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# JORDAN ENERGY SECTOR CAPACITY BUILDING ACTIVITY QUARTERLY PERFORMANCE REPORT

QUARTERLY REPORTING PERIOD  
From October 1-December 31, 2013

January 19, 2014

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JORDAN ENERGY SECTOR CAPACITY BUILDING ACTIVITY

CONTRACT NUMBER: AID-OAA-I-13-00018

TASK ORDER NUMBER: AID-278-TO-13-00003

DELOITTE CONSULTING LLP

USAID/JORDAN ENERGY OFFICE

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# CONTENTS

<b>TABLE OF ACRONYMS</b> .....	<b>II</b>
<b>EXECUTIVE SUMMARY</b> .....	<b>1</b>
<b>TASK 1: DESIGN A UTILITIES INCENTIVE MECHANISM TO PROMOTE ENERGY EFFICIENCY</b> .....	<b>3</b>
KEY ACCOMPLISHMENTS .....	3
CHALLENGES/SOLUTIONS.....	11
ACTIVITY FORECAST.....	11
<b>TASK 2: BUILD CAPACITY OF THE ENERGY SECTOR</b> .....	<b>12</b>
KEY ACCOMPLISHMENTS .....	12
CHALLENGES/SOLUTIONS.....	13
ACTIVITY FORECAST.....	13
<b>TASK 3: DEVELOP ENERGY SERVICES ASSOCIATION(S)</b> .....	<b>14</b>
KEY ACCOMPLISHMENTS .....	14
CHALLENGES/SOLUTIONS.....	14
ACTIVITY FORECAST.....	15
<b>TASK 4: RESPOND TO ENERGY SECTOR OPPORTUNITIES</b> .....	<b>16</b>
KEY ACCOMPLISHMENTS .....	16
CHALLENGES/SOLUTIONS.....	16
ACTIVITY FORECAST.....	16
<b>CROSS-CUTTING AREAS: GENDER &amp; INCLUSION</b> .....	<b>17</b>
KEY ACCOMPLISHMENTS .....	17
ACTIVITY FORECAST.....	17
<b>PROJECT MANAGEMENT AND OPERATIONS</b> .....	<b>18</b>
KEY ACCOMPLISHMENTS .....	18
CHALLENGES/SOLUTIONS.....	19
<b>PERFORMANCE MONITORING</b> .....	<b>20</b>
<b>APPENDIX</b> .....	<b>23</b>
STTA PROVIDED DURING THE QUARTER .....	23
PROJECT INVENTORY LIST .....	24
SAMPLE VEHICLE LOG .....	28

## TABLE OF ACRONYMS

Acronym	Term
<b>AFD</b>	Agence Française de Développement
<b>ASE</b>	Alliance to Save Energy
<b>CFL</b>	Compact Fluorescent
<b>DSM</b>	Demand-side Management
<b>EBRD</b>	European Bank for Reconstruction and Development
<b>EDCO</b>	Electricity Distribution Company
<b>EE</b>	Energy Efficiency
<b>ERC</b>	Electricity Regulatory Commission
<b>ESCB</b>	Energy Sector Capacity Building Activity
<b>ESCO</b>	Energy Service Company
<b>ESP</b>	Energy Service Provider
<b>EU</b>	European Union
<b>GCC</b>	Global Climate Change
<b>GoJ</b>	Government of Jordan
<b>IDECO</b>	Irbid District Electricity Company LTD.
<b>IFC</b>	International Finance Corporation
<b>IM</b>	Incentive Mechanism
<b>IPP</b>	Independent Power Producer
<b>JEPCO</b>	Jordan Electric Power Company
<b>JESPA</b>	Jordan Energy Service Providers Association
<b>JREEF</b>	Jordan Renewable Energy and Energy Efficiency Fund
<b>JSMO</b>	Jordan Standards and Metrology Organization
<b>KEC</b>	Kingdom Electricity Company
<b>KW</b>	Kilowatt
<b>KWh</b>	Kilowatt hours
<b>MEMR</b>	Ministry of Energy and Mineral Resources
<b>MEV</b>	Measurement, Evaluation and Verification
<b>MLIs</b>	Multi-Lateral Institutions
<b>MoE</b>	Ministry of Environment
<b>MoF</b>	Ministry of Finance

<b>Acronym</b>	<b>Term</b>
<b>MoPIC</b>	Ministry of Planning and International Cooperation
<b>MoPWH</b>	Ministry of Public Works and Housing
<b>M&amp;V</b>	Measurement and Verification
<b>NARUC</b>	National Association of Regulatory Utility Commissioners
<b>NEEAP</b>	National Energy Efficiency Action Plan
<b>NEPCO</b>	National Electricity Power Company
<b>NGO</b>	Non-Governmental Organization
<b>RE</b>	Renewable Energy
<b>RFTOP</b>	Request for Task Order Proposal
<b>RT</b>	Reform Timetable
<b>SC</b>	Steering Committee
<b>STTA</b>	Short-Term Technical Assistance
<b>TBD</b>	To be determined
<b>TTC</b>	Technology Transitions Company
<b>UNEP</b>	United Nations Environment Program
<b>UNDP</b>	United Nations Development Program
<b>USAID</b>	United States Agency for International Development
<b>USTDA</b>	United States Trade and Development Agency
<b>WB</b>	World Bank
<b>WG</b>	Working Group

## EXECUTIVE SUMMARY

The Energy Sector Capacity Building Activity (Contract # AID-OAA-I-13-00018, Task Order # AID-278-TO-13-00003) achieved significant milestones during the period October 1 – December 31, 2013.

Under Task 1, ESCB kicked off and publicly announced the DSM incentive mechanism design process at the beginning of October. ESCB supported the formation of the Steering Committee, three Working Groups and two task forces. The Steering Committee approved the DSM Incentive Mechanism Action Plan and endorsed the Working Groups. Each Working Group agreed upon their function, and the Steering Committee and all Working Groups held regular meetings.

Legal, regulatory and technical consultants developed a workable framework for the regulation of the DSM Mechanism. The project team acquired most of the data needed to develop the DSM incentive mechanism. In addition, two task forces were formed (financial and the load survey), and both task forces have started their work.

ESCB mobilized an international consultant to provide technical assistance to NEPCO in Integrated Resource Planning. ESCB staff developed two scopes of work for international consultants in response to technical assistance needs identified by NEPCO: renewable energy grid code integration and a cost-of-service study.

The project team is developing a financial model that will be a shared analytic tool supporting development and evaluation of alternative DSM measures and program designs. The financial model development proceeded with the international and local consultant team inputs; the financial model was used to conduct a preliminary assessment of DSM programs.

An expert on financing clean energy was mobilized to provide support in several crosscutting areas including DSM financial incentives for delivery agents and program participants; developing robust assumptions for evaluating the cost-effectiveness of DSM programs; and alternative business models for private sector led energy efficiency.

Under Task 2, ESCB fielded a short-term consultant to initiate the Capacity Building Action Plan together with the local consultant team using Deloitte's CYPRESS methodology. The team developed an interview protocol and held consultations with technical staff from the ERC regarding their technical, non-technical, and organizational capacity building needs. Consultations and interviews were also held in the four departments from MEMR whose work impacts the provision of a DSM program. The Capacity Building Action Plan was nearing completion at the end of the quarter.

ESCB conducted an assessment for JSMO on establishing a lighting testing lab facility, focusing specifically on the lab's specifications and tendering process, accreditation process, infrastructure, location, equipment needed to operate the lab, and capacity building required in order to properly run it. Recommendations were made to USAID for further options to support of the lighting testing facility.

Under Task 3, ESCB drafted and fielded the ESCO survey, compiled responses and produced the ESCO Survey report. The Task 3 team initiated the ESCO market assessment report that is being conducted by a local consultant. ESCB fielded an international expert in association formation and capacity-building to assess the options for an Energy Service Providers association.

USAID identified preliminary activities for Task 4, and selection criteria were defined for selecting activities. ESCB provided comments on a preliminary scope of work for installing solar PV on two government buildings. Since Task 4 is demand-driven, specific activities need to be requested by USAID and counterparts.

An Inclusion Plan, including a Gender Action Plan, was developed for ESCB. It comprises an assessment of the current gender issues in the energy sector and recommendations for gender and disability inclusion activities across ESCB project tasks. A short workshop on gender issues and approaches was held for ESCB staff and USAID gender staff.

