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Annual Report – October 30, 2017

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<tr>
<td>COP</td>
<td>Chief of Party</td>
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<td>DISCO</td>
<td>Distribution Company</td>
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<td>EPC</td>
<td>Engineering, Procurement, and Construction</td>
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<td>HEBCO</td>
<td>Hebron Electricity Distribution Company</td>
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<td>HICD</td>
<td>Human and Institutional Capacity Building</td>
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<td>JDECO</td>
<td>Jerusalem District Electricity Company</td>
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<td>KPIs</td>
<td>Key Performance Indicators</td>
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<td>M&amp;E</td>
<td>Monitoring and Evaluation</td>
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<td>MOU</td>
<td>Memorandum of Understanding</td>
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<td>MW</td>
<td>Megawatt</td>
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<td>NEDCO</td>
<td>North Electricity Distribution Company</td>
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<td>NGO</td>
<td>Non-governmental Organization</td>
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<td>PA</td>
<td>Palestinian Authority</td>
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<td>PC</td>
<td>Professional Community</td>
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<td>Public Relations</td>
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<td>PENRA</td>
<td>Palestinian Energy and Natural Resources Authority</td>
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<td>PERC</td>
<td>Palestinian Electricity Regulatory Council</td>
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<td>PETL</td>
<td>Palestinian Electricity Transmission Company</td>
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<td>PMA</td>
<td>Palestinian Monetary Authority</td>
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<td>PPR</td>
<td>Performance Plan and Report</td>
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<td>PR</td>
<td>Public Relations</td>
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<td>PEP</td>
<td>Palestinian Energy Project</td>
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<td>PREPC</td>
<td>Palestinian Renewable Energy Professional Communities</td>
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<td>PPU</td>
<td>Palestine Polytechnic University</td>
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<td>PV</td>
<td>Photovoltaic</td>
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<td>RE</td>
<td>Renewable Energy</td>
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<td>RFI</td>
<td>Request for Information</td>
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<td>SELCO</td>
<td>Southern Electricity Company</td>
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<td>SOW</td>
<td>Scope of Work</td>
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<td>STTA</td>
<td>Short-term Technical Assistance</td>
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<td>USAID</td>
<td>US Agency for International Development</td>
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<td>WBG</td>
<td>World Bank Group</td>
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EXECUTIVE SUMMARY

PROJECT DESCRIPTION

The United States Agency for International Development (USAID) awarded AECOM International Development the Palestinian Energy Project (PREP), Order No. AID-294-TO-16-00006 under the Clean Energy Non-CPC IDIQ (No. AID-OAA-I-13-00012), which was executed on September 30, 2016. This document is a deliverable under Section F.5 (5) of the aforementioned contract. Its purpose is to detail the progress towards technical delivery; update USAID on key operations, staffing and management developments; and provide USAID with upcoming activities and potential obstacles.

PREP is a three-and-a-half year program whose goal is to significantly advance the Palestinian energy sector to support affordable and sustainable energy independence in the West Bank. The program’s major stakeholders include the Palestinian Energy and Natural Resources Authority (PENRA), Palestinian Electricity Regulatory Council (PERC), and Palestinian Electricity Transmission Company (PETL), as well as West Bank distribution companies (DISCOs). The main components of the program are:

1. **Build the Palestinian Authority (PA) energy sector institutional capacity to support increased clean energy generation and grid integration;**
2. **Strengthen and commercialize the distribution sector to improve collections, increase revenues and enable uninterrupted payment to suppliers;**
3. **Promote the benefits of solar PV electricity and/or other renewable energy (RE) generation through the development of sustainable pilot activities; and**
4. **Build PA institutional capacity to oversee the commercial and operational administration of the Palestinian electricity sector.**

In August 2017, PREP received a modification on its contract from USAID, which amended the project’s scope by adding a fourth component that will support the Palestinian Authority (PA)’s efforts to expand ownership and control of its energy assets. In addition, the modification included changing the project’s name from Palestinian Renewable Energy Project (PREP) to Palestinian Energy Project (PEP).

During the first year of PEP, the program focused on gaining a deeper understanding of the issues related to the project’s four components and developing the early stage activities of each component to support the success through the Life of Project. Numerous meetings, discussions, discovery workshops, and assessments were conducted with stakeholders of the PA energy sector to adequately map out activities aimed at supporting affordable and sustainable renewable energy (RE) in the West Bank.

Under Component 1, PEP implemented human and institutional capacity development (HICD) activities with PETL, PERC and the targeted DISCOs to assess the current state of those organizations relative to capacity-building development. Specific capacity-building activities included both PETL and the DISCOs attending offsite grid modeling software training at the ETAP training facility in Dubai, thus preparing them for transmission grid code development and management. In addition, the project conducted preliminary research on green financing and incentives that will help promote renewable energy financing within the West Bank. This research will lead to a comprehensive report outlining the current incentives and loan products available to the RE market and support implementation of Year 2 activities supporting the Green Finance Committee.
Under Component 2, PEP completed extensive work with the DISCOs, with PEP documenting key issues facing the DISCOs related to RE, revenue collection, and overall operations. The project conducted assessments to select a second DISCO to join the Jerusalem District Electricity Company (JDECO) for an in-depth HICD engagement. Based upon these capacity assessments and the performance benchmarking results, the project selected the North Electricity Distribution Company (NEDCO) as the second targeted DISCO to receive support from the PEP program. In addition, PEP provided training on grid modeling software to provide the foundation for studying the impact that renewable energy installations will have on the existing distribution grid. Finally, PEP also assisted the DISCOs’ public relations departments to improve their overall ability to communicate with customers on sector policy and practice changes related to revenue collection goals.

