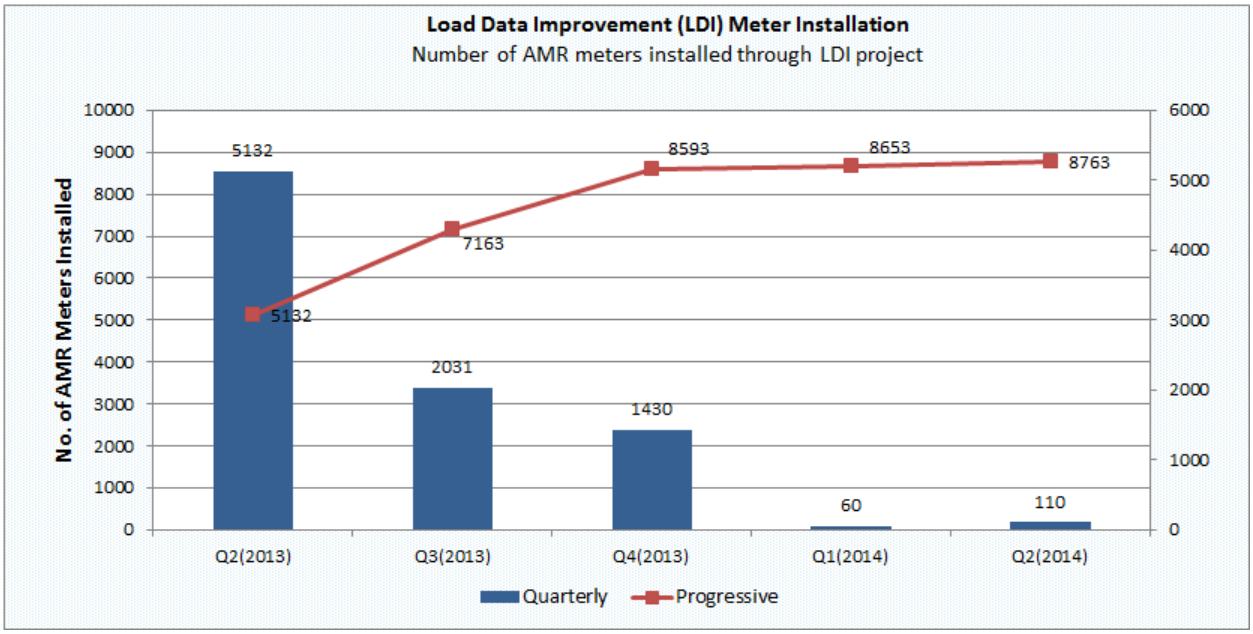


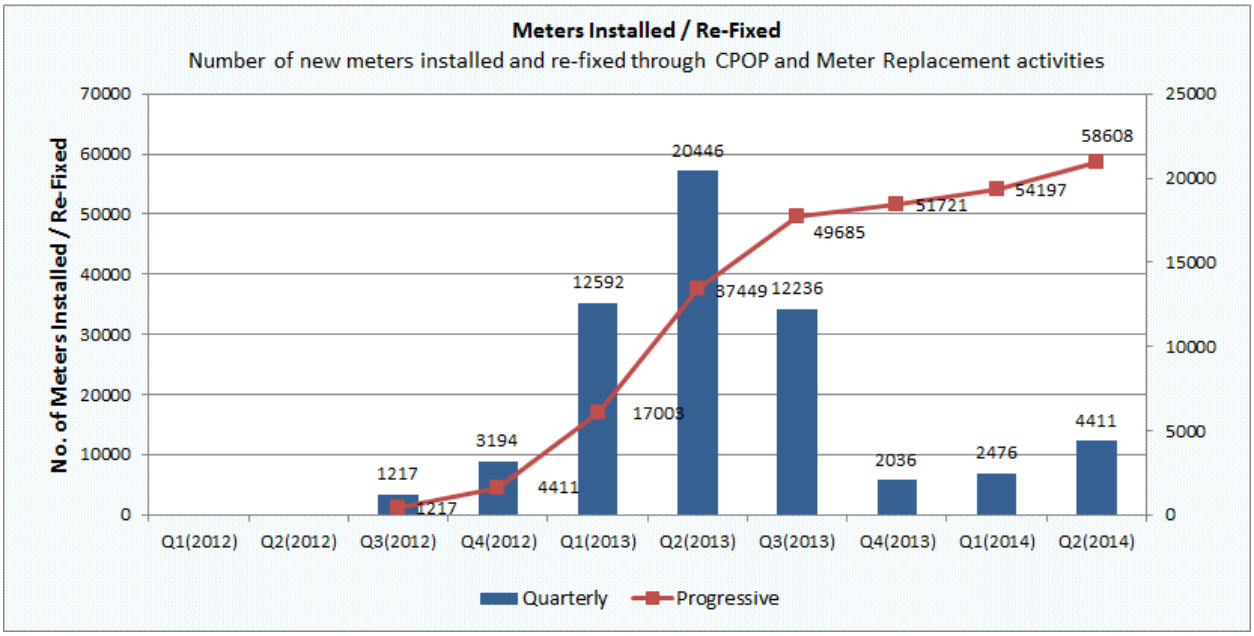

Revenue Generated
Revenue generated by installing HT/ LT capacitors, meters, improving commercial procedures and internal audit optimization
Revenue ($ Million)
140
120
100
80
60
40
20
0
80
70
60
50
40
30
20
10
0
7.6
11.8
8.1
0.2
1
1.6
6.8
7.2
74.9
14
7.6
19.4
27.5
27.7
28.7
30.3
37.1
44.3
119.2
133.2
Q1(2012)
Q2(2012)
Q3(2012)
Q4(2012)
Q1(2013)
Q2(2013)
Q3(2013)
Q4(2013)
Q1(2014)
Q2(2014)
Quarterly
Progressive