ESCB submitted and received approval for the 1<sup>st</sup> Year Work Plan and the Performance Monitoring Plan. Long-term project staff was finalized with USAID approvals, and local staff contracts have been executed. The ESCB project staff moved into the project office and established the necessary infrastructure to be fully functional.

Several events were held to publicize ESCB and USAID:

- Kickoff event at the Bristol Hotel for Task 1 'Design a Utilities Incentive Mechanism to Promote Energy Efficiency' on October 3, 2013
- Kickoff event at the Ritaj Hotel for the Working Group meetings on October 7, 2013
- Kickoff event at the Century Park Hotel for Task 3 '*Develop Energy Services Associations*' on October 23, 2013
- Presentation of ESCB at EDAMA Power Breakfast on October 28
- Submitted ESCB updates for monthly USAID publication
- Met with USAID Communications team to review Mission communications policies and protocols
- Presented an ESCB briefing for US Ambassador Jones (October 3) and for a Mission-wide audience (November 12)

## TASK 1: DESIGN A UTILITIES INCENTIVE MECHANISM TO PROMOTE ENERGY EFFICIENCY

AT-A-GLANCE SUMMARY	
Top 4 Achievements	Priority Next Step Activities
<ul style="list-style-type: none"> <li>• The DSM incentive mechanism design process was publicly launched</li> <li>• The Steering Committee, three Working Groups, and two task forces have been established and are meeting regularly</li> <li>• The Steering Committee endorsed the Reform Timetable and the Action Plan</li> <li>• A draft concept for the DSM incentive mechanism was completed</li> </ul>	<ul style="list-style-type: none"> <li>• Garner endorsement of the ERC and Steering Committee on the DSM incentive mechanism</li> <li>• Initiate utility load research</li> <li>• Conduct customer consultation sessions</li> <li>• Develop the legal and regulatory instruments to support the DSM mechanism</li> <li>• Complete the design of the financial model to test the proposed programs</li> <li>• Define a structure for the EE unit within each utility and define its functions</li> <li>• Design a more detailed incentive mechanism including EM&amp;V</li> </ul>
Primary Implementation Barriers	Proposed Changes to Work Plan
<ul style="list-style-type: none"> <li>• Recent resignation of the ERC Chief Commissioner has left the ERC without the full quorum needed to obtain regulatory approval of the incentive mechanism</li> <li>• Lack of end-use load data</li> </ul>	<ul style="list-style-type: none"> <li>• Schedule will be delayed due to the need to present the DSM incentive mechanism to the ERC Council of Commissioners and to utilities' Board of Directors</li> </ul>

### Key Accomplishments

#### *Progress made towards fulfillment of the project's results*

During this past quarter, ESCB supported the formation of the Steering Committee (SC) and all three Working Groups (WGs).

In addition, ESCB kicked off and publicly announced the DSM incentive mechanism design process at the beginning of October in a presentation that included all of the Working Groups. The Steering Committee approved the DSM Incentive Mechanism Action Plan and endorsed the Working Groups. Each Working Group elaborated on and agreed upon their function, and the Steering Committee and all Working Groups held regular meetings.

Legal, regulatory and technical consultants developed a workable framework for the regulation of the DSM Mechanism. This framework will provide a foundation for the development of all legal and regulatory instruments required to implement the DSM Mechanism.

The project team has since acquired most of the data needed to develop the DSM incentive mechanism. In addition, two task forces were formed (one on financial, and one on the load survey). Both task forces have started their work.

## Summary of Progress Towards Design of the DSM Incentive Mechanism

### *ESCB Team*

- Launched DSM incentive mechanism design process in a meeting that included all Working Groups (October 7)
- Prepared and submitted a DSM incentive Mechanism Year 1 Action Plan to the Steering Committee for approval
- Supported periodic meetings of the Working Groups, particularly in increasing knowledge of Working Group members on DSM mechanism options
- Mobilized two local consultants to initiate work on the electricity load survey
  - Developed load survey plan
  - Initiated questionnaire design
- Mobilized an expert in financial analysis and modeling; obtained most of the data required to develop the financial model
- Identified the technical assistance required by NEPCO and subsequently mobilized an integrated resource planning expert
- Conducted an analysis of the legal and regulatory issues raised by the proposed DSM Mechanism
- Drafted a workable legal and regulatory framework for the implementation of the DSM mechanism
- Each Working Group developed Action Plans for the first phase of the program

### *Critical Stakeholders*

- The Steering Committee held two meetings, where it approved the project development Work Plan and endorsed the Working Groups and their chairs

## Summary of Steering Committee (SC) Meetings

The Steering Committee held two meetings during the quarter; the discussion and results are summarized below.

### *October 23, 2013*

The Steering Committee was established in October 2013, and the first SC meeting was held on October 23, 2013. In this meeting, the ESCB team proposed a structure and design process to reach an agreement on the incentive mechanism. Furthermore, the ESCB team presented the roles and responsibilities of the Steering Committee, working groups, and task forces. Finally, the ESCB recommended that ERC, NEPCO, and the three distribution utilities assign qualified and dedicated employees as members of the WGs, emphasizing the need for a strong champion.

A summary of the key decisions made during this initial Steering Committee meeting are outlined below:

- The SC agreed on the structure of the Working Groups
- The SC provided directions regarding on how the three Working Groups should communicate and coordinate their activities, and how the ESCB team will ensure such coordination and communication
- Working Groups are not decision-making bodies; thus, all results will be presented to the SC

- ESCB will have a stakeholder group that will be a consultative in nature, not a decision-making group
- JREEEF will be involved in ESCB activities as a financing arm
- The SC discussed and approved the draft action plan, subject to changes as needed

### *November 28, 2013*

The second SC meeting was held on November 28, 2013. HE Minister Hamed of MEMR chaired the meeting. During the meeting, the SC members provided their written approval on the following materials, marking significant progress:

- Minutes of the October 24 Steering Committee Meeting
- Framework for developing the DSM Mechanism
- DSM Incentive Mechanism Action Plan
- Written assent by the Steering Committee members to the DSM Incentive Mechanism Development Framework and Action Plan

The ESCB team presented five potential funding mechanisms (listed below) and invited the Steering Committee members to comment on the proposed funding sources and to suggest other ideas:

1. Reprogram a portion of the Rural fills flow
2. Create a distributor DSM portal in JREEEF
3. DSM surcharge on retail sales
4. Surcharge on new revenues flowing from the 2013-2017 tariff increases
5. Commercial lending to distributors

ESCB and USAID shared these options with the Steering Committee with the objective to identify the legal, institutional and technical impediments of using any of the suggested funding mechanisms. Furthermore, the project team and USAID underscored the importance of having a sustainable funding mechanism that would be available now and for years to come. During the discussion, the ESCB team received signals from some SC members in support of JREEF as potential funding tool. HE the Minister agreed to hold a meeting with the relevant persons in MEMR responsible for JREEEF. The ESCB team subsequently obtained HE the Minister's support for targeting low consumption customer groups where energy savings can have the greatest benefit.

### **Working Group Meetings Held**

Prior to the formal convening of the Steering Committee, the working groups were invited to a meeting to introduce ESCB and the DSM Incentive Mechanism design process. Following formal approval of the Working Groups structure by the Steering Committee, each of the working groups met twice during the quarter.

Working Group	Date	Location	Total number of attendees	
			Male	Female
Regulatory	28 Oct 2013	ERC	12	1
NEPCO	29 Oct 2013	NEPCO	12	2
DISCO	26 Nov 2013	IDECO	10	1
Regulatory	27 Nov 2013	ERC	9	2
NEPCO	3 Dec 2013	NEPCO	4	7
DISCO	7 Jan 2014	IDECO	7	2

## Regulatory Working Group

The Regulatory Working Group was formed in early October. The Steering Committee endorsed these members and the Chair during their November meeting. The regulatory working group held two meetings during the quarter. A third meeting was scheduled for December 16, however it was cancelled due to the weather.

The first regulatory WG meeting was held on October 28, 2013. The Working Group (WG) meeting was chaired by Commissioner Wejdan Al Rabadi. In this meeting, ESCB explained the responsibilities of the Working Group and the hierarchy of the committees and the Steering Committee, i.e. that the SC provides direction to the working groups and ensures satisfactory progress towards the implementation of a DSM incentive mechanism.