Looking at Component 3, the main accomplishments under this component focused on building the demonstration project pipeline. Numerous investigative and research activities were conducted to gain a deeper understanding of the current RE environment and the issues surrounding its lack of performance. A RE demonstration project pipeline was then developed to identify suitable projects to address these issues. To build the pipeline, PEP developed a comprehensive set of criteria to be used to assess the potential of renewable energy project proposals. Working with USAID in the criteria development, PEP identified over 12 different criteria which addressed project attributes ranging from project readiness, to financing opportunities, to beneficiaries and gender impacts. In addition, PEP developed a public solicitation for potential RE projects. The solicitation generated over 100 responses throughout the West Bank. One project that demonstrated high potential was the Palestine Polytechnic University (PPU), whose project scored high on all criteria points. That demonstration project is currently underway after the signing of a MOU, and will be a showcase demonstration model for other projects to follow.

The public relations initiatives supporting the demonstration project achieved a number of milestones during Year 1. PEP also designed public awareness templates, which will be customized for each RE demonstration project. Finally, the project completed an overall communications milestone schedule that supports the public awareness activities at specific times within the life of the demonstration project.

In addition to activities related to Components 1, 2 and 3, PEP also achieved progress in activities associated with Component 4. During Year 1, PEP supported the PA energy sector and PETL through transformation activities, which included the development of a customer billing and ERP system, analyzation of the requirements for a SCADA system, metering infrastructure and communications, as well as initiation of the development of a national control center.

PEP is looking forward to achieving progress toward Year 2 activities and has developed a second year work plan that incorporates the achievements of the first year. PEP will continue to work with its stakeholders to accelerate positive change within the Palestinian energy sector.
SUMMARY OF PROGRESS

MAJOR ACCOMPLISHMENTS

COMPONENT 1
- Completed the HICD assessment process for PETL and PERC.
- Conducted stakeholder meetings with representatives from PENRA, PERC, DISCOS, the renewable energy industry, and financial sector representatives to assess the current net metering scheme.
- Completed training for eight engineers from PETL, NEDCO, and JDECO on ETAP simulation software.
- Procured grid modeling software for PETL.
- Conducted preliminary research on green financing and incentives that will help promote renewable energy financing within the West Bank.

COMPONENT 2
- Developed the “Net Metering Consumer Application Process – Assessment and Recommendations” report based on the current consumer application process and effectiveness along with recommendations for improvement to the net metering program for a selected demonstration project.
- Conducted a geographic-based data collection on non-technical losses to determine areas for improvement for revenue savings potential.
- Conducted an assessment for targeted DISCOs public relations departments to evaluate their current public relations approaches.
- Facilitated meetings with stakeholders from PERC, JEDCO and NEDCO to discuss their position concerning tariff, net metering and RE incentives.
- Completed Revenue Protection Workshop.
- Conducted “Performance Benchmarks Orientation Workshop” for West Bank DISCOs as part of an assessment to select DISCO to join JDECO for long-term HICD.

COMPONENT 3
- Launched the first RE Demonstration Project, titled “On-Campus Solar Array”, and signed a Memorandum of Understanding (MOU) with Palestine Polytechnic University (PPU).
- Finalized selection criteria for the RE Demonstration Projects.
- Developed RE Demonstration Project pipeline information.
- Initiated the procurement process for Solar PV systems for the On-Campus Solar Array at PPU.
- Designed awareness plans for PPU and Sharek Youth Forum RE demonstration project.
PROGRESS BY OBJECTIVE, COMPONENT, AND TASK

OBJECTIVE 1: IMPROVE THE ENABLING ENVIRONMENT FOR RE DEVELOPMENT

COMPONENT 1: BUILD PA ENERGY SECTOR INSTITUTIONAL CAPACITY TO SUPPORT INCREASED CLEAN ENERGY GENERATION AND GRID INTEGRATION

ASSIST PERC & PETL DEVELOP AND IMPLEMENT SUSTAINABLE HICD PLANS AND PROVIDE TRAINING AND OTHER ASSISTANCE

During the first year of the project, PEP succeeded in securing key partners’ commitment towards HICD engagement and activities. PEP also worked with the senior leadership of PENRA, PERC, and PETL to form HICD working groups for PERC and PETL. Several workshops were conducted to orient the working groups to the HICD process and methodology. This was followed by data collection and analyses for the five HICD criteria, which resulted in an evaluation report and training solutions package for PETL and PERC.

PEP continued implementation of the four steps of the HICD engagement process, including obtaining client commitment, orienting stakeholders, developing criteria and conducting assessments and develop performance solutions package with the four long-term HICD partners (PETL, PERC, JDECO, and NEDCO).