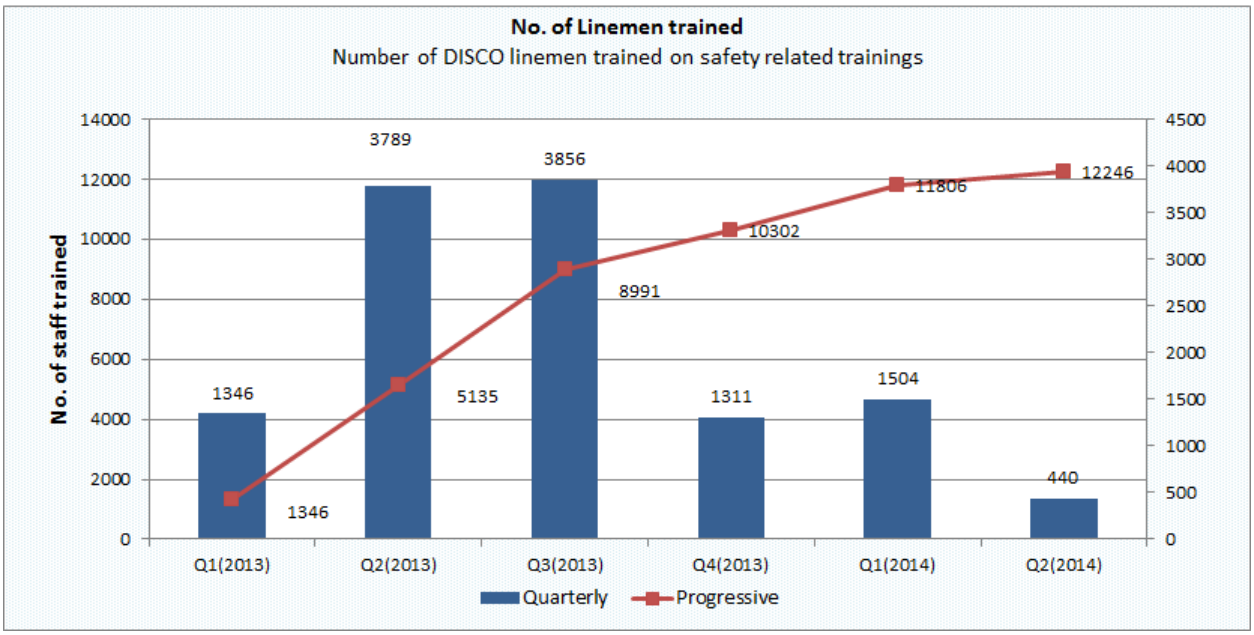

No. of Beneficiaries
Number of beneficiaries receiving improved energy services by installing HT/ LT capacitors, meters and improving commercial procedures
Beneficiaries
2000000
1800000
1600000
1400000
1200000
1000000
800000
600000
400000
200000
0
500000
450000
400000
350000
300000
250000
200000
150000
100000
50000
0
303000
451500
318000
45000
69000
66000
54000
154500
189000
135000
303000
754500
1072500
1117500
1186500
1252500
1306500
1461000
1650000
1785000
Q1(2012)
Q2(2012)
Q3(2012)
Q4(2012)
Q1(2013)
Q2(2013)
Q3(2013)
Q4(2013)
Q1(2014)
Q2(2014)
Quarterly
Progressive

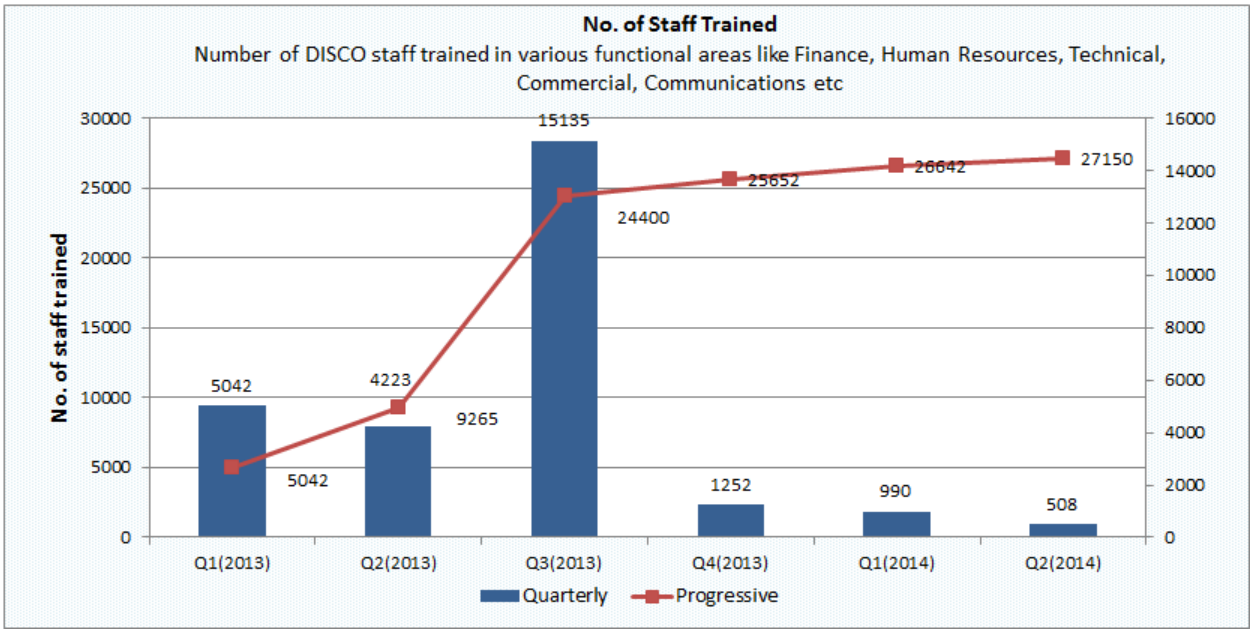

Capacitors Installed
Number of capacitors installed on tube-well pumps
No. of Capacitors Installed
25000
20000
15000
10000
5000
0
7000
6000
5000
4000
3000
2000
1000
0
474
840
1326
1670
2783
4773
6256
9488
15978
20917
474
366
486
344
1113
1990
1483
3232
6490
4939
Q1(2012)
Q2(2012)
Q3(2012)
Q4(2012)
Q1(2013)
Q2(2013)
Q3(2013)
Q4(2013)
Q1(2014)
Q2(2014)
Quarterly
Progressive


Motors Installed
Number of Motors & VSDs Installed
No. of Moptors Installed
1800
1600
1400
1200
1000
800
600
400
200
0
800
700
600
500
400
300
200
100
0
173
128
740
196
438
173
301
1041
1237
1675
Q2(2013)
Q3(2013)
Q4(2013)
Q1(2014)
Q2(2014)
Quarterly
Progressive


Load Data Improvement (LDI) Meter Installation
Number of AMR meters installed through LDI project
No. of AMR Meters Installed
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
6000
5000
4000
3000
2000
1000
0
5132
2031
1430
60
110
5132
7163
8593
8653
8763
Q2(2013)
Q3(2013)
Q4(2013)
Q1(2014)
Q2(2014)
Quarterly
Progressive


Meters Installed / Re-Fixed
Number of new meters installed and re-fixed through CPOP and Meter Replacement activities
No. of Meters Installed / Re-Fixed
70000
60000
50000
40000
30000
20000
10000
0
25000
20000
15000
10000
5000
0
1217
3194
12592
20446
12236
2036
2476
4411
1217
4411
17003
37449
49685
51721
54197
58608
Q1(2012)
Q2(2012)
Q3(2012)
Q4(2012)
Q1(2013)
Q2(2013)
Q3(2013)
Q4(2013)
Q1(2014)
Q2(2014)
Quarterly
Progressive


No. of Linemen trained
Number of DISCO linemen trained on safety related trainings
No. of staff trained
14000
12000
10000
8000
6000
4000
2000
0
4500
4000
3500
3000
2500
2000
1500
1000
500
0
1346
3789
3856
1311
1504
440
1346
5135
8991
10302
11806
12246
Q1(2013)
Q2(2013)
Q3(2013)
Q4(2013)
Q1(2014)
Q2(2014)
Quarterly
Progressive


No. of Staff Trained
Number of DISCO staff trained in various functional areas like Finance, Human Resources, Technical, Commercial, Communications etc
No. of staff trained
30000
25000
20000
15000
10000
5000
0
16000
14000
12000
10000
8000
6000
4000
2000
0
5042
15135
1252
990
508
5042
4223
9265
24400
25652
26642
27150
Q1(2013)
Q2(2013)
Q3(2013)
Q4(2013)
Q1(2014)
Q2(2014)
Quarterly
Progressive

- 1,785,000 beneficiaries received improved energy services
- $133.2 million in savings and revenue generated by PDP’s interventions
- 119 megawatts (MWs) saved through installation of capacitors, pumps, motors and electronic meters

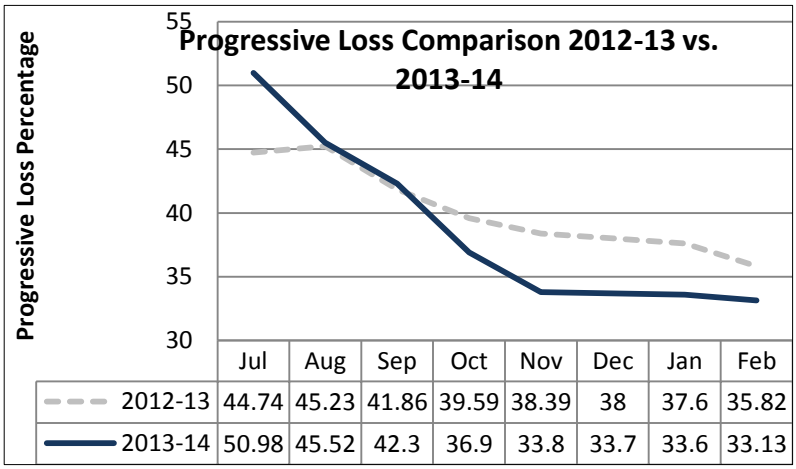
SECTION 3: COMPONENT 3 TASKS

TASK 1: COMMERCIALIZATION OF DISCOS

Task 1 provides a two-pronged approach to commercializing DISCOs, focusing on improving performance of two Turnaround DISCOs (PESCO and MEPCO). PDP will modernize policies, processes, procedures and provide a modern infrastructure that will allow these companies to improve their commercial, technical and financial performance.