ESCB discussed the difficulties faced in finding updated data on household's energy consumption and the need for better end-use data. Commissioner Wijdan suggested conducting a residential load survey designed in a comprehensive view to get accurate analysis for energy consumption and to distinguish the seasonal energy consumption (winter vs. summer).

During the meeting, ESCB team provided an illustration of how to analyze financial aspects of the DSM scheme. The refrigerator scheme was presented as an example and opened a more comprehensive discussion on refrigerators as a favored target to achieve energy efficiency. Working group members agreed that refrigerators are among the top electricity consuming appliances to consider. ESCB pointed out that significance of savings depends on the efficiency of the replaced refrigerators and size of the program. The load survey will help to identify both the number and type of refrigerators that could be eligible for replacement. It was agreed that consumers with a high electricity bill are incentivized by lowering their bill, but users with low bills need different incentives as the payback period will be longer for them.

The second regulatory WG meeting was held on November 27, 2013. The working group meeting focused on legal and regulatory aspects of what constitutes a core business under the Electricity Law and the distribution company licenses. The following activities were brought up in the discussion to clarify what could be considered a DSM core business for the utilities:

- **Peak shaving activities** can be considered a core activity as they reduce the need for peaking generation and lower the costs of service to all consumers. ERC has attempted to develop peak shaving programs and tariffs in the past by changing the hours of the peak times. However, medium industrial customers connected with DISCOs did not like this approach and they fought back.
- **Loss reduction activities** can be considered a core activity as losses increase costs for all customers and amount to a 100% subsidy for those diverting electricity. In many countries non-technical loss reduction activity is often carried out by the same specialists who do the DSM programs. There is a study, to start soon, funded by the distributors to look at the losses (technical and non-technical) and suggest possible solutions.
- **Reducing the consumption of highly-subsidized consumers** can be considered a core activity, because by reducing subsidy outflows it will reduce the bills of all customers. It will also help low-income customers to afford their electricity bills and prepare for a possible increase in rates after 2017

In this meeting, the ERC pointed out the efforts in the past regarding customers who might benefit from time of use rates or demand charges. ERC studied large hotels, which used to be on flat tariffs, to understand the peak demand incidence and opportunity for peak shaving. Unfortunately, not many hotels placed on the TOU tariff have been able to shift their on-peak

usage and save on their bills. However, at a later stage, ERC introduced TOU tariffs (+demand charges) for large hotels (4 stars and above) such that those who were connected before the introduction of the tariff have the option of moving to the TOU but hotels connected after the introduction of the new tariff have to be billed according to the TOU tariff in effect.

The ERC brought up that among the criteria for approving any core or non-core DSM activity is that the activity should not adversely affect the core business.

### **Distributor Working Group**

The Distributor Working Group was also formed in early October. The members elected to rotate the meeting venue between the distributors' offices. Similarly, the chairmanship will rotate between distributors CEOs. The Steering Committee endorsed these members and the Chair during their November meeting.

The Distributor WG held two meetings during the quarter. The first meeting was with the other two WGs, where the ESCB team presented the activity and identified each Working Group's scope of work and meeting schedule. During the second meeting, the ESCB team presented the end use load survey implementation plan, proposed a WG action plan, and made a case to establish an EE unit in each of the utilities.

ESCB's Dr. Fawaz Al Karmi presented the load survey plan and explained the role of the Distributor WG in conducting the load survey research. Dr. Karmi estimated that each utility would need to assign two crews of two persons each for two months to conduct the survey.

The WG expressed concern about the difficulty of dedicating this much manpower to the load survey effort. Despite this concern, Chairman Mr. Thainat expressed his support and noted the benefits to the distributor staff from engaging in this task and the capacity building that they will acquire to perform such studies independently in the future

The ESCB team also presented the importance of establishing an Energy Efficiency Unit in each utility. The WG agreed on the importance of establishing a permanent unit in each distributor to conduct such studies, and suggested that the ESCB express their support for such a plan to the ERC.

All three distributors agreed to submit a proposal and budget for such an EE unit to the ERC. Pending formal ERC approval, the WG agreed that each utility would reassign some of their working staff to be devoted to form a virtual EE unit, and those people should be the core for a larger permanent EE unit in each utility. JEPSCO reported that it has already established such a virtual DSM unit.

The WG requested ESCB/Dr. Fawwaz to explain the methodology of designing the questionnaire and the importance of each question. Dr. Fawwaz subsequently conducted a meeting in each of the three distribution companies in the presence of the statistical expert to provide this capacity building.

The ESCB team requested the cooperation of the distributors in the following areas:

1. WG is requested to provide comments on the load survey questionnaire. This is an opportunity for the utility staff to acquire experience before meeting with ESCB statistical experts Dr. Fawwaz and Dr. Nsour, to explain designing the load survey questionnaire and load survey sample.
2. Each distributor is to respond to customer billing data requests, if not yet completed.
3. ESCB team needs access to the details of Annexes 5, 6 and 7 of the distributor licenses. These annexes contain the description of core and non-core business for each of the distribution companies. The ESCB legal and regulatory team continued to be in touch with the utilities to go over these details in person.

### **NEPCO Working Group**

The NEPCO Working Group was established, with members and a Chair, in early October. The Working Group agreed they would meet biweekly and at NEPCO. The Steering Committee endorsed these members and the Chair during their November meeting.

The NEPCO WG held two meetings during the quarter. The first meeting was with the other two WGs, where the ESCB team presented the activity and identified each Working Group's scope of work and meeting schedule. The second meeting was held on November 12, 2013, where NEPCO's needs for capacity building and technical assistance were discussed. Specifically, the Working Group identified the following areas for technical assistance:

- Integrated resource planning (IRP)
- Addition in the grid code to accommodate PV projects, and review of the existing articles related to wind projects
- Cost-of-service calculations

### **Technical assistance for NEPCO**

NEPCO requested technical assistance in understanding how to integrate demand-side programs into power sector planning, as well as how to refine its forecasting and power sector planning to integrate DSM and renewable energy into future power requirements.

To provide some of this technical assistance, ESCB mobilized an international expert in Integrated Resources Planning, Mr. Sasan Salem from December 2-20, 2013. During this period, Mr. Salem organized four meetings:

- NEPCO WG meeting – Mr. Salem presented the Integrated Resource Planning (IRP) concept, the domains that can be included in IRP, and how it assists utilities in avoiding duplication of work and save resources. He described the steps and technical elements to create an IRP program and pointed out the typical objectives, benefits and the importance of DSM and renewable resources of an IRP in general. NEPCO is eager to begin the IRP process.
- The second and third meetings were on Dec. 5, 2013 in NEPCO National Control Center and the other meeting in NEPCO HQs. Both meetings were to solicit data and recognize NEPCO resources in planning and other functions.
- ERC meeting to understand the procedures adopted by the ERC in calculating tariffs and conducting forecasts.

Mr. Salem also prepared materials for a workshop on IRP to utility, MEMR, and ERC staff. However, the weather conditions that prevailed in the country on the planned workshop day prevented him from conducting the workshop

NEPCO has also requested that ESCB assist in developing a new chapter in the Transmission Grid Code to address solar PV. Articles already exist in the Code on wind energy, but they do not address planning and operational aspects of integrating variable renewable energy sources. ESCB agreed to mobilize an expert in renewable energy grid integration to work with NEPCO on these issues, and to support development and improvement of the transmission code chapters covering renewable energy.

Finally, NEPCO also requested technical assistance in the review and revision of their tariffs to reflect the seasonal differences in peak demand hours, and to increase the price signal to encourage direct serve customers to shift load away from peak hours or pay more for their

peak demand. ESCB described the procedure known as a cost-of-service study that would establish a cost duration curve for NEPCO. USAID/ESCB agreed to identify and mobilize a consultant to undertake a cost-of-service study followed by a review of the current tariff structure with the intention of making improvements encouraging peak demand reduction.

Based on these requests, ESCB team prepared two scopes of work for short-term technical assistance to mobilize experts in these areas. The scopes of work were discussed with the NEPCO team in a meeting that was held in the National Control Center on Dec.24, 2013. More discussion on these two tasks extended a few days more into the next quarter to identify NEPCO's exact needs.

### **Legal and Regulatory Barriers Task Force**

The project contracted a local regulatory expert, Dr. Imad Nejdawi, and a local legal advisor, Attorney Tala Al Mauge. The ESCB project also mobilized an international legal consultant, Robert Taylor. The legal team has conducted several consultative meetings with the ESCB team to take directions and to agree on the work plan.