The progress in the first step of the HICD process included sharing the commitment documents with the HICD partners and soliciting them for their comments and feedback. PEP received the commitment document from PETL in June 2017.

In the second step of the HICD process, PEP developed organization evaluation criteria and supporting tools and metrics, called Key Performance Indicators (KPIs), for the five focus areas: Leadership, People, Knowledge, Processes and Finance. PEP customized the tool kit to align with the PA energy sector targets.

By the end of Year 1 and in support of the third step of the HICD process, PEP finalized the HICD assessment process for two of the long-term partners at PERC and PETL. The assessment included finalizing the data collection for the five focus areas: Leadership, People, Knowledge, Processes and Finance for each partner and developing the five final reports for PETL representing the assessment results, root causes underlying performance gaps and solutions package.

For PERC, PEP conducted one-on-one interviews to collect and process HICD assessment data into one final report, which included the assessment results, root causes underlying performance gaps and solution packages.

ASSIST PENRA AND PERC TO REFINE EXISTING NET METERING SCHEMES FOR SMALL RE UNITS

During Year 1, PEP supported the refinement of net metering schemes within the energy sector in order to lay the foundation for better adaptation of new sources of energy.

PEP reviewed the existing net metering scheme and conducted stakeholder meetings with representatives from PENRA, PERC, DISCOs, Engineering, Procurement and Construction (EPC) firms, the renewable energy industry, and financial sector representatives to assess the impact of the current net metering
scheme on various consumer classes and to identify specific issues and potential changes that will improve the scheme. PEP gathered the required data to refine the current schemes including laws, regulations, and incentives adopted by PENRA and the Palestine Investment Promotion Agency. During these meetings, all stakeholders raised concerns that the existing net metering scheme was not fully satisfactory to developers and consumers and required refinement in a number of areas, including storage penalties invoked by DISCOs and wheeling charges for transmitted electricity.

PEP summarized the position of each stakeholder and clarified specific requests from PENRA and DISCOs. These requests included performing analyses to specify the effect of net metering connections on DISCOs’ profit to determine the size of current revenue losses, and to specify a fair storage deduction percent for net metering and the effect of system size limitations.

**ASSIST PETL AND DISCOS TO DEVELOP A GRID INTEGRATION STUDY INCLUDING TRAINING AND ESSENTIAL TOOLS**

In Year 1, PEP procured grid modelling software for PETL and selected DISCOs. The US-based firm ETAP was selected as a sole source supplier of modelling electrical networks software due primarily to stakeholders’ previous experience with this specific network modelling application.

In July 2017, PEP completed a training workshop on ETAP Power System Analysis grid modelling software. Eight engineers from PETL, JDECO and NEDCO participated in a four-day training session at the ETAP center in Dubai. The workshop advanced the capacity of the engineers as it covered a variety of advanced power system solutions for generation plants, transmission, and industrial facilities. The training was aimed at assisting engineers in PETL and select DISCOs to manage conventional and renewable grid integration, load flow, loss of load, short circuit of the system and operational impacts on system reliability and stability. The workshop allowed the engineers to learn power system modelling and analysis using ETAP software; it will also enable them to apply their newly gained skills once they start using the ETAP software procured by PEP.

The participant engineers received final training test results of A+ and B+.
ASSIST THE PA TO DEVELOP INCENTIVES THAT WILL HELP SECURE FINANCING FOR RENEWABLE ENERGY INVESTMENTS

During this year, PEP continued to support the PA in developing incentives to secure financing for renewable energy investments. PEP participated in a workshop organized by the Palestinian Investment Promotion Agency (PIPA) on new incentives that were developed by the PA to promote the RE investments. PEP also met with the Middle East Investment Initiative (MEII) loan guarantee fund to discuss potential collaboration opportunities that could lead to creating new incentives and facilitation of investments in the renewable energy sector.

To secure buy-in from relevant ministries, private sector financial institutions, and other stakeholders, PEP conducted meetings with the Palestinian Monetary Authority (PMA), PENRA, European Palestinian Credit Guarantee Fund, and the Bank Association of Palestine. Based on the information gathered during these meetings, PEP initiated the establishment of a Green Finance Committee. The Committee will review relevant information, establish a work plan, and begin to develop recommendations for improving the financial landscape related to renewable energy financing. To achieve this, PEP recruited a Green Finance STTA to assist with the alignment of the main stakeholders’ requirements and PEP’s goals. The Advisor developed a draft report of the current local renewable energy financing landscape, global best practices, and an anticipated final report outline.

ASSIST PENRA AND DISCOS TO UNDERTAKE ASSESSMENTS AND STUDIES RELATED TO INTEGRATION OF VRE GENERATION

PEP provided preparatory support to PETL and select DISCOs to develop a grid integration study, which will include training and provision of essential tools. As distributed renewable energy is promoted and is used in increasing amounts by residential, commercial, and industrial customers, the DISCOs will need to address the issues related to the impact of additional supply on their distribution systems. During Year 1, PEP assessed the current grid operations and tools used by PETL and the DISCOs in grid modelling and analysis, after which the project procured the selected modelling software, ETAP. PEP then trained eight engineers from PETL, NEDCO, and JDECO on ETAP grid-modeling simulation software in Dubai and assisted PETL and select DISCOs with building capacity in grid operations and management.
Based on the HICD assessment and operational performance evaluation, PEP selected NEDCO to join the long-term HICD engagement after the evaluation indicated NEDCO as the most qualified DISCO. The evaluation was based on a set of criteria that included the number of customers, amount of electricity purchased, electricity sales revenues, aggregated technical and commercial losses, and availability of PENRA’s licenses to DISCOs. PEP submitted the assessment report to USAID for review and comments.