HIGHLIGHTS

- **Using PESCO Revenue Cell to Enhance Revenue –** One of PESCO's primary challenges has been high losses due to power theft and poor revenue collection. To counter this and meet the Government of Pakistan's (GOP) top priority in reducing AT&C losses, PDP developed an integrated approach to protect revenue and reduce losses. Last quarter, PDP established its Revenue Protection Cell at PESCO's Kohat Road subdivision. Its core activities include theft surveillance, theft surveillance, recovery of arrears, tracking cases of power theft and legal prosecution, and meter reading follow-up. This quarter, its coverage area was expanded from the subdivision level to the entire Cantt circle – the Kohat Road subdivision continues to maintain its three percent decline in progressive losses for the fourth consecutive month, which amounts to **2.43 million units saved or approximately $0.2 million**. Additionally, the direct revenue earned this quarter – including recovery of arrears, fines imposed for illegal power use, and recovery from under-billed consumers – was $66,180. A good example of PDP's successful anti-theft campaign, the percentage of cases registered with the police increased this quarter to 35%, up 11% from last quarter's 24%.



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
2012-13	44.74	45.23	41.86	39.59	38.39	38	37.6	35.82
2013-14	50.98	45.52	42.3	36.9	33.8	33.7	33.6	33.13

Figure 1: Kohat Road Subdivision Progressive Loss Comparison

- **Automated Meter Reading Meters Installation at Multan Electric Power Company –** During this quarter, completion, testing, acceptance and installation planning of 800 new AMR meters for MEPCO was completed. Locations for MEPCO's Multan Circle specific high-end commercial customers with loads of over 10 kilowatt (KW) were identified. MEPCO has agreed to make these installations and provided 32 linemen for this purpose. MEPCO's lineman safety and installation training was completed, the meters configured, and meters and hardware delivered to Multan. AMR meter Installation will start during the first week of April. PDP-provided Planning & Engineering (P&E) Geographic Information System (GIS) mapping capability was used to identify every pole, transformer and customer where these meters will be installed, resulting in a clear and accurate installation package.

- **Automated Meter Reading on High-End Customers –** Currently, PESCO has 270,000 commercial customers and 13,250 high-use customers whose demands exceed 20 KW and whose meters are manually read. There is significant loss of revenue from these customers. – The application of automatic meter reading (AMR) improves accuracy of readings and reduces chances of theft, while significantly lowering non-technical losses. This quarter, the contract to provide AMR metering is under procurement with bids to open in early April. An initial intervention for 102 customers is underway to provide PESCO with its first AMR reading at Peshawar Circle. All selected locations require current transformer (CT) operated meters due to high power consumption, making PESCO one of the first DISCOs where this type of AMR metering is being installed for billing. A prototype is being developed which, following PESCO's clearance, will be installed in the field. This work is expected to begin in April. The design works utilizes the existing framework of steel security boxes, CTs and wiring where possible, resulting in an expeditious and cost-effective solution.

AMR Meters Installed for PESCO

- **Geographic Information System Mapping Continues in Peshawar –** This quarter, PDP continued GIS high tension (HT) and low tension (LT) mapping in PESCO and all other DISCOs, focusing on helping PESCO as it completes GIS mapping of all HT feeders in Peshawar Circle. Also this quarter, PDP shifted its GIS effort to include a number of feeders in the adjacent Mardan Circle, totaling 594 kilometers of LT and HT mapping. PESCO staff is now fully trained and capable of completing this activity, with PDP providing on-the-job support. In Component 2, PDP carried out feeder mapping and analysis of one subdivision per DISCO with the goal of enabling all nine DISCOs to develop a geodatabase with accurate mapping and location information of all nine DISCOs. Under Component 3, PDP is continuing this effort and building PESCO and MEPCO's capacities to map entire divisions and circles.

- **Enterprise Geographic Information System Mapping Begins in Multan –** All PDP-created P&E computer centers at DISCOs' headquarters have been made operational and the mapping function extended to operational staff to ensure consistent updating and maintenance. GIS field data will be made available for field engineers responsible for system construction, maintenance and operation. This quarter, PDP arranged a kickoff meeting in Multan and invited MEPCO's operational staff to discuss how the existing GIS IT infrastructure could be enhanced with server class machines through upgrading the ArcGIS platform to facilitate remote data access. PDP will expand the GIS infrastructure to the circle level at MEPCO (and other DISCOs). The Deputy Director Technical who remains in close contact with MEPCO's Stores, Construction and Operations Divisions will update the network as needed. In a related activity, PDP this quarter completed HT GIS mapping of three divisions of the Multan circle and provided on-the-job training (OJT) to MEPCO's Planning Engineers and Field Surveyors to ensure the project's sustainability. MEPCO's P&E Department is now able to use GIS maps for network optimization, calculating HT and transformation losses, and using the SynerGEE power analysis tool. Additionally, PDP also completed the LT GIS mapping of five feeders for meter replacement.

- **Installation of Insulated Cables in Peshawar Electric Supply Company –**Fixing illegal hooks – called "kundas" – to steal electricity is common in congested areas where the electricity lines pass close to roofs and balconies. The open wires are a constant life-threatening hazard to residents. To control illegal connections and improve residential safety, PDP-trained linemen this quarter began installing quadruplex-insulated secondary cables. This Aerial Bundled Cable (ABC) replaces the current bare-wire low voltage secondary cables, reducing non-technical losses and thereby, improving revenues. The existing bare LT secondary conductors were replaced on nine of the 79 transformers on PESCO's Wapdaga feeder, selected as the prototype for this project. Field surveys for the remaining transformers were completed and the design and work orders will be released in the next quarter.

- **Expanding the Planning & Engineering Capacity in Multan –** At MEPCO, the Planning and Engineering functions were expanded this quarter from the single headquarters application completed in previous project phases to include all eight MEPCO circles. This covers MEPCO's entire operating area, which includes over 4.5 million customers. PDP will assign representatives to provide technical assistance in each circle and fielded 17 GIS mapping assistance teams. MEPCO is providing a senior representative in each Circle and making available approximately 100 temporary personnel to expedite GIS mapping concurrently in each circle. The quantity and equipment specifications to achieve the expansion were developed and issued for procurement during this quarter.