In December, the local legal and regulatory team consisting of Tala Al Mauge and Imad Nejdawi carried out bilateral consultation sessions with both the regulator and the distributors. The purpose of these sessions was to gather information needed to evaluate the current legal and regulatory framework governing the activities and relationship / license agreement between the regulator and the distributor, and to identify any possible complexities that might affect the implementation of a DSM program.

The consultation activities were intended to generate general feedback on the possibility and acceptability of adopting a specific incentive mechanism that promotes energy efficiency and to identify the possible legal and regulatory barriers that might affect the progress of a DSM program. These meetings and consultations will continue in the next quarter of the project in order to collect further feedback governing and affecting possible DSM programs.

### **Load Survey Task Force**

The project mobilized a local consultant, Dr. Fawwaz Al Kharmi, and a statistical expert, Mr. Fathi Nsour, to work on this activity. Dr. Fawwaz prepared a Load Survey Plan and presented it to the Distributor Working Group in the meeting held in IDECO. A Load Survey questionnaire was provided as an attachment to the plan. Dr. Fawwaz in his presentation of the plan, went through the questionnaire with the Distributor WG and received feedback.

Based on a request from the Distributor WG, the load survey experts and Jamal Arja from Task 1 also held three separate meetings with delegates of the three utilities to the load survey task force and distributor WG; one in IDECO Irbid and two others in Amman with JEPSCO and EDCO. The meetings aimed to provide capacity building in questionnaire design and to get the distributor's feedback on the same. The questionnaire was amended as per the feedback received from the participants.

Based on ESCB request, the Load Survey experts provided an interim report in which they provided acknowledgement to the scope of work and objectives of the load survey and provided their methodology to conduct and analyze the load survey.

### **Financial Model Development**

ESCB is developing a financial model that will be a shared analytic tool supporting development and evaluation of alternative DSM measures and program designs. A DSM Financial Analysis Modeling Task Force was established with members from the Distributors, NEPCO, and ERC. The ESCB team presented the financial model development process at an

initial meeting held on November 11, including early results from a rudimentary version of the model prepared by Deloitte analysts.

The ESCB team also collected participants' suggestions on improving the model, and revised the model taking into consideration these suggestions. The second version includes individual models for each DSM measure – residential lighting replacements, refrigerator rebates and replacements, washing machines, and solar water heaters. These models were useful in projecting the impacts of DSM measures and selecting which DSM measures were most cost effective for Jordan.

A third and final revision of the financial model began in December 2013 with the participation of an international financial modelling expert, Mark Germer, who has extensive previous experience in building commercial DSM analysis models. The current version of the model, which ESCB will deliver to Distributors and the ERC in February 2014, will be a single model covering all DSM measures and all distributors. It will incorporate the flexibility to process any DSM measure for all customer classes. It will also allow analysis of the aggregate effects of DSM programs on rates and on loss reduction. Once completed, the international expert will return to Jordan to deliver the model to the distributors and train distributor staff on how to use the model to prepare their DSM proposals to the ERC. Future updates, support, output verifications, and training on the model will be done by the ESCB staff.

### **Incentive Mechanism Financing Scheme Development**

A well-known expert on financing clean energy, Mr. Dilip Limaye, was mobilized to provide advice and support in several cross-cutting areas. These included:

- DSM financial incentives for delivery agents and program participants
- Developing robust assumptions for evaluating the cost-effectiveness of DSM programs
- Bringing DSM experience from other developing economies to bear on programs in Jordan
- Alternative business models for private-sector led (e.g., commercial) energy efficiency

During his December visit, Mr. Limaye helped assess alternative approaches for a refrigerator replacement program, provided information on IRP approaches proven effective in other developing economies (Thailand and the Philippines), alternative approaches for DSM incentive mechanisms for DSM programs, suggestions for improving the DSM financial analysis model, and suggestions on establishing a diverse and robust ESCO industry in Jordan.

A key element of Mr. Limaye's visit was a Power Breakfast with private sector entities including distribution utilities to present and discuss options for them to engage in and benefit from energy efficiency implementation using the energy services model. Mr. Limaye prepared a presentation on this topic that included the following:

- Why private sector-led energy services?
- Typical building and industrial energy efficiency (EE) technologies
- The energy services value chain and the wide range of products and services that may be offered by the private sector
- Typical energy services business (ESB) models
- Distribution utility options for energy services
- Review of key characteristics of the ESB models
- Illustrative examples
- Pathways to developing and ESB
- Barriers faced by the private sector and approaches to address these
- International experience with energy services

- Steps for establishing an energy services business

Unfortunately, due to the inclement weather in mid-December, the planned Power Breakfast had to be postponed and will be re-scheduled in February 2014.

## Challenges/Solutions

### *Implementation issues, including obstacles encountered and possible delays*

#### **Weather conditions prevailed in the country in December 2013**

Harsh weather conditions prevailed in the country during December 2013, when heavy snowfall accumulated in the streets, preventing ESCB staff – and many others -- from reaching their place of work. The storm affected the country's electricity network and the road blockages prevented the restoration crews reaching the damaged system components. Many consumers were left without electricity for long time, which led to the ERC and MEMR to act against the electricity utilities. The electricity staff members were all busy either in repairing the damaged system components to restore the supply or in preparing reports to the ERC and MEMR. As a result, the following scheduled activities were cancelled, as too many key stakeholders were too preoccupied with disaster response to participate:

- Executive Power Breakfast, where high-level executive from the energy sector would be briefed on the DSM incentive mechanism concept proposal
- Distributor Working Group meeting, where the DSM incentive mechanism concept proposal was meant to be discussed
- Regulatory Working Group meeting, where the DSM incentive mechanism concept proposal was meant to be discussed
- NEPCO Working Group meeting, where the DSM incentive mechanism concept proposal was meant to be discussed
- Steering Committee meeting, where the DSM incentive mechanism concept proposal was meant to be discussed and approved
- IRP Workshop, where NEPCO and the distribution companies would be provided with a more detailed explanation of IRP

## Activity Forecast

### *Next steps for the next period*

- Develop and present a detailed DSM incentive mechanism
- Work to secure the approval of the Steering Committee and the Council of Commissioners of the components of DSM incentive mechanism
- Develop and present the principal and subsidiary legal and regulatory instruments required to implement the DSM mechanism
- Produce a robust and comprehensive financial model
- Conduct a load survey and obtain results
- Conduct customer consultation
- Commence capacity building to implement DSM in utilities

## TASK 2: BUILD CAPACITY OF THE ENERGY SECTOR

AT-A-GLANCE SUMMARY	
<b>Top Achievements</b> <ul style="list-style-type: none"> <li>ERC institutional assessment drafted (Phase 1)</li> <li>MEMR institutional assessment drafted (Phase 1)</li> <li>Short-term DSM training plan developed</li> </ul>	<b>Priority Next Step Activities</b> <ul style="list-style-type: none"> <li>Present capacity-building plans to MEMR and ERC; develop timetable for training</li> <li>Provide training to staff identified by ERC and MEMR</li> <li>Initiate Phase 2, Utility capacity-building consultations</li> </ul>
<b>Primary Implementation Barriers</b> <ul style="list-style-type: none"> <li>Difficulty in scheduling meetings with key MEMR personnel</li> <li>Commitment of senior MEMR managers to capacity-building</li> </ul>	<b>Proposed Changes to Work Plan</b> None proposed at this time.

### Key Accomplishments

#### *Progress made towards fulfillment of the project's results*

ESCB fielded a short-term consultant, Ms. Suzanne Hinsz, to initiate the Capacity Building Action Plan together with the local consultant team using Deloitte's CYPRESS methodology. Ms. Hinsz with the local consultant team developed an interview protocol and briefed the ESCB staff on the CYPRESS approach. The capacity building team also held consultations with technical staff from the ERC regarding their technical, non-technical, and organizational capacity building needs. Consultations and interviews were also held in the four departments from MEMR whose work impacts the provision of a DSM program, namely the Energy Efficiency (EE) Department, the Renewable Energy (RE) Department, the Electricity Department, and JREEEF.

The ESCB team presented the findings of these consultations and interviews to USAID at the end of their November field mission. At this time, USAID agreed that ESCB should conduct additional interviews within MEMR, which delayed completion of the report. Additional interviews were conducted in the second and third week of December, and the findings were incorporated into the Capacity Building Action Plan that was being finalized at the end of the quarter.