During this year, PEP also developed the HICD program for DISCOs to select a second DISCO to join JDECO for long-term HICD engagement. PEP followed the HICD methodology steps to identify training and development opportunities to strengthen the second DISCO’s commercial operations and assist with reducing commercial losses. While the same methodology will be used for both DISCOs, the identified capacity gaps and required interventions will be unique to each DISCO participant and specific HICD training plans will be developed in support of planned improvement goals.

In addition to the HICD assessment, PEP conducted the Performance Benchmarks Orientation Workshop for West Bank DISCOs to select the second DISCO to join JDECO for long-term HICD engagement. The benchmarking orientation and data collection workshop was the first workshop that gathered representatives from PERC, PETL, JDECO, NEDCO, Hebron Electricity Distribution Company (HEBCO) and Southern Electricity Company (SELCO) to discuss the operational performance of DISCOs and the role of PERC as a regulator for the PA power sector. The workshop assisted the DISCOs to better understand operational performance and the role that benchmarking can play in performance monitoring, comparing practices and identifying areas needing operational improvement. Twenty-two representatives from the power sector attended the workshop.

PEP also conducted a follow-up workshop on the performance benchmarks for DISCOs representatives that focused on data collection and validation, where participants reviewed Key Performance Indicators (KPIs) and data elements and gained a common understanding and interpretation of the KPIs and data quality. PEP provided further assistance for the DISCOs to collect and validate the data.
ASSIST DISCOS TO IMPLEMENT A NET METERING PROGRAM FOR SELECT RENEWABLE ENERGY DEMONSTRATION PROJECTS

During Year 1, PEP worked with PERC and the selected DISCOs to identify ways to streamline the consumer application process for net metering approval. Based on the review, analysis and development of recommendations, PEP finalized a report titled “Net Metering Consumer Application Process – Assessment and Recommendations”. The report included the results of data gathered to assess the current application process as well as recommendations on streamlining the application process. The report’s recommendations will assist PERC in developing appropriate policies to facilitate the net metering licensing process.

ASSIST TARGETED DISCOS TO STRENGTHEN COMMERCIAL OPERATIONS AND DEVELOP AND IMPLEMENT COST-EFFECTIVE AND SUSTAINABLE LOSS REDUCTION STRATEGIES

PEP utilized the HICD engagement to support the project’s technical goals for performance improvement with long-term partners by identifying organizational development gaps. While the same methodology is used for both DISCOs, the identified capacity gaps and required interventions will be unique to each DISCO participant and specific HICD training plans will be developed in support of planned improvement goals.

PEP conducted meetings with the DISCOs’ executive teams to establish mutual understanding of the HICD process and conducted an initial introductory assessment of NEDCO, TEDCO, and HEBCO to assist in the selection of one DISCO to join JDECO for a long-term HICD engagement.

PEP also worked on securing partner commitment and conducted orientation meetings with JDECO and NEDCO to present an overview of the project and obtain initial feedback regarding the program’s objectives, scope and tasks. The meetings included discussions on key issues required for the startup phase, as well as the training coordination and support necessary for developing the HICD baseline assessments.

PEP then developed a baseline performance assessment of the DISCOs to evaluate the current state and understanding of loss reduction. This allowed the project to explore and recommend potential loss reduction solutions.

As technical and non-technical losses are a major challenge facing the DISCOs, PEP
conducted a “Revenue Protection Workshop” to present solutions for reducing commercial losses. The workshop highlighted key topics such as the importance of loss reduction to system stabilization, the relationship among smart metering, metering and revenue enhancement, and billing and collections best practices, prepayment systems and new technologies.

During the three-day workshop, the participants shared their experiences and gained knowledge from international experts who presented best practices on strategies, technologies and techniques for improving distribution companies’ performance related to revenue protection management and customer service and how to proactively engage the community to achieve loss reduction targets. During the workshop, energy sector representatives from PENRA, PERC, PETL and DISCOs led sessions during which they presented their current practices and discussed best approaches to minimize the DISCOs losses and improve revenue.

ASSIST DISCOS TO REGULARIZE ILLEGAL CUSTOMERS AND INCREASE AFFORDABILITY OF SERVICES

During Year 1, PEP conducted a geographic-based data collection on non-technical losses to determine areas for improvement based on criteria that included the geographic area, customer type and revenue savings potential. Based on the findings, the project developed a report identifying the type and geographic distribution of illegal customers.