- **Customer Information System Development Gains Momentum –** The CIS is a fully automated system that aims to increase the efficiency of the billing collections process including setting up new connections and managing existing ones. The computerized system

will revolutionize the way DISCOs conduct their business through reductions in operating costs, improved customer service and enhanced employee efficiency. It will also help minimize the time needed to translate customer energy consumption into billing statements and billing statements into revenue, while dramatically reducing paperwork. Augmented with handheld meter reading devices (HHUs), the CIS generates accurate consumer bills and provides a one-window customer service center, enabling improved customer service. This quarter, PDP began HHU implementation at PESCO's Kohat Road subdivision where, as a first step, subdivision staff were trained on the HHUs and associated software. After PESCO's Management Information System (MIS) configured 18 electronic batches i.e. reading routes, PDP initiated an HHU parallel run in these areas. Approximately 10,000 consumer meters were read and compared with PESCO's manual readings; discrepancies were identified and handed to subdivision staff for correction. PDP also finalized the selection of a contractor for the installation of an off-the-shelf CIS and that contractor will be mobilized in April 2014. Part of the CIS project is a consumer census to ensure that the consumer database reflects accurate information. This quarter, PDP initiated consumer enumeration at Peshawar circle's Chok Yadgar subdivision and enumerated over 1,000 consumers. Finally, PDP renovated the Kohat Road subdivision office and instituted its one-window CSC solution. Also in this quarter, software development for CIS implementation at Multan circle was launched. In order to aid the development and quality assurance phases, PDP initiated the hiring process of an Information Technology (IT) company. Tender specifications were prepared, bids were received and proposals are being evaluated.

- **Enterprise Resource Planning Rollout at Peshawar Electric Supply Company –** Existing DISCO back office operations are incapable of providing timely information required for making effective managerial decisions or for properly monitoring and controlling utility operations. DISCO cost/revenue centers are dispersed geographically, adding to the delay in reporting. Additionally, collection, validation, compilation and data processing processes are inefficient. The automation of back office operations through an Enterprise Resource Planning (ERP) system will streamline processes, improve workflow efficiency, and enable reliable and precise financial and management information. This quarter, PDP's ERP Project Management firm was deployed and work began; a PESCO Steering Committee was established and functional core and coordination teams were formed, with the selection of the ERP implementation vendor in its final stages. Senior management from PDP regularly meets with PESCO senior management to provide updates on the project.

MEPCO Meter Reader Conducting Surveillance on Existing Consumer Meters

- **Effective Meter Reading and Surveillance Program Continues at Multan Electric Power Company –** As part of PDP's efforts to improve the quality of meter reading at DISCOs, PDP delivered three sessions of its "Effective Meter Reading and Surveillance Program" at MEPCO. The program focuses on the duties and responsibilities of meter readers and techniques for reading electromechanical and various other types of meters. It enhances the knowledge, skill and work attitudes of both commercial and line staff regarding their duties and responsibilities as meter readers, commercial staff, technicians and customer service representatives. The course also covered the impact of accurate meter reading, actions to resolve meter-related issues meters, the prevailing modes of controlling energy theft and preventative methods. Thus far, 100 participants from different MEPCO subdivisions have been trained, with participants expressing strong interest in additional Effective Meter Reading training programs.

- **Theft Crackdown at Peshawar Electric Supply Company –** Due to the high losses that PESCO sustains as a result of electricity theft, a joint team of PESCO, local police and PDP staff implemented a major anti-theft crackdown this quarter. A comprehensive mass media anti-theft campaig was also launched using newspaper advertisements, TV commercials, infomercials, billboards and streetlight pole streamers. The campaign is ongoing in major locations in Peshawar; front page coverage has appeared in the region's leading newspapers. It is estimated that the campaign message will reach over eight million people living in Khyber-Pakhtunkwa province.

- **Energy Conservation Campaigns Support Turnaround DISCOs –** This quarter, PDP launched its Energy Conservation drive targeting school children in PESCO's Kohat Road subdivision. Attractive audio-visual presentations were produced and presented to all students. The team, comprised of senior PESCO staff and PDP's Communications Team, reached out to approximately 8,000 students; the activity's overall outreach is estimated at over 20,000 persons, including the students' families, friends and relatives. The take-home material distributed to the students included conservation tips, plus responsible citizenry and motivational messages to empower energy scouts. PESCO plans to continue this activity throughout the year, noting its long-term positive benefits. In a related activity, MEPCO distributed 5.7 million compact fluorescent lamp (CFL) energy saver light bulbs among its consumers. These CFLs will replace older, inefficient bulbs and thereby reduce demand. PDP, in collaboration with MEPCO, launched a media campaign to promote the use of energy savers and the benefits of energy conservation among MEPCO's consumers. The campaign included newspaper advertisements, cable TV and FM channel public services messages, airing of a MEPCO documentary, streamers and banners within Multan and displays of standees and banners in all MEPCO's circle offices. This ongoing CFL campaign not only promotes MEPCO as a consumer-friendly DISCO, but will also facilitate MEPCO in meeting its target of reducing consumption by 230 MW.

- **A One-Window Customer Service Center Established at Multan Electric Power Company –** As part of its CIS initiative at MEPCO, PDP this quarter converted the customer services center at MusaPak division into a one-window customer services facility. This Component 2 activity was expanded into Component 3 after MEPCO was selected as the second Turnaround DISCO. The one-window customer service center has already increased customer satisfaction by 125% through a major decrease in the average time taken to resolve complaints. Over 1,300 customers accessed the center's services during this quarter. MEPCO senior management has asked PDP to extend this intervention to other division offices within the Multan circle.

- **Training and Capacity Building Continues at Peshawar Electric Supply Company –** This quarter, PDP conducted three orientation sessions for workshops aimed at PESCO senior management and the DISCO's Human Resources (HR) Department on the importance of internal customer care and change management, both in any generic organization and in an electric utility, in particular. The HR Department's role in the implementation of change management initiatives for sustainable development was also discussed; PESCO staff participants provided positive feedback all sessions.

- **Meter Reading and Handheld Unit Project Advances at MEPCO** - This quarter, PDP initiated the tender process for purchasing HHUs and associated IT equipment and the hiring of meter reading auditors, with MEPCO matching human resources and material contributions toward the HHU implementation in all of Multan Circle. Training was provided to over 300 MEPCO employees from Multan and other operational circles in the implementation and use of Improved Meter Reading (IMR) / HHUs. MEPCO made an initial allocation of approximately 500 meters and required PVC for each subdivision where IMR / HHU will be implemented. Meter reading sections of the Nawan Sheher and Cantt subdivisions were refurbished to accommodate the IT equipment and HHUs as PDP began field implementation in the form of HHU parallel runs in these subdivisions. At the same time, MEPCO started its own IMR / HHU implementation in six subdivisions – New Multan, Shah Rukhne Alam, Gulberg, Mkh Rashid, Shamsabad and Hassanabad.

Strategic Business Plan Workshop for MEPCO

- **Commercial Activities Move Ahead in Multan Electric Power Company –** This quarter, PDP briefed MEPCO senior management on planned activities for MEPCO as part of its Turnaround status. An office order was issued, outlining areas where MEPCO requires PDP's assistance in its Commercial Department and MEPCO nominated a dedicated officer to

streamline coordination with PDP. Mutually agreed activities include the expansion of the IMR and HHU projects to the entire Multan Circle, scaling up CIS from the subdivision level (under Component 2) to the circle level, the upgrade of one-window operations and the regional customer center, surveillance for revenue protection and theft control, and technical assistance in replacing damaged or defective meters.

- **Preparing a Strategic Business Plan for Multan Electric Power Company –** PDP's MEPCO plans include development of a five-year strategic plan for MEPCO that provides a roadmap for implementing specific and measurable improvements. In defining MEPCO's strategic objectives and related goals, the business plan will identify key activities required to meet them. This quarter, PDP launched a series of workshops for senior management that were designed to educate and instruct on the development of a business plan's strategic objectives and goals. Related activities include training project managers in project management and providing the necessary technical assistance.

- **Professional Development Workshops for Women in Leadership –** This quarter, PDP held two workshops for PESCO's female employees and interns. The objective was to promote professionalism, integrity and leadership qualities in employees. Work ethics, organizational dynamics and changing concepts and perceptions were discussed in interactive sessions. Current challenges facing women in the workplace and related consequences that hinder efficiency and productivity were reviewed.