#### *Technical Assistance to JSMO*

Mr. William Noel, an energy expert, was contracted by ESCB to conduct an assessment for JSMO on establishing a lighting testing lab facility, focusing specifically on the lab's specifications and tendering process, accreditation process, infrastructure, location, equipment needed to operate the lab, and capacity building required in order to properly run it.

Mr. Noel carried out intensive meetings and discussions with relevant stakeholders, especially with JSMO staff and leadership. As a result of these discussions, Mr. Noel made the following recommendations in his trip report:

- JSMO should develop a market surveillance strategy and determine the role of the lab in fulfilling it

- To guarantee the suitability of the specifications prepared, industry comments should be solicited before issuing the tender to establish the lab
- JSMO testing staff should be trained to use the lab's equipment properly; this capacity building could take place either within or outside of Jordan
- Specific suggestions to improve equipment specifications

## Challenges/Solutions

### ***Implementation issues, including obstacles encountered and possible delays***

The main challenge encountered during this reporting period was the difficulty of scheduling meetings with Department Heads in MEMR, specifically the RE Department. In response, ESCB will change its approach to some of the more difficult personnel. Rather than employing informal invitations to meet, it will use official letters from ESCB to MEMR.

Within MEMR, several of the senior managers that were consulted in the development of the Task 2 Action Plan expressed little interest in capacity-building. Others had specific training ideas but were only interested in one-time training courses. There is a resistance within MEMR to a systematic training program to enhance capacity for DSM program implementation.

## Activity Forecast

### ***Next steps for next period***

The following is a list of anticipated activities and deliverables for the coming quarter:

- Review and confirm the capacity development plan with senior leadership from MEMR and ERC
- Initiate organizational development effort for both MEMR and ERC (if agreed by leadership as detailed in the Capacity Building Report)
- Develop a detailed training and technical assistance schedule and mobilize appropriate training consultants for the identified training modules
- Develop a capacity building plan for the distribution companies to support implementation of DSM (Phase 2)

## TASK 3: DEVELOP ENERGY SERVICES ASSOCIATION(S)

AT-A-GLANCE SUMMARY	
Top Achievements	Priority Next Step Activities
<ul style="list-style-type: none"> <li>• ESCO Survey Report completed</li> <li>• Preliminary Assessment of JESPA</li> <li>• First draft of Market Assessment Report</li> </ul>	<ul style="list-style-type: none"> <li>• Complete Market Assessment Report</li> <li>• Complete JESPA Assessment</li> <li>• Complete database for ESPs</li> <li>• ESP project financing options and capacity building</li> </ul>
Primary Implementation Barriers	Proposed Changes to Work Plan
Delay in receiving official bylaw(s) for licensing ESCOs from MEMR	None proposed at this time.

### Key Accomplishments

#### *Progress made towards fulfillment of the project's results*

- **ESCO Survey Report.** ESCB fielded a short-term expert, Dr. Hameed Nezhad, to lead the ESCO task with local leadership provided by Isam Mustafa, a local consultant. During the quarter, ESCB completed and submitted to USAID the ESCO survey report. In preparing for the survey, ESCB held a Task 3 kick-off meeting to present the work plan for the ESCO task and introduce the ESCO questionnaire. The kick-off meeting was followed by individual meetings with the self-identified ESCOs in Jordan (10 ESCOs). Each of the ESCOs was asked to complete a comprehensive questionnaire about their current staffing, market segments, and outlook for ESCO business.
- **Preliminary Association Plan.** The ESCB team conducted a preliminary assessment of forming Jordan Energy Service Providers' Association (JESPA). ESCB fielded an international expert, Mr. Jeff Serfass, in association formation and capacity-building, to assess the options for an ESP association. Mr. Serfass was in Amman December 5-15 to conduct an assessment and develop preliminary recommendations. Subsequently, a local consultant, Mohammad Asfour, was brought on board to assist in the ESCO association task. Mr. Serfass and Mr. Asfour conducted comprehensive information collection on the most important associations operating in Jordan including Amman Chamber of Industry, EDAMA, JGBC, and Jordan RE society. The ESCB team established a process for forming the association and will start by forming a task force/steering committee to brainstorm the institutional set up of the association in addition to its potential members.
- **ESP Market Assessment.** The ESCB team drafted the market assessment for ESPs. A local consultant, Dr. Ibrahim Odeh, was brought on board to complete the assessment. The market assessment will assist in identifying the market potential for ESCOs which will help them to focus on certain priority sector where their services will be mostly needed.

### Challenges/Solutions

#### *Implementation issues, including obstacles encountered and possible delays*

- The ESCB team needs the official bylaw(s) from MEMR for ESCO licensing before we can schedule ESCO/ESP accreditation activities. However, to date, we have not received the bylaw(s) from MEMR due to their reluctance to provide a bylaw that is not yet formally approved. The ESCB has attempted several times to meet with MEMR's concerned personnel to discuss the draft bylaws and come up with an agreement sensitive to their needs for finalizing and enforcing the bylaw. At the end of the quarter, ESCB obtained assurance from MEMR that a meeting will take place in early January.

## **Activity Forecast**

### ***Next steps for the next period***

The following is a list of anticipated activities and deliverables for the coming quarter:

- Complete Market Assessment Report to identify actions business development of ESCOs.
- Complete JESPA assessment both analysis on existing association and approach towards establishing JESPA.
- Hold ESP workshop to present ESCO Survey Report, Market Assessment Report, and JESPA assessment and develop an Action plan for ESPs.
- Organize a committee of ESPs as founding members of JESPA. The committee will brainstorm all aspects related to establishing JESPA (institutional set up, membership)
- Complete capacity building activities for ESP project financing. The focus will be on performance based contracting and all relevant stakeholders (ESCOs, MEMR, Banks, Consumers) will participate in the training.

## TASK 4: RESPOND TO ENERGY SECTOR OPPORTUNITIES

AT-A-GLANCE SUMMARY	
Top Achievements	Priority Next Step Activities
<ul style="list-style-type: none"> <li>Preliminary activities identified by Minister and USAID</li> <li>Draft Work Plan prepared</li> </ul>	Respond to scopes of work from USAID for installation of PV systems in two public organizations (MoPIC and Customs Department)
Primary Implementation Barriers	Proposed Changes to Work Plan
None identified at this time.	None proposed at this time.

Task 4 activities will mainly depend on needs identified by USAID and on the identification of energy sector opportunities by counterparts.

### Key Accomplishments

#### *Progress made towards fulfillment of the project's results*

Deloitte initially suggested several possible technical assistance activities for implementation under Task 4 in its proposal for ESCB. The ESCB team has since identified additional possibilities in consultations with various stakeholders. Drawing from these consultations, the ESCB team developed a draft Work Plan for Task 4 through gathering proposed ideas from stakeholders, developing selection criteria to be used by USAID and ESCB to select projects, and establishing processes for selecting activities for funding.

### Challenges/Solutions

#### *Implementation issues, including obstacles encountered and possible delays*

No implementation issues or obstacles identified during this period.

### Activity Forecast

#### *Next steps for the next period*

The following is an illustrative list of activities and deliverables for the coming quarter:

- Respond to scopes of work developed by USAID with proposed resource(s)
- Develop budgets and activity plan for each approved activity

## CROSS-CUTTING AREAS: GENDER & INCLUSION

AT-A-GLANCE SUMMARY	
Top Achievements	Priority Next Step Activities
<ul style="list-style-type: none"> <li>Developed Inclusion Plan</li> <li>Initiated staff capacity development on inclusion issues</li> <li>Developed two concept notes for expanding women's participation in ESCB</li> </ul>	Plan and implement the Mentorship Program and Women's Leadership Forum
Primary Implementation Barriers	Proposed Changes to Work Plan
None identified at this time.	None identified at this time.

### Key Accomplishments

#### *Progress made towards fulfillment of the project's results*

During the reporting period, ESCB developed an Inclusion Plan, including a Gender Action Plan, comprised of an assessment of gender in the energy sector and recommendations for gender, disability, and youth inclusion activities organized by ESCB task and subtask, as per the ESCB Year 1 Work Plan. The ESCB project team held a meeting with USAID's Gender team to present and discuss the findings of the gender assessment and the Gender Action Plan and garner feedback and support. A second meeting was held at the ESCB office to present the final Action Plan. ESCB took USAID's feedback from both meetings into consideration when finalizing the Inclusion Plan, which was presented to USAID as a Gender Baseline, Inclusion Plan, and Gender Advisor STTA Trip Report.