As part of the overall loss reduction efforts included in this task, PEP worked closely with the DISCOs to regularize illegal customers, increase the affordability of services to low income customers, and assist in deterring electricity theft. PEP also recruited a STTA to assist the DISCOs in developing loss reduction strategies. The STTA worked with the selected DISCOs to assist in identifying the type and geographic distribution of illegal customers, and will continue to work with the DISCOs to identify potential solutions, required steps, and any needed incentives to regularize each segment. The STTA will also help to determine areas for improvement based on criteria such as the geographic area, customer type and revenue savings potential. In order to collect data, PEP prepared a table and distributed it to all DISCOs to help in identifying the geographic areas with high fraud and low collection. PEP also developed a set of criteria to conduct an initial assessment of non-technical losses to determine areas for improvement. The criteria included the geographic area, customer type and revenue savings potential. PEP is working with partner DISCOs to finalize the criteria and approach to determine the best method of identifying, registering and entering these customers into the DISCOs’ billing system database. PEP also issued an initial assessment report on the types and geographic distribution of illegal customers in selected DISCO’s areas.

ASSIST DISCOS TO IMPLEMENT PUBLIC RELATIONS STRATEGY TO INCREASE CONSUMER ACCEPTANCE OF NEW COLLECTION AND LOSS REDUCTION STRATEGIES AND ACTIVITIES.

During Year 1, PEP conducted an assessment for targeted DISCOs public relations departments to evaluate their current public relations approaches. PEP also prepared a comprehensive report on current communications and outreach capacity of select DISCOs.

This assessment will assist PEP in designing capacity-
building plans for Public Relations (PR) employees, which will enable them to design and implement public relations strategies. The initial findings of the assessment indicated a need for extensive training for NEDCO’s PR employees to build their capacity in designing and implementing PR strategies to increase consumer acceptance of new loss reduction activities and to assist DISCOs to change consumer-paying behavior and support a reduction in commercial losses. The assessment of JDECO PR employees indicated that JDECO had only one PR employee and outsourced their PR activities to a firm.

ASSIST DISCOS TO ESTABLISH IMPLEMENTATION PLANS FOR INSTALLATION OF ADDITIONAL PRE PAID METERS AND SMART METERING SYSTEMS

As part of the overall loss reduction strategy for DISCOs, which includes activities to regularize illegal customers, PEP coordinated with other donors to help with the installation of additional prepaid/smart meters, which will improve collection rates and minimize non-technical losses. Through these coordination efforts, PEP learned that the World Bank had developed a comprehensive technical assistance program for DISCOs to install smart meters. The World Bank plans to invest $3.4 million into purchasing and installing smart meters and AMI system. PEP will continue to coordinate with the World Bank to prevent duplication of efforts.

ASSIST DISCOS TO UNDERTAKE GRID ANALYSIS AND IMPACT FOR COMMERCIAL RENEWABLE ENERGY PROJECTS

In order to enable the DISCOs to manage the flow of electricity, PEP continued to support the DISCOs’ ability to analyze and plan for an increase in grid-connected RE systems. In support of this, PEP finalized and developed the selection criteria for potential renewable energy demonstration projects and presented a shortlist of projects for modeling exercises to the selected DISCOs. This criteria will assist the DISCOs to understand the impact that a high percentage of RE would have on the grid, the grid stability and capacity to ensure safety and proper utilization of the power generated. In conjunction with the modeling exercises, the selected DISCOs will benefit from advanced training on grid modelling software and will test these new skills and knowledge by applying them to integrate commercial RE projects.

ASSIST DISCOS PREPARE FOR INTERACTIONS WITH THE REGULATOR ON TARIFFS AND RENEWABLE ENERGY INCENTIVES

During this year, PEP conducted a series of meetings with DISCOs, PERC, and PETL to identify and develop various renewable energy incentive schemes that will be incorporated into consumer tariffs rate applications. PEP worked closely with PERC, discussing their requirements regarding the refinement of the net metering scheme that will lead to more incentives for RE investments. PERC is currently concentrating on the net metering deduction rate, regarding the application process, PERC informed PEP that there are no complaints from customers about the application process and they have already prepared a guideline for the RE projects that are connected to the grid through the net metering system.

PEP continued to provide support to PERC by working on planning for a regulatory workshop that will be held during year 2. The workshop will assist PERC to better define its role as a regulator regarding tariff development, regulation enforcement, performance management of the sector, and customer advocacy. The workshop will also strengthen the capacity of DISCOs to advocate for and work with PENRA, PERC, and PETL on establishing and implementing new tariff and RE incentives.
OBJECTIVE 2: IMPROVE CAPACITY TO DELIVER AND UTILIZE DISTRIBUTED SOLAR PV AND/OR OTHER RENEWABLE ENERGY GENERATION

COMPONENT 3: PROMOTE THE BENEFITS OF SOLAR PHOTOVOLTAIC ELECTRICITY AND/OR OTHER RENEWABLE ENERGY GENERATION THROUGH THE DEVELOPMENT OF SUSTAINABLE DEMONSTRATION ACTIVITIES

PROVISION AND SUSTAINABLE OPERATIONS PLANS OF SOLAR PV SYSTEMS AND/OR OTHER RENEWABLE ENERGY SYSTEMS

During this year, PEP utilized three distinct approaches to identify potential RE demonstration projects; the approaches comprised of discovery meetings, a publicly advertised Request for Information (RFI), and strategic partnerships.