- **Computer Lab Set Up at Peshawar Electric Supply Company –** This quarter, PDP established a computer training lab at PESCO headquarters that will help build IT skills among PESCO employees. A survey to determine the training needs revealed that a majority of PESCO employees require basic IT skills and advanced Microsoft Office skills. The center was handed over to PESCO's administrative staff which continues to conduct two IT sessions per day. The labs will not only enhance the professional capabilities of individual employee, but also contribute to improving PESCO's overall operations. To ensure security, PDP installed closed circuit television (CCTV) cameras in the lab and in corridor, to be managed by the DG Administration and Services.

- **Building Corporate Communications at Peshawar Electric Supply Company –** To educate its consumers regarding MEPCO and PEPCO goals, responsibilities, and recent reforms, PDP is assisting in improving its corporate communications including its corporate branded stationary, including calendars, diaries, notebooks, file covers, etc. In this quarter, PDP provided PESCO with branded material to enhance corporate image building, marking the first time in PESCO when the company shifted from Water And Power Development Authority-branded stationary to PESCO-branded stationary, an activity designed to building PESCO's reputation as a consumer- and employee-friendly company In a related activity, PDP continued to support circulation of PESCO's popular, six-month-old newsletter, PESCO Post. The eight-

pager is circulated to a broad audience including all major stakeholders, political leadership, policymakers, libraries, engineering universities and PESCO employees. The newsletter reports on all PESCO activities. In just under six months, the circulation has increased to 1,500 newsletters per month.

TASK 2: ENERGY CONSERVATION & DEMAND SIDE MANAGEMENT

Pakistan is facing the worst power crisis in its history. The country's power supply falls significantly short of the estimated demand from consumers year-round. The capacity shortfall has resulted in 10-12 hours of load shedding in metropolitan cities such as Lahore, and as much as 16-20 hours of load shedding in rural areas. In the face of such challenges, energy efficiency and Demand Side Management (DSM) can contribute significant benefits and often, within the shortest possible timeframe.

18.5 KW Tubewell Motors for Replacement at Ittehad Chemicals Limited, One of Pakistan's Largest Chemical Producing Companies

DSM initiatives are considered to be the most cost-effective options for transforming peak demand growth to a longer time horizon and reducing wasted electricity consumption due to inefficiency.

HIGHLIGHTS

- **Demand Side Management of Industrial Motors –** The Industrial DSM Program focuses on the replacement of inefficient motors and VSDs. Industrial motors are estimated to contribute between 60-80% of industrial electricity consumption in most Pakistani industrial sectors. Thus far, PDP has installed 1,018 industrial motors and replaced 657 Varied Frequency Drives (VFDs) while orders for the replacement of an additional 147 VFDs and 577 motors are in process. **This activity is expected to save 11.64MW.**

TASK 3: COST OF SERVICE & NEPRA REFORM

This task covers two activities: Cost of Service Study (CoSS) and Tariff Design for all DISCOs and NEPRA Reform. The Cost of Service Model is the tool with which the CoSS is performed, and includes a repository of financial, technical and billing information in a spreadsheet-based model. The model performs a functional classification of the total costs a utility incurs, and then allocates these costs to different customer categories. Once a customized model is developed, it becomes possible for utility staff to perform CoSS by simply updating the information repository.

HIGHLIGHTS

- **Cost of Service Study Begins for Four Power Distribution Companies –** PDP began working on Cost of Service Studies for the last set of four DISCOs, i.e. PESCO, Hyderabad Electric Supply Company (HESCO), Quetta Electric Supply Company (QESCO) and Sukkur Electric Power Company (SEPCO) in the previous quarter. This quarter, site visits were undertaken to these DISCOS where presentations explaining the process of the CoSS and its benefits in addition to its regulatory requirement were made. The data collection exercise at these DISCOs is also ongoing on and feeder level load data by tariff, billing data and financial data is being collected to be used for customizing the Cost of Service model according to the needs of each of these DISCOs.

- **Identifying Under-Billing in Power Distribution Companies Results in Massive Savings –** During the CoSS analysis, PDP discovered that all DISCO were under-billing select customer groups through the use of incorrect billing formulae. Time of Use consumers paying a fixed rate were being billed based on the determination of average demand, rather than NEPRA's determined tariffs for maximum demand, resulting in lower consumer bills and less revenue for DISCOs. This practice was instituted for both commercial and industrial consumers who are billed based on both consumption and maximum demand. It resulted in up to $47 million in losses, has been a part of the current system for well over a decade, and would have gone unnoticed for longer except for PDP's discovery. Subsequently, after reviewing the evidence and supporting documentation supplied, NEPRA concurred with PDP's findings and issued notices to DISCOs indicating that the practice was in violation of NEPRA's tariff protocols. NEPRA has ordered all the DISCOs to immediately correct this situation through a change in their billing formula. This change is expected to occur effective April 2014 consumer bills, resulting in increased DISCO revenues.

- **Reevaluating Organizational Assessment and Restructuring at NEPRA –** Currently, NEPRA's organizational structure is non-competitive and non-growth oriented, resulting in low staff retention, limited skill development, and low employee morale. The absence of a mechanism for individual assessment and growth with a perpetually readjusting organizational chart has resulted in significant employee dissatisfaction. This quarter, PDP launched a series of activities that include the completion of job descriptions for employees working in the professional and executive cadres; development of proposed organizational structure models and a comprehensive training needs assessment for all departments. In parallel to this, PDP remained actively engaged with the NEPRA management and, in a series of meetings, met with NEPRA's senior management to discuss the way forward. NEPRA agreed to formulate a review committee to assess and analyze PDP's deliverables. Also this quarter, PDP conducted two workshops on "Organizational Structure Assessment" and "Performance Management System" and finalized the outsourcing of its compensation and benefits study.

TASK 4: CAPACITORS AT TUBEWELLS FOR POWER FACTOR IMPROVEMENT & LOSS REDUCTION

One of the largest loads on Pakistani DISCOs is that of tubewell pumps. Nationwide, electric consumption via tubewell pumps accounts for 15% of the total annual energy consumption, with significant variation from one DISCO to another. Tubewell pumps used in Pakistan have low-rated power factors, on the order of 80-85% even when new. Frequent rebuilding of pumps required due to poor power quality results in further reductions in power factor. Low power factor increases reactive power demand on transmission and distribution lines and transformers, and results in higher technical losses. The high number of inefficient tubewell pumps with low power factor has a significant effect on the system's technical loss, and creates unnecessary demand on the system.

Capacitors for Installation at PESCO

HIGHLIGHTS

- **Capacitor Installation at Five Power Distribution Companies –** Under its Capacitor Installation Program, PDP is installing capacitors on tubewells throughout the country. The PESCO project concluded with the installation of 2,367 capacitors. The QESCO installation is progressing steadily, with a total of 12,922 capacitors (out of 16,000) installed to date. While for other DISCOs, with MEPCO taking the major share of capacitors to be installed, the procurement of capacitors will be completed soon followed-up by installations. The capacitor installation program will result in substantial reduction in demand and technical losses.

TASK 5: FEEDER OPTIMIZATION FOR LOSS REDUCTION

DISCOs have not assessed current requirements for HT power factor correction. Feeder loads have changed with the addition of air conditioner motors and other appliances, causing poor power factor on many feeders with lost revenue, low voltage and customer dissatisfaction.

PDP's P&E program will focus on both Turnaround DISCOs to perform feeder power flow analysis using new software technology and install 11 kilo-Volt (kV) HT capacitors. This task will include installation of HT capacitors on feeders and in grid stations.