In addition, in the past quarter, the ESCB held two meetings with staff to build their capacity around inclusion in general and gender in particular. During these meetings, ESCB leadership also updated the staff on planned gender interventions and urged the team to ensure that they are taking gender into consideration when developing their action plans. Additionally, the project's Senior Gender Expert continued to meet with women leaders and potential leaders in the sector and potential partners for the empowerment of women in the sector, including UNWOMEN, Engicon, Women's Microfund and Drivers of Change Institute.

Finally, the Gender Team prepared two concept notes during the reporting period: one for the Mentorship Program under Task 3, and another for a Women's Leadership Forum, planned for the coming quarter. The Mentorship Program will encourage young women to start their own energy-related businesses, raise awareness on the non-engineering related work in the sector, and support women to make career choices that will support their upwards advancement within the sector. The goal of the Women's Leadership Forum is to promote the advancement and professional growth of women in the energy sector in Jordan at a national level.

### Activity Forecast

#### *Next steps for the next period*

In the coming period, the ESCB team will ensure that gender, disability, and youth interventions are implemented across tasks in line with the Work Plan, with particular focus on the planning and implementation of the Mentorship Program and Women's Leadership Forum.

## PROJECT MANAGEMENT AND OPERATIONS

AT-A-GLANCE SUMMARY	
Top Achievements	Priority Next Step Activities
<ul style="list-style-type: none"> <li>Finalized all long-term local staff</li> <li>Moved into office space and provided infrastructure necessary to be fully functional</li> <li>Approval of first year project work plan and PMP</li> </ul>	Continue supporting program staff
Primary Implementation Barriers	Proposed Changes to Work Plan
None identified at this time.	None identified at this time.

### Key Accomplishments

#### *Contractual*

- Submitted and received USAID approval of the Year 1 ESCB Work Plan
- Submitted and received USAID approval of the Performance Monitoring Plan
- Executed contract modification #1
- Received change orders #1 and #2 for Task 2 Plug Figure technical assistance

#### *Human Resources*

- Registered ESCB and all current employees with Social Security Corporation
- Registered ESCB with Income and Sales Tax Department
- Negotiated and procured medical insurance for local staff
- Finalized Local Staff Personnel Manual
- Finalized STTA Deployment Guide

#### *Procurement/Office Premises*

- Finalized housing for COP and Tasks 1 and 2 Lead
- Rented, renovated, and furnished office space
- Negotiated hotel rates for STTA consultants
- Chose and signed contract with Internet service provider
- Installed office landlines, IT equipment, and security system
- Purchased computer equipment for project staff
- Prepared the inventory list for IT and non-IT equipment. (attached in Appendix)
- Completed mileage log template (attached in Appendix)

#### *Communications/Events*

- Held kickoff event at the Bristol Hotel for Task 1 'Design a Utilities Incentive Mechanism to Promote Energy Efficiency' on October 3, 2013
- Held kickoff event at the Ritaj Hotel for the Working Group meetings on October 7, 2013
- Held kickoff event at the Century Park Hotel for Task 3 'Develop Energy Services Associations' on October 23, 2013
- Submitted ESCB updates for monthly USAID publication
- Met with USAID Communications team to review Mission communications policies and protocols
- Presentation of ESCB at EDAMA Power Breakfast on October 28.

- Presented an ESCB briefing for US Ambassador Jones (October 3) and for a Mission-wide audience (November 12).

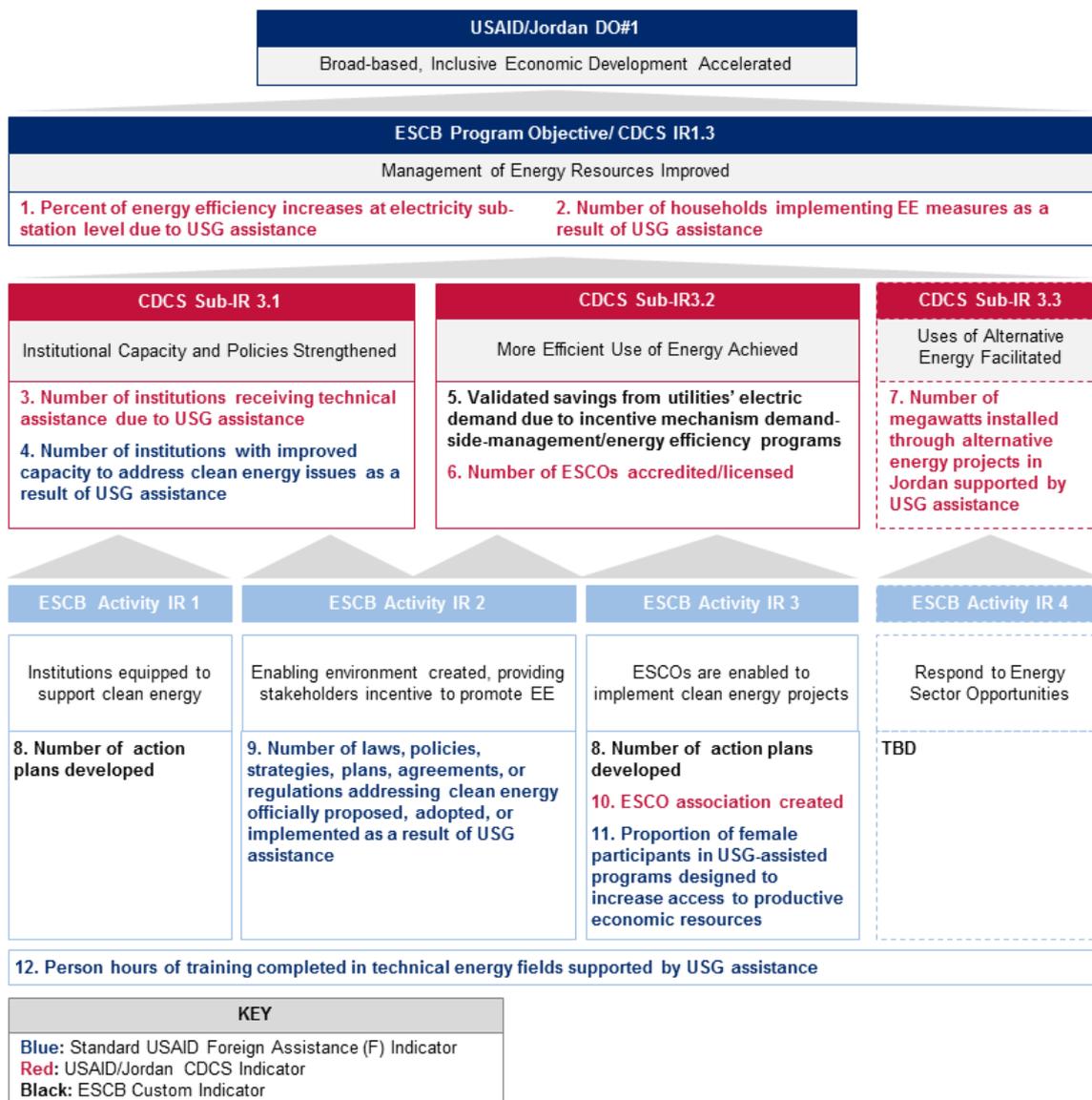
## **Challenges/Solutions**

### ***Implementation issues, including obstacles encountered and possible delays***

The office location that was selected took longer than expected to renovate, resulting in a longer than anticipated stay at ECO Consult's office. The Eid holidays also delayed the renovation schedule.