PEP met with senior members of Palestinian Polytechnic University (PPU), located in Hebron, to discuss issues related to biomass and solar initiatives. Also discussed was the possibility of using the university as a site model for a renewable energy demonstration project. Potential projects included rooftop PV installations that could reduce the university’s energy costs (up to 60%) with the energy savings costs being applied to renewable energy scholarships.

PEP continued to work on the provision of RE demonstration projects through a series of site visits and targeted projects with a potential for replication in specific market segments by demonstrating available technologies, ease of installation and maintenance. PEP visits to potential renewable energy demonstration project sites included Al-Najah University, Al Estiklal Public Park, and Ramallah Municipality Public Park. Each visit included an overview of the PEP program and discussion of renewable energy demonstration project application process criteria.

This year, PEP identified PPU as the recipient of the first RE demonstration project, which will consist of a solar PV project. PPU presented a solid proposal in building the awareness and promotion of education in renewable energy. PEP developed an action plan, implementation process and timeframe for the installation of this demonstration activity.

As a result of PEP’s approach in identifying RE demonstration projects through discovery meetings, PEP launched its first RE Demonstration Project, titled “On-Campus Solar Array”, and signed a Memorandum of Understanding (MOU) with PPU during a ceremony conducted at the University’s campus in Hebron.

This PPU RE demonstration project will include the utilization of the cost savings from the solar PV system to provide 200 scholarships for male and female RE students enrolled in RE programs for the next 10 years. In addition, the Solar PV System will be used as hands-on field training for staff, students, local
community and RE industry engineers. The system will generate approximately 380 MWh annually and save the PPU 50% of the electricity cost. The project will not only have the technical and financial benefits of PV solar system, but will also encourage institutions and individuals to adopt solar energy through awareness campaigns aimed to increase the understanding of RE benefits.

In addition, PEP released a Request for Proposals (RFP) to Engineering Procurement and Construction (EPC) firms and conducted an informational session to provide guidance to bidders. PEP then conducted a site visit during which the project provided necessary information to eleven EPC firms that will assist them with in developing technical and financial proposals. The site visit provided the EPC firms with a better understanding of the project location, implementation and installation process, the availability and access to roads, roof conditions, locations of the connection meters, types of generators available, circuit breakers, and other site details.

Through the second approach to building the RE demonstration project pipeline, PEP advertised an RFI to solicit potential projects. This application review process will enable PEP to evaluate a wide range of potential projects and develop a shortlist of projects and beneficiaries who will receive project support from USAID. The targeted beneficiaries will include projects from the government, the private sector, and public institutions which align with the project’s overall goals. In response to the RFI, PEP received over 100 applications for additional potential renewable energy demonstration projects. Applications were received from municipalities, industrial establishments, universities, private sector and civil society organizations.

PEP began evaluating the potential RE demonstration projects solicited through the RFI applications during the second half of Year 1. Through the evaluation process, PEP categorized the applicants into either low- or high-potential implementation projects. The high potential implementation projects will be marked according to the scoring criteria, and projects with the highest marks will be selected for implementation.

Regarding the strategic partnerships approach, PEP conducted several meetings with potential partners and large-scale developers that have a financial incentive to develop a RE market. PEP met with Gigawatt Global, the Union of Housing Cooperatives in Palestine, and the Palestinian Investment Fund. By following this approach, PEP will identify partners whose goals align well with the project’s strategic rationale to expand the market.

**DESIGN AND CONDUCT PUBLIC OUTREACH AND AWARENESS INITIATIVES**

In Year 1, PEP developed its internal and external communications protocols, which included developing the annual communications plan and key presentations on how public outreach and awareness initiatives will support the component three objectives. The goal of the communications strategy is to increase public awareness on the benefits of renewable energy to various consumer classes.

PEP also designed awareness and outreach plans for the On-Campus Solar Array RE demonstration project. The plan promotes the utilization of PV solar systems for electric power generation to increase awareness on cost effectiveness and reliability of the RE options as well as increase the demand for renewable energy systems.

Finally, PEP developed the project’s promotional material to be used for public events, and finalized the
design of printed folders that will be distributed to workshops participants, thus ensuring that the USAID identity has a high level of visibility.

**OBJECTIVE 3: ASSIST THE PALESTINIAN AUTHORITY IN ITS EFFORTS TO EXPAND OWNERSHIP AND CONTROL OF ITS ENERGY ASSETS**

**COMPONENT 4: BUILD PA INSTITUTIONAL CAPACITY TO OVERSEE THE COMMERCIAL AND OPERATIONAL ADMINISTRATION OF THE PALESTINIAN ELECTRICITY SECTOR**

**PROCURE AND INSTALL A BILLING SYSTEM TO GENERATE INVOICES AND TRACK BILLING INFORMATION FOR ENERGY USAGE**

As part of PEP’s assistance to PETL to fast track the procurement and installation of a billing system, PEP finalized the procurement documents for subcontracting with Experts Turnkey Solutions, a billing and ERP systems vendor, and conducted a meeting with USAID and PETL to finalize the subcontract SOW.