HIGHLIGHTS

- **Area Planning Using Geographical Information Systems –** The distribution network underwent tremendous growth in the last year, but lack of effective planning resulted in a maze of feeders essentially serving the same area. GIS provides planners with a vision of ground realities and conditions, enabling them to properly manage feeder and transformer loads. The SynerGEE software simulates the conditions and allows planners to test different network arrangements prior to fieldwork. Planners at each DISCO are now using GIS to better visualize ground conditions and generate proposals. PDP also coordinated effective area planning activities with all DISCOs and this quarter, GEPCO planned load shifting of a new grid station at Sialkot. Multiple feeders from four grid stations were simultaneously analyzed to determine the most feasible network arrangements.

Area Planning Using GIS and SynerGEE

TASK 6: EXPANSION OF HIGH IMPACT OPPORTUNITIES & IMPROVED GOVERNANCE

This task includes the following activities:

- Activity 1: Load Data Improvement Project
- Activity 2: Improved Meter Reading Project
- Activity 3: Line Staff Skill Development
- Activity 4: Governance
- Activity 5: Lineman Training for all DISCOs

HIGHLIGHTS

- **Load Data Improvement Program –** PDP successfully achieved the Load Data Improvement (LDI) program's objective, i.e., to reduce unscheduled load shedding through the installation of AMR meters at all nine DISCOs' grid substations. Following the establishment of the Tribal Area Electricity Company (TESCO), the MWP asked PDP to integrate its power utilization intervention with the LDI project. This quarter, PDP began installing AMR meters in the tribal areas – thus far, a total of 8,763 meters have been installed across all DISCOs including TESCO. These meters will help provide each DISCO Power Distribution Control Center (PDC) and the National Power Control Center (NPCC) with near real-time data on current loads, critical to making quick adjustments to load management issues as they arise, an initiative that has almost eliminated unscheduled (forced) load shedding. PDP also installed specially designed executive screens in Chief Executive Officer (CEO) and General Manager, Operations offices at Lahore Electric Supply Company (LESCO), Islamabad Electric Supply Company (IESCO) and MEPCO. For the first time in DISCO history, real-time MWs received from the national grid are displayed on these live data screens, instrumental in controlling and reducing unscheduled load shedding.

Delegates Being Briefed About the Functioning of the LESCO PDC Center

- **Outage Reduction Devices Project –** The reliability of electric power distribution systems is critically important for both DISCOs and the consumers they serve. Due to the current lack of sectionalizing devices in the DISCOs' distribution systems, consumers outside the vicinity of power faults are also affected during outages. This quarter, PDP allocated four 900-amp three-phase ground operated gang switches for installation on critical and sensitive feeders; 48, 600-amp disconnect switches for installation on main feeders; 450 disconnect switches for installation on feeder branches, and 1,500 cutouts for installation on distribution transformers in PESCO and six other DISCOs. Additionally, PDP allocated 105 fault indicators for installation on strategic locations on the feeders in order to expeditiously pinpoint fault locations. These devices were well-received. At PESCO, design work orders for eight feeders were completed and released during the quarter with the remainder in progress. PESCO allocated ten linemen from Peshawar Division who will implement the installations, with PDP providing the necessary training. This is a tremendous intervention at PESCO and the other DISCOs and will provide substantial relief to consumers relative to reduced outage time, while simultaneously enabling an easy and organized fault isolation mechanism.

Similar efforts are ongoing at MEPCO, HESCO, IESCO, LESCO, Faisalabad Electric Supply Company (FESCO) and Gujranwala Electric Power Company (GEPCO).

- **Improving Safety for Linemen in Power Distribution Companies –** This quarter, under its Linemen Training Program, PDP trained 440 linemen from across all nine DISCOs on safety techniques and meter installations using PDP-provided safety tools and equipment. In a related activity, 111 senior managers from all DISCOs were trained on safety execution for linemen. These "Executive Safety Leadership" workshops were designed to bring awareness about the responsibilities of senior managers regarding the occupational health and safety of their workforce. A good portion of technical losses in DISCOs result directly from DISCO management's the lack of attention to linemen training and training facilities and the inadequate investment in tools, materials, training and procedures. Untrained line workers using tools unsuited to their tasks are attempting to keep the system operational, resulting in damaged transformers, escalating line losses and a rising injury and death toll. PDP's Linemen Training, Tools and Equipment program is an essential intervention for transforming the DISCOs' frontline operations, creating a safe working environment with the right tools, thereby minimizing line losses and ultimately, loss of life.

- **Meter Installation and Replacement Program Advances –** PDP's meter replacement program swaps electromechanical meters for electrostatic meters. The aim is to improve DISCOS' commercial viability through theft reduction and more accurate consumer billing. It eliminates the possibility of meter tampering, rampant in electromechanical meters and leads to a reduction in commercial losses and improvement in utility profitability. This quarter, PDP completed meter replacement in one subdivision each of LESCO, FESCO and PESCO, thus far, replacing 20,382, 8,610 and 11,889 meters, respectively in these three DISCOs. Another contract for the installation of 40,000 electrostatic meters in PESCO has been awarded to Creative Engineering. The contractor is being mobilized and is expected to commence installations in the second week of April. A new initiative to replace electrostatic meters with Radio Frequency (RF) meters was launched in LESCO's Thokar Niaz Baig subdivision. Thus far, 5,045 of 6,800 meters have been replaced.

- **Creating and Institutionalizing an Independent Central Power Purchasing Agency –** PDP is assisting MWP in the re-creation and operationalization of the Central Power Purchasing Agency (CPPA) as an independent company that will act as an agent between generators and distributors. The new entity, now known as "CPPA Guarantee Limited", was created in December 2013 – its BOD recommended the changes required in the CPPA's memorandum and articles and articles of association that PDP prepared last quarter. Members of CPPA Guarantee Limited members approved these changes at the Agency's extraordinary general meeting. PDP advisors assisted the MWP and CPPA Guaranteed Limited in developing a road map to fully operationalize the CPPA, drafting job descriptions and assisting in advertising for a CEO, Company Secretary and CFO.

Additionally, PDP developed the CPPA Guarantee Limited's internal governance policies for adoption. This quarter, PDP also developed provisional market rules, reviewed initial drafts the Business Transfer Agreement, prepared an initial draft of existing settlement procedures and worked with the MWP to ensure that job descriptions be included for the highest levels of the organizational structure.

- **Formulation of National Electric Safety Codes –** This quarter, PDP continued to assist with the formulation and development of the national electric safety codes (NESC) in collaboration with the Pakistan Engineering Council (PEC), a statutory body under Pakistan's Constitution, in order to implement safe work practices in the power sector and Pakistan's communications companies. The intent is to minimize accidents that occur due to failed safety equipment, resulting in the loss of 200 lives per year. The NESC encompass all processes from generation to end consumers. This quarter, all sub-groups submitted their first drafts to the Task Force convener and a meeting was called for consolidation of all work submitted by each sub-group where each section was finalized by work-group. The NESC second draft will be forwarded for international vetting and legal opinion.

Task Force Meeting on the National Electric Safety Codes at Pakistan Engineering Council

- **Instituting an IT-Friendly Environment at the Ministry of Water and Power –** PDP is expanding the existing IT infrastructure at the MWP, an initiative aimed at improving overall power sector performance and loss reduction. This intervention will significantly improve MWP's workflow, efficiency in processing cases, and the quality and speed of its interactions with affiliate or subsidiary organizations. This system was designed to serve as a building block for the MWP's MIS Department, to handle both internal and external communication, administrative processes, records and archives. Because MWP plays a key role in implementing power sector reform, its improved efficiency will also benefit other reforms. In this regard, 80% of MWP staff has already been equipped with the latest desktop computers and related software, with the remainder expected by the end of next quarter. Implementation of PDP's state-of-the-art video conferencing solution to reduce travel and other operational costs, yet enable communication between all power sector players has been well-received and is being increasingly used for meetings and conferences. MWP staff members are also training on basic IT system usage and IT security. In the next phase, PDP will develop a web-based dashboard application to allow the MWP to automate information flow between DISCOs and the Ministry. This will also help the MWP to monitor and enforce performance Key Performance Indicators as detailed in the performance contracts of each DISCO.