## PERFORMANCE MONITORING

ESCB submitted our Performance Monitoring Plan (PMP) to USAID in late October; the PMP was subsequently approved in November 2013. The PMP includes 12 approved indicators, along with their definitions and targets for FY14. These indicators consist of a mix of four Standard USAID Foreign Assistance (F) Indicators, five USAID/Jordan CDCS Indicators, and and ESCB custom indicators, as shown in the ESCB Results Framework below:



The table below shows the final approved list of indicators with a baseline, targets for FY14, and results achieved between October 1, 2013 – December 31, 2013:

<b>Indicator</b>	<b>Baseline</b>	<b>FY14 Target</b>	<b>Achieved Results Oct 1 – Dec 31, 2013</b>
1. Percent of energy efficiency increases at electricity sub-station level due to USG assistance	0% <i>DSM/EE program not yet implemented</i>	0 <i>DSM/EE programs to begin late FY14</i>	N/A
2. Number of households implementing EE measures as a result of USG assistance	0 <i>DSM/EE program not yet implemented</i>	0 <i>DSM/EE programs to begin late FY14</i>	N/A
3. Number of institutions receiving technical assistance due to USG assistance	0 <i>Baseline defined to track technical assistance provided through ESCB</i>	20 <i>List of anticipated institutions included in PMP, Appendix 1</i>	7 <i>MEMR, ERC, EDCO IDECO, JEPCO NEPCO, JSMO</i>
4. Number of institutions with improved capacity to address clean energy issues as a result of USG assistance	0 <i>Baseline defined to track capacity building due to ESCB</i>	0 <i>FY14 is the defined baseline year</i>	N/A
5. Validated savings from utilities' forecasted electric demand due to incentive mechanism demand-side-management/energy efficiency programs	0 <i>DSM/EE program not yet implemented</i>	0 <i>DSM/EE programs to begin late FY14</i>	N/A
6. Number of ESCOs accredited/licensed	0 <i>Accreditation program not yet implemented</i>	0 <i>Accreditation program to begin FY15 earliest</i>	N/A
7. Number of megawatts installed through alternative energy projects in Jordan supported by USG assistance	N/A <i>To be defined based on Task 4 initiatives</i>	0.15 MW <i>Estimate dependent on known planned solar panel installations</i>	0 <i>ESCB received its first request for technical assistance related to renewable energy under Task 4 in January 2014</i>

<b>Indicator</b>	<b>Baseline</b>	<b>FY14 Target</b>	<b>Achieved Results Oct 1 – Dec 31, 2013</b>
8. Number of action plans developed	0 <i>Baseline defined to track action plans developed due to ESCB</i>	7 <i>Assumes 3 WG Action Plans, ESCO Action Plan, and 3 Capacity Building Plans (MEMR, ERC, one DISCO)</i>	2 <i>-DSM Mechanism action plan -Inclusion plan (including gender action plan)</i>
9. Number of laws, policies, strategies, plans, agreements, or regulations addressing clean energy officially proposed, adopted, or implemented as a result of USG assistance	0 <i>Expected measure will be the utility incentive mechanism</i>	1 <i>At least one agreement with a DISCO reached</i>	0 <i>The ESCB team has made significant progress towards agreeing upon an DSM incentive mechanism with the utilities and ERC</i>
10. ESCO association created	No <i>Governing body not yet established</i>	Yes <i>Association to be formed in FY14</i>	No
11. Proportion of female participants in USG-assisted programs designed to increase access to productive economic resources	0 <i>Baseline defined to track ESCB gender considerations</i>	30% <i>Based on an estimated approximately 36 female participants out of 120 total</i>	N/A
12. Person hours of training completed in technical energy fields supported by USG assistance	0 <i>Baseline defined to track capacity building due to ESCB</i>	1,200 <i>Assumes average of 30 trainees attending 14 three hour trainings planned in Year 1</i>	128 <i>First working group meeting to present incentive mechanisms and design structure</i>

The M&E team is still working with the technical and gender teams to define tools and required data to calculate the baselines and targets for Indicators 1, 2, 5 and 11. In addition, the M&E Specialist is working closely with the institutional and capacity development team to understand CYPRESS and how to use the tool to monitor the development of the capacities in target entities and measure Indicator 4: "Number of institutions with improved capacity to address clean energy issues as a result of USG assistance."

## APPENDIX

### STTA Provided during the quarter

Consultant	Arrival	Departure	Task #	Expertise
Alice Miller	1/Oct/13	10/Oct/13	Task #1	Regulatory
Hameed Nezhad	5/Oct/13	26/Oct/13	Task #3	Task Leader
Gergana Stoitcheva	28/Oct/13	7/Nov/13	Task #1	Financial Modeling
Bill Noel	1/Nov/13	15/Nov/13	Task #2 – plug	EE Lighting Standards
Hannah Kemp	1/Nov/13	14/Nov/13	Cross-cutting	Gender
Suzanne Hinsz	7/Nov/13	20/Nov/13	Task #2	Capacity-building
Jeff Serfass	5/Dec/13	15/Dec/13	Task #3	Association Development
Hameed Nezhad	6/Dec/13	20/Dec/13	Task #3	Task Leader
Sasan Salem	2/Dec/13	5/Jan/14	Task #1	IRP
Robert Taylor	6/Dec/13	23/Dec/13	Task #1	Legal and Regulatory
Jake Delphia	16/Dec/13	27/Dec/13	Task #1; Acting COP	Regulatory reform
Dilip Limaye	11/Dec/13	18/Dec/13	Task #1	EE Financing and ESCOs
Mark Germer	15/Dec/13	20/Dec/13	Task #1	EE financial modeling