**ASSIST PETL IN ESTABLISHING AN ENERGY CONTROL CENTER TO OVERSEE THE TRANSMISSION SYSTEM**

In coordination with PETL, PEP formed a working group to assist PETL in establishing an energy control center to oversee the transmission system. The working group will review the consultants’ deliverables, facilitate site visits and data collection, suggest alternative solutions based on the group’s knowledge of political and security status, and provide final recommendations to PETL’s management for approval.

During this year, PEP recruited and mobilized two Control Center STTA Experts who traveled to the PEP field office to assist in the control center and SCADA design and requirements. During their assignment, the experts began preparation of a feasibility study to capture the system requirements and operational conditions to ensure that the control center operates in the most cost effective manner consistent with safety, quality, and operational standards.

**TRAIN SELECTED PENRA AND PETL STAFF ON SCADA SYSTEM USAGE AND SKILLS IN TRANSMISSION SYSTEM OPERATION AND DISPATCH**

To assist PETL in building their capacity to oversee the operational administration of the Palestinian electricity system, PEP recruited and mobilized a STTA Training and Development Consultant. The STTA conducted a needs assessment of current knowledge and understanding of SCADA systems operation. The STTA also submitted a draft training plan that will assist PETL in its efforts to develop a responsible and competent transmission organization capable of operating and maintaining a transmission system and the management of energy flow through the network.

**DONOR COORDINATION AND CONSULTATION**

During Year 1, PEP collaborated with donors, NGOs, international organizations and other USG-funded projects to ensure effective coordination and avoid duplication of efforts. PEP conducted several consultation meetings with the World Bank Group (WBG) to ensure coordination of work and to avoid any duplication in activities. The WBG shared a draft of their project activities with PEP that focuses on
assisting PENRA, PETL, PERC and DISCOs in the coming five years. PEP reviewed these activities to identify possible duplications. Following the review of the WBG Electricity Sector Performance Improvement Project (ESPIP) activities, PEP met with the WBG to discuss areas of support that may potentially be duplicate efforts between the ESPIP and PEP. Both projects reviewed their activities to seek ways of collaboration. WBG and PEP will continue cooperation efforts. PEP also conducted conference calls with the USAID Jordanian energy project Energy Sector Capacity Building (ESCB), which was joined by USAID Jordan, USAID West Bank and Gaza, project COPs, Washington-based USAID representatives, and technical staff. A number of issues were discussed regarding both projects, including grid modeling, renewable energy, VRE integration, and capacity building efforts. The ESCB project, which is in its final stages, provided a host of information and lessons learned applicable to the PEP program.

PEP participated in a collaboration meeting with USAID and the “Communities Thrive” project implemented by Tetra Tech to discuss possible technical cooperation between the two projects, particularly activities related to renewable energy, increasing collection rates, reducing revenue losses and PEP’s renewable energy demonstration activities.

PEP also attended PENRA’s Open Session on the Establishment of a New Electricity Market in Palestine along with the participation of several donor organizations working in energy and renewable energy sectors. The session highlighted USAID’s investment in the energy sector and addressed PEP’s ongoing activities to advance the Palestinian energy sector. Moreover, PENRA’s Chairman presented the new implementation plan and identified urgent needs for supporting PTEL’s transformation and the capacity building of staff of PENRA, PTEL and PERC.

Finally, PEP participated in the “Municipal Sustainable Energy Workshop”, sponsored by Cleaner Energy Saving Mediterranean Cities (CES-MED), an EU-funded initiative, which included an introduction on the Sustainable Energy Action Plans for municipalities and a discussion meeting for donors to explore opportunities on financing municipal projects. This workshop provided a opportunity for PEP to explore and expand the RE demonstration projects pipeline as well as gain knowledge on similar activities in the energy sector.

**GENDER, YOUTH, CONFLICT, AND SUSTAINABILITY ANALYSIS**

This year, PEP completed and submitted the Gender, Youth, Conflict, and Sustainability Analysis to USAID. The analysis provided literature on the links between energy access and the dimensions of gender, youth, conflict, and sustainability, and described and evaluated the available evidence on the linkages between gender and youth considerations in the energy sector in Palestine. This comprehensive analysis also provided insights to the issues related to the challenges that women, youth, and other marginalized groups face in the West Bank. PEP began incorporating the recommendations of the analysis in planning for
activities to provide special consideration to increase opportunities that would benefit women and youth as stakeholders within the energy sector.