“To date, this program has replaced over 34,000 meters nationwide. These meters are also being adjusted to readable heights for meter readers. This is a small yet powerful intervention,” said John Pullinger, PDP’s Field Operations Director

(Pictured Above) Improving PESCO’s Commercial Viability – The Power Distribution Program has to date successfully replaced 11,889 meters for PESCO consumers. PDP is replacing all electro-mechanical meters with electro-static ones and existing meters are being rehabilitated. Tamper-proof electro-static meters reduce theft and increase billing accuracy, thereby advancing PESCO’s commercial viability in the process. PDP has also replaced 20,382 meters for LESCO and 8,610 meters for FESCO.

SECTION 4: COMPONENT 2 TASKS CONTINUING IN COMPONENT 3

TASK 1: CONGESTED AREA IMPROVEMENT

Under Component 2, congested area work is underway at PESCO, HESCO and LESCO. Under Component 3, PDP will assist the DISCOs in planning congested areas, focusing on the Turnaround DISCOs, and installing ABC cable to extend HT lines by shortening LT lengths, plus new high efficiency transformers, switches and outage reduction equipment. To achieve this improvement, PDP will purchase and install the bulk of the material with DISCO participation. This activity will lead to reduced losses and increased revenue in congested and high theft areas, resulting ultimately in improved customer safety and satisfaction.

HIGHLIGHTS

- **Congested Area Improvements Through Installation of Completely Self Protected Transformers –** PDP is improving PESCO's congested operating areas and this quarter, in collaboration with PESCO staff, began the installation of 77 Completely Self Protected (CSP) transformers to reduce overloading existing transformers. PDP also reduced the length of secondary LT circuits that will help to reduce losses. PDP has thus far provided 30 45 Kilo Volt Amperes-rated (KVA) transformers for installation on the Peshawar distribution system. PESCO's Construction Division this quarter assigned five linemen to work exclusively on the installation of these transformers; nine transformers are already in the field. Additionally, 47 CSP transformers rated at 75 KVA were provided for installation; field survey and design progressed this quarter with the release of the requisite installation work orders, maps and material expected in April. Those line crews installing the 45 KVA units will also implement this activity.

A 45 KVA CSP Transformer Being Installed in PESCO's Peshawar Circle

TASK 2: HIGH TENSION POWER FACTOR IMPROVEMENT

Under Component 2, the DISCOs have committed to repair or replace installed HT capacitors. PDP will continue under Component 3 to assist the DISCO to complete this ongoing effort. Improved distribution system power factor will reduce technical losses along with million volt ampere reactive (MVAR) demand with improved voltage resulting in customer satisfaction. DISCOs have not assessed current requirements for HT power factor correction. Yet the feeder loads have changed with continuous loads of air conditioners, motors, CFL and other appliances, resulting in poor power factor on many feeders and lost revenue, low voltage, high technical loss and customer dissatisfaction. PDP will focus on PESCO and MEPCO to conduct feeder power flow analysis, using new software and the installation of HT capacitors on feeders and congested area strategies on high-loss feeders. At MEPCO this activity is coupled with voltage regulators for the introduction of the Volt/Var Optimization (VVO) Program as part of the Energy Load Reduction (ELR) program.

HIGHLIGHTS

- **Energy Load Reduction Program Begins at Multan Electric Power Company –** Under the ELR program, an engineered mix of switched HT capacitors and HT voltage regulators will be applied to improve MEPCO's voltage and power factor problems on critical feeders. During the quarter, 125 units of 450 KVAR-switched HT capacitor equipment orders were developed and issued. The specifications for 125 32-step voltage regulator units were developed and are in final review; procurement is expected to begin in early April.

TASK 3: GEOGRAPHIC INFORMATION SYSTEM SURVEY & ENGINEERING ANALYSIS

In Component 2, PDP carried out feeder mapping and analysis of one subdivision per DISCO. PDP initiated a program to enable all nine DISCOS to develop a geodatabase with accurate mapping and locations of all field installations. To date, nine DISCO P&E computer centers have been made operational. Under Component 3, this effort will continue and PDP will build the capacity in DISCOs to map entire divisions and circles. Planning engineers will be encouraged to concentrate their engineering software analysis on these areas to produce more accurate feeder / area rehabilitation plans, based on field GIS data.

HIGHLIGHTS

- **Data Collection and Database Development Continues at all Distribution Companies** – The creation of a GIS database of the power distribution facilities at all DISCOs is essential for improved governance and resource management. This quarter, work continued at all DISCOs where individual feeders are collecting data and processing it into a GIS, database suitable for map preparation and engineering program analysis. Six DISCOs are, with PDP's assistance, now using their own personnel to conduct GIS work, with PDP providing OJT only. PDP's GIS trainings focused on facilitating staff in processing spatial data captured through field surveys and subsequent processing for use in SynerGEE, the power flow analysis tool. Thus far, over 1,000 feeders have been mapped across the country, with the DISCOs mapping an increasing number of feeders themselves.

DISCO Staff Using SynerGEE Software to Map the Distribution Network

TASK 4: DEMAND SIDE MANAGEMENT PROGRAM

Industrial motors contribute an estimated 60-80% of industrial electricity consumption in most Pakistani industrial sectors. Under the rollover program and through funding from the Energy Efficiency Conservation, PDP's Phase 1 Motors in Industry program will install 811 energy efficient motors and 662 Variable Frequency Drives (VFDs) in industries throughout Pakistan (except Baluchistan) until December 2013. In Phase 2, PDP will install 784 motors and 662 VFDs; the phase is expected to conclude March 31, 2014. Another program activity is the replacement of inefficient pump sets in the publicly-owned water and sewerage utilities. Under Component 2, PDP replaced 135 inefficient municipal pump-sets for Islamabad's Capital Development Authority Islamabad, and 75 large capacity tubewell motors and pumps in the Karachi Water & Sewerage Board. This activity concluded in December 2013.

TASK 5: LOW TENSION CAPACITOR INSTALLATION PROGRAM

Under Component 2's Capacitor Pilot Program, PDP is installing 24,000 LT capacitors on agricultural tubewells for the purpose of improving pump set power factor correction (LT capacitors) on distribution feeders in MEPCO, FESCO, LESCO, IESCO and QESCO. Based on the successful results of this project, PDP has started the national capacitor installation project under Component 3 with 81,812 LT capacitors, addressing the challenges faced during the pilot project, to maximize the nationwide program's success and peak demand savings.

TASK 6: COST OF SERVICE STUDY

Having completed the Cost of Service (CoS) Study with IESCO, PDP is currently working on CoS studies at eight DISCOs – LESCO, FESCO, GEPCO, MEPCO, HESCO, PESCO, SEPCO and QESCO. The methodology used with IESCO and approved by NEPRA will be applied and amended to meet the needs of each DISCO. Financial, commercial and load data will be used to populate the model. AMR meters will be procured and installed at all transformers of selected feeders in each DISCO for establishing coincidence and contribution to the DISCO's demand. An appropriate methodology for calculation of weighted average cost of capital will be used to determine market based rate of return.

HIGHLIGHTS

- **Cost of Service Model Customized Continues for Four Power Distribution Companies –** Work continued this quarter on the Cost of Service studies for the first set of four DISCOs (FESCO, GEPCO, LESCO and MEPCO); the model is being tailored for each DISCO. Work is currently underway to finalize these models, after which the organizations will be assisted in the preparation of their tariff petitions based on the results, which will then be submitted to NEPRA in June 2014.