**STATUS TOWARDS APPROVED INDICATORS**

N/A

**SUMMARY OF COMPLETED ACTIVITIES, REPORTS, AND DELIVERABLES**

| Completed staffing of Key Project Personnel | 
| Completed project orientations sessions to stakeholders | 
| Submitted First Year Work Plan | 
| Submitted First Year M&E Plan | 
| Completed Performance Benchmarking (KPIs) Manual | 
| Completed Grid Modeling Software Specifications and selection | 
| Completed Benchmarking Orientation Workshop for West Bank DISCOs | 
| Completed Assessments of all DISCOs to select second DISCO to join JDECO for long-term HICD | 
| Completed the procurement of ETAP Grid Modelling Software | 
| Submitted the final five HICD reports (Leadership, People, Knowledge, Processes and Finance) for PETL including the assessment results, root causes underlying performance gaps and solutions package | 
| Completed PERC’s final report including the assessment results, root causes underlying performance gaps and solution packages | 
| Completed the training of eight engineers from NEDCO, JDECO and PETL on ETAP modelling Software in Dubai | 
| Completed the initial assessment on “Type and Geographic Distribution of Illegal Customers” | 
| Conducted Revenue Protection Workshop for PA Energy Sector | 
| Developed and finalized RE Demonstration Project Selection Criteria | 
| Completed the Request for Information (RFI) for the RE Demonstration Projects | 
| Finalized a draft report on the status of green financing in the West Bank | 
| Finalized draft report titled “Net Metering Consumer Application Process – Assessment and Recommendations” | 
| Completed the Awareness Plan for First RE demonstration Project | 
| Released Request for Information (RFI) for RE Demonstration Projects | 
| Completed and submitted all Weekly, Monthly, and Quarterly Reports | 
| Completed Gender, Youth, Conflict, and Sustainability Analysis |
STTA OBSERVATIONS

The following is a summary of observations from STTAs who visited the PEP field office between October 2016 and September 2017:

Lee Sutton, AECOM Home Office Senior Advisor for Monitoring and Evaluation, traveled to Ramallah in November 2016 to draft the PEP M&E Plan. The primary deliverable for this trip was the PEP M&E Plan. Unfortunately, due to the timing of the trip and delays in key personnel onboarding, the Chief of Party was the only project staff member working on the project during the visit. Additionally, it was determined that the previously-identified project M&E Specialist has a conflict of interest and could no longer work on the project. While less than ideal, Ms. Sutton worked with the COP to draft the M&E Plan and met with USAID to discuss the M&E Plan, in particular the project indicators. Being able to work directly with the COP and having an in-person meeting with USAID was extremely helpful during the process of drafting the M&E Plan.

Amy Watve, PEP’s HICD Training Specialist, traveled to Ramallah from March 2017 to provide the field staff with expert HICD assistance. During her trip, Ms. Watve enhanced the PEP team members’ HICD capacity through training and discussion on the HICD framework, methodology, and philosophy. She also provided support to the PEP HICD Specialist to finalize overall approach and draft tailored HICD implementation plans for target organizations, including target timelines, deliverables, and required resources, based upon initial information collected from the target organizations, and developed a draft HICD assessment tools for target organizations to be finalized by the HICD Specialist. Finally, Ms. Watve conducted meetings with HICD working groups within target organizations to introduce the PEP HICD approach, planning, initial toolkit, and next steps for working teams. She also attended strategic meetings with target organizations, PA, USAID, or others, as needed to support HICD introduction and implementation planning.

Dina Scippa, AECOM’s Home Office Senior Energy Advisor, visited the PEP field office in April 2017. During her trip, Ms. Scippa worked to complete the Gender, Youth, Conflict, and Sustainability analysis to guide implementation efforts to effectively address gender and social inclusion considerations throughout the project life cycle. Over the course of her assignment, Ms. Scippa and the project’s local Gender Specialist met with nearly 15 different stakeholder organizations to collect primary data on perspectives and opinions to the most pressing challenges related to access and participation in the renewable energy sector, and what those differences may be between men and women. Interviews also focused on what constraints exist regarding sustainability and how to mitigate any potential negative consequences brought on by improved access to renewable energy across the West Bank. Ms. Scippa also worked with the local Gender Specialist to provide guidance on how to support the PEP project on tasks related to addressing gender and youth considerations. She spent time speaking with the project’s HICD Specialist to determine how gender could feature prominently in stakeholder organizations’ sustainability assessments and plans. Finally, Ms. Scippa conducted a training for the PEP team on the importance of gender and social inclusion considerations in the context of the PEP project, by using the AECOM-tested Gender and Social Inclusion Training Module.
STATUS OF BUDGET EXPENDITURES

PEP spent $1,302,880.33 from October 2016 through September 2017.

PROBLEMS, DELAYS, AND ADVERSE CONDITIONS
N/A

M&E PLAN DEVELOPMENT / GEO-MIS ATTACHMENT REFLECTING PROGRESS AGAINST INDICATORS

PEP has not received an approved M&E plan from USAID as end of this reporting period. In this regard, FY1 activities /tasks will be reflected into Geo-MIS immediately once USAID approves the project’s M&E Plan and the matrix of activity indicators is opened on Geo-MIS by their team.

Towards the end of May in Year I, PEP’s M&E Specialist joined the team as a full-time resource. During this period, PEP accomplished the following:

- Developed M&E templates for data collection per each indicator, including sign-in sheets for training/workshops, events checklists, in-country training, third country training, field visit, STTA);
- Drafted and submitted Project M&E Plan to USAID review and approval;
- Submitted Indicators for Project M&E Plan to USAID review and approval;
- Developed and updated work plan activities for FY2 on Microsoft Project; and
- Uploaded all officially submitted project reports to USAID on Geo-MIS, including monthly and quarterly reports as well as the project’s overall goals and achievements.

TraiNet

TraiNet reporting requirements are up to date

STATUS OF REQUIRED AUDIT PROCESSES
N/A