- **Cost of Service Automated Meter Reading Meters –** This quarter, as part of an ongoing activity, PDP assisted IESCO crews in the installations of over 150 AMR CT meters. These meters will enable CoS monitoring on selected feeders in IESCO. PDP is also providing 150 meters for installation in each of the other eight DISCOs with a total 1,200 AMR meters to be installed on selected feeders. Only feeders that mirror the overall DISCO performance were selected for this activity, to ensure the data is a true reflection of the company's performance.

TASK 7: ORGANIZATIONAL ASSESSMENT AND RESTRUCTURING

A similar project was undertaken at MEPCO under Component 2. Understanding that all DISCOs share similar structures, the assessment work conducted at MEPCO will be validated for PESCO with minimal assessment performed in areas where there might be discrepancies or inconsistencies. The project will focus on the implementation of approved proposals / studies.

HIGHLIGHTS

- **Organizational Assessment and Restructuring at Multan Electric Power Company –** PDP continued its support for MEPCO's organizational restructuring. With MEPCO's buy-in last quarter, PDP this quarter developed Request for Proposals for nine additional proposals. These include "Job Descriptions & Key Performance Indicators", "Performance-Based Evaluation System", "Training and Capacity Building", "Training Function Development", "Recruitment Policy", "Employee Handbook", "Rewards and Recognition Policy", "HR Help Desk" and "Identification of Anomalies".

- **Internal Audit Process Optimization at Power Distribution Companies –** As part of the PDP's Internal Audit Process Optimization (IAPO) project, a new internal audit manual and framework was introduced, emphasizing a risk-based approach that considers the entire business process rather than individual transactions. This includes training programs for internal audit staff, DISCO senior management and BOD Audit Committees (Committee). The IAPO project is designed to improve DISCO financial transaction transparency and operational efficiencies while introducing better controls. The new framework will include the DISCOs Committees, which will oversee the internal audit function and report results directly to the Board of Directors, rather than centralizing accountability with the CEO. This will improve the level of financial transparency and financial accountability. PDP is providing OJT as well as "training the trainer" programs. The DISCO will be provided with an internal audit training calendar and recommendations to achieve a sustainable internal audit capacity at each DISCO. PDP delivered the new internal audit manual to DISCO Boards of Directors. Results to date are encouraging. However, due to the hiring ban, the GOP's reconstitution of BODs and the DISCOs' lack of capacity in the internal audit function, the original work (Phase I) could accomplish only a portion of its sustainable objectives. PDP's strategically focused two-pronged solution (Phase II) will continue certain services proved successful under Phase I, while introducing new services that will result in more sustainable solutions. The first approach will focus on the seven DISCOs – FESCO, GEPCO, HESCO, IESCO, LESCO, QESCO and SEPCO. The second approach will focus on the two turnaround DISCOs (MEPCO and PESCO).

QESCO Audit Manuals

"We really appreciate USAID's effective workshop on Performance Management Systems. This workshop allowed NEPRA participants to thoroughly understand modern practices and the practices and tools shared will pave the way for implementing a new performance measurement system", said Malik Hammad Shamimi, NEPRA Director General HR/A

(Pictured Above) Performance Management Systems Workshop: As part of its Organizational Assessment and Restructuring Project, the USAID Power Distribution Project carried out an extensive assessment of the existing performance measurement process, tools and aligned guidelines currently being applied at NEPRA. The existing system lacks the capacity to incorporate and establish an employee's measurable objectives. Employees are not being measured on the value of their work or their competence, but instead on non-tangible attributes.

SECTION 5: EVENTS

INAUGURATING POWER DISTRIBUTION CENTER AT LESCO

ELIMINATING UNSCHEDULED LOAD SHEDDING:

In an event attended by the U.S. Consul General, PDP handed over its newly created Power Distribution Center to LESCO.

MESSAGE DELIVERED:

With live monitoring screens presenting continuous actual data load from all LESCO's grid stations and feeders, PDC operators, for the first time, have an immediate display of the power grid's real-time load data and feeder load shedding status.. This information will enable LESCO to monitor its planned load shedding and stay within its NPCC allocation quota.

RECOGNIZING PESCO EMPLOYEES

FACILITATING EMPLOYEE SATISFACTION:

PDP initiated the first ever PESCO Employee Recognition Awards.

MESSAGE DELIVERED:

The event catered to over 1,000 employees recognizing the best performers (in both management and operational staff). Overall the event was equally appreciated by both PESCO's labor union and staff and will go a long way in bringing a positive change in the company in 2014.

APPENDIX A: TABULAR PERFORMANCE RESULTS

Indicator	Unit	Start of Project to End of Previous Quarter	Current Quarter (Jan-Mar 2013)	Start of Project to End of Current Quarter
Power and Energy Saving				
MWs of power saved by installing high tension/low tension capacitors, meters and improving commercial procedures	MW	110	9	119
Giga-watt hours of energy made available by installing high tension / low tension capacitors, meters and improving commercial procedures	GW-h	484	34.9	518.9
Revenue saved or revenue generated by installing high tension / low tension capacitors, meters and improving commercial procedures, internal audit process optimization and advising PESCO on a corporate level	$ million	119.2	14	133.2
Beneficiaries				
Number of beneficiaries receiving improved energy services by installing high tension/low tension capacitors, meters and improving commercial procedures	No.	1,650,000	135,000	1,785,000
Capacitors				
Number of capacitors installed in tubewell pumps	No.	15,978	4,939	20,917
Pumps & Motors				
Number of pumps installed in municipalities	No.	210	0	210
Number of motors installed	No.	796	222	1,018

Indicator	Unit	Start of Project to End of Previous Quarter	Current Quarter (Jan-Mar 2013)	Start of Project to End of Current Quarter
Number of variable speed drives (VSDs) on motors	No.	441	216	657
Load Data Improvement Project				
Out of the target of 8075 meters, number of AMR meters installed	No.	8,653	110	8,763
Meter Installation Improved Meter Reading & Meter Replacement Activity				
Number of new meters installed through improved meter reading & meter replacement activity	No.	40,087	4,219	44,306
Number of meters re-fixed with new service drops and proper fixing brackets through meter replacement activity	No.	14,110	192	14,302
Total new meters installed and re-fixed through improved meter reading and meter replacement activity	No.	54,197	4,411	58,608
Percent reduction in complaints	%	76%	-	76%
Miscellaneous Installations				
Number of outage reduction devices	No.	-	246	246
Number automatic meter reading meters	No.	-	230	230
Number of transformers	No.	-	9	9
Number of ABC cables	meter	-	700	700
Revenue Protection Cell				
Total number of FIRs lodged	No.	6	18	24
Total number of illegal hooks detected	No.	168	266	434

Indicator	Unit	Start of Project to End of Previous Quarter	Current Quarter (Jan-Mar 2013)	Start of Project to End of Current Quarter
Census				
Number of consumers enumerated	No.	48,528	-	48,528
Number of theft cases observed through census	No.	1,099	-	1,099
Wrong tariff cases identified through census	No.	146	-	146
Linemen Training				
Number of linemen trained on proper safety techniques	No.	11,806	440	12,246
Percent reduction in fatal accidents (maximum in a month)	%	71%	34%	71%
Percent reduction in non-fatal accidents (maximum in a month)	%	66%	56%	66%
Functional Training				
Number of DISCO staff trained in various functional areas like Finance, Human Resources, Technical, Commercial, Communication etc.	No.	26,642	508	27,150
Governance				
Number of policies and international best practices analyzed, developed and issued	No.	23	7	30

USAID Power Distribution Program

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