Laptop Dell Latitude with Software-Mohammad Maayt	ESCB113	Dell	E5430	5TZ2NX1	USA10551-01	10/31/13	10/31/13	2406.00	JOD 1,703.45	Contractor Acquired Property	14682	Amman, Jordan	Yes	Electronics	002
Laptop Dell Latitude with Software-Jenine Jaradat	ESCB108	Dell	E5430	BMOOPX1	USA10551-01	10/31/13	10/31/13	2406.00	JOD 1,703.45	Contractor Acquired Property	14682	Amman, Jordan	Yes	Electronics	007
Laptop Dell Latitude with Software-Adam Atari	ESCB107	Dell	E5430	H9Y2NX1	USA10551-01	10/31/13	10/31/13	2406.00	JOD 1,703.45	Contractor Acquired Property	14682	Amman, Jordan	Yes	Electronics	010
Laptop Dell Latitude with Software-Alaa Aloul	ESCB104	Dell	E5430	6MZZNX1	USA10551-01	10/31/13	10/31/13	2406.00	JOD 1,703.45	Contractor Acquired Property	14682	Amman, Jordan	Yes	Electronics	014
Laptop Dell Latitude with Software-May Bseiso	ESCB114	Dell	E5430	FB3JRY1	USA10551-01	11/25/13	12/02/13	1751.41	JOD 1,240.00	Contractor Acquired Property	16703	Amman, Jordan	Yes	Electronics	001
Cell Phone/Short term consultant	ESCB115	Nokia	100	3823772	USA10551-01	08/22/13	08/22/13	31.07	JOD 22.00	Contractor Acquired Property	3382	Amman, Jordan	Yes	Electronics	014
Cell Phone/Short term consultant	ESCB116	Nokia	100	3819499	USA10551-01	08/22/13	08/22/13	31.07	JOD 22.00	Contractor Acquired Property	3382	Amman, Jordan	Yes	Electronics	014
Cell Phone/Short term consultant	ESCB117	Nokia	100	3630737	USA10551-01	09/22/13	09/22/13	28.25	JOD 20.00	Contractor Acquired Property	NA	Amman, Jordan	Yes	Electronics	014
Cell Phone/Short term consultant	ESCB118	Nokia	100	3819713	USA10551-01	09/22/13	09/22/13	28.25	JOD 20.00	Contractor Acquired Property	NA	Amman, Jordan	Yes	Electronics	014
Cell Phone/Short term consultant	ESCB119	Nokia	100	1444784	USA10551-01	09/25/13	09/25/13	28.25	JOD 20.00	Contractor Acquired Property	8891	Amman, Jordan	Yes	Electronics	014
Cell Phone/Short term consultant	ESCB120	Nokia	100	3819630	USA10551-01	09/26/13	09/26/13	28.25	JOD 20.00	Contractor Acquired Property	5401	Amman, Jordan	Yes	Electronics	014
Cell Phone/Short term consultant	ESCB121	Nokia	100	3879246	USA10551-01	09/26/13	09/26/13	28.25	JOD 20.00	Contractor Acquired Property	5401	Amman, Jordan	Yes	Electronics	014
Cell Phone/Broken	ESCB122	Nokia	100	3879287	USA10551-01	09/26/13	09/26/13	28.25	JOD 20.00	Contractor Acquired Property	5401	Amman, Jordan	Yes	Electronics	014
Printer	ESCB123	Canon	Pixma MX 454	CJFA10BK10387	USA10551-01	09/24/13	09/24/13	103.11	JOD 73.00	Contractor Acquired Property	14013	Amman, Jordan	Yes	Electronics	014
Printer	ESCB124	HP	Pro 200	CND8F7Z37R	USA10551-01	10/22/13	10/22/13	416.67	JOD 295.00	Contractor Acquired Property	14492	Amman, Jordan	Yes	Electronics	001
Printer	ESCB125	HP	Pro 200	CND8F9047R	USA10551-01	10/22/13	10/22/13	416.67	JOD 295.00	Contractor Acquired Property	14492	Amman, Jordan	Yes	Electronics	009
Printer	ESCB126	HP	Pro400	CND8F7840N	USA10551-01	10/22/13	10/22/13	840.40	JOD 595.00	Contractor Acquired Property	14492	Amman, Jordan	Yes	Electronics	007
Kitchen Unites	ESCB127	Tabbaa	Unknown	2218-ESCB127	USA10551-01	11/11/13	11/27/13	2372.88	JOD 1,680.00	Contractor Acquired Property	2218	Amman, Jordan	Yes	Furniture	013
Photocopier	ESCB128	Canon	IRC 2225 i	21LYE13199	USA10551-01	11/27/13	11/27/13	3813.56	JOD 2,700.00	Contractor Acquired Property	3969	Amman, Jordan	Yes	Electronics	008
Microwave	ESCB129	Sharp	R-75MT (S)	308411174	USA10551-01	11/12/13	11/12/13	114.41	JOD 81.00	Contractor Acquired Property	2005	Amman, Jordan	Yes	Office Equipment	013
Refrigerator	ESCB130	Sharp	SJ-43S	L130800018	USA10551-01	11/12/13	11/12/13	543.79	JOD 385.00	Contractor Acquired Property	2004	Amman, Jordan	Yes	Office Equipment	013
Coffee Maker	ESCB131	AEG	KF-5255	23200152	USA10551-01	11/03/13	11/03/13	96.05	JOD 68.00	Contractor Acquired Property	33792	Amman, Jordan	Yes	Office Equipment	013
Coffee Maker	ESCB132	AEG	KF-5255	23200266	USA10551-01	11/03/13	11/03/13	96.05	JOD 68.00	Contractor Acquired Property	33792	Amman, Jordan	Yes	Office Equipment	004
Water purifier	ESCB133	Bio Family	Unknown	PEJO05C0E01385A0204	USA10551-01	11/17/13	11/17/13	169.49	JOD 120.00	Contractor Acquired Property	632	Amman, Jordan	Yes	Office Equipment	013
Water purifier	ESCB134	Bio Family	Unknown	PEJJO04C0E21384A0517	USA10551-01	11/13/13	11/13/13	176.55	JOD 125.00	Contractor Acquired Property	3058	Amman, Jordan	Yes	Office Equipment	004
Access Controller	ESCB135	NA	Unknown	2813040095310	USA10551-01	11/05/13	11/05/13	169.49	JOD 120.00	Contractor Acquired Property	203	Amman, Jordan	Yes	Electronics	001
Single Door Electro Magnetic	ESCB136	NA	Unknown	2812110085741	USA10551-01	11/05/13	11/05/13	183.62	JOD 130.00	Contractor Acquired Property	203	Amman, Jordan	Yes	Electronics	001
Security Cam	ESCB137	HIK	HIK 600	417991153	USA10551-01	11/05/13	11/05/13	127.12	JOD 90.00	Contractor Acquired Property	203	Amman, Jordan	Yes	Electronics	001
Security Cam	ESCB138	HIK	HIK 600	DS23405	USA10551-01	11/05/13	11/05/13	127.12	JOD 90.00	Contractor Acquired Property	203	Amman, Jordan	Yes	Electronics	001
Security Cam	ESCB139	HIK	HIK 600	DS23406	USA10551-01	11/05/13	11/05/13	127.12	JOD 90.00	Contractor Acquired Property	203	Amman, Jordan	Yes	Electronics	007
4 CH DVR+ 1 TB HDD	ESCB140	HIK	7000	428612450	USA10551-01	11/05/13	11/05/13	529.66	JOD 375.00	Contractor Acquired Property	203	Amman, Jordan	Yes	Electronics	012
LCD 22"	ESCB141	Toshiba	24P1300EE	D34V76A14355C1	USA10551-01	11/05/13	11/05/13	310.73	JOD 220.00	Contractor Acquired Property	203	Amman, Jordan	Yes	Electronics	001
LCD 22"	ESCB142	Toshiba	24P1300EE	D34V76A15809C1	USA10551-01	11/05/13	11/05/13	310.73	JOD 220.00	Contractor Acquired Property	203	Amman, Jordan	Yes	Electronics	014
Server Cabinet 38 U	ESCB143	E Cabinet	Unknown	202-ESCB143	USA10551-01	10/31/13	10/31/13	656.78	JOD 465.00	Contractor Acquired Property	202	Amman, Jordan	Yes	Electronics	012
Patch Panel	ESCB144	Datwyler	Unknown	202-ESCB144	USA10551-01	10/31/13	10/31/13	112.99	JOD 80.00	Contractor Acquired Property	202	Amman, Jordan	Yes	Electronics	012
Smart Phone/ Grayson Hefner	ESCB145	Apple	5S 16 G	357998058005129	USA10551-01	12/01/13	12/01/13	543.79	JOD 385.00	Contractor Acquired Property	POS2739353	Amman, Jordan	Yes	Electronics	Grayson Hefner
Smart Phone/ Mary Wozala	ESCB146	Samsung	S4	358918052960102	USA10551-01	12/01/13	12/01/13	338.98	JOD 240.00	Contractor Acquired Property	POS2739377	Amman, Jordan	Yes	Electronics	Mary Wozala
Data Show	ESCB147	Epson	EB-X 11	PU3K3300141	USA10551-01	11/10/13	11/10/13	798.02	JOD 565.00	Contractor Acquired Property	2896	Amman, Jordan	Yes	Electronics	004
Vehicle	ESCB148	Dodge	Durango Crew	1C4DJDG5DC6565115	USA10551-01	09/23/13	11/18/13	41300.00	JOD 29,240.40	Contractor Acquired Property	VS 10/2013	Amman, Jordan	Yes	Automotive	NA
Coat Hanger	ESCB149	Forsit	120900	FQ000842-2	USA10551-01	11-27-13	8/12/2013	123.59	JOD 87.50	Contractor Acquired Property	FQ000842-2	Amman, Jordan	Yes	Furniture	014
Coat Hanger	ESCB150	Forsit	120900	FQ000842-2	USA10551-01	11-27-13	8/12/2013	123.59	JOD 87.50	Contractor Acquired Property	FQ000842-2	Amman, Jordan	Yes	Furniture	002
Coat Hanger	ESCB151	Forsit	120900	FQ000842-2	USA10551-01	11-27-13	8/12/2013	123.59	JOD 87.50	Contractor Acquired Property	FQ000842-2	Amman, Jordan	Yes	Furniture	003
Coat Hanger	ESCB152	Forsit	120900	FQ000842-2	USA10551-01	11-27-13	8/12/2013	123.59	JOD 87.50	Contractor Acquired Property	FQ000842-2	Amman, Jordan	Yes	Furniture	007
Coat Hanger	ESCB153	Forsit	120900	FQ000842-2	USA10551-01	11-27-13	8/12/2013	123.59	JOD 87.50	Contractor Acquired Property	FQ000842-2	Amman, Jordan	Yes	Furniture	005
Coat Hanger	ESCB154	Forsit	120900	FQ000842-2	USA10551-01	11-27-13	8/12/2013	123.59	JOD 87.50	Contractor Acquired Property	FQ000842-2	Amman, Jordan	Yes	Furniture	008
External Hard Drive 2 TB	ESCB155	WD	WDBU*Y0020B BK-	WXAI E63FZHJ2	USA10551-01	10/11/2013	11-28-13	149.72	JOD 106.00	Contractor Acquired Property	826	Amman, Jordan	Yes	Electronics	012
Expansion Desktop 2 TB	ESCB156	Seagate	SRD00F2	NA4M30R9	USA10551-01	10/11/2013	11-28-13	158.19	JOD 112.00	Contractor Acquired Property	826	Amman, Jordan	Yes	Electronics	012
UPS	ESCB158	Tripp-Lite	SMARTINT 2200VS	2315JY0SM672500017	USA10551-01	10/11/2013	11-28-13	501.41	JOD 355.00	Contractor Acquired Property	826	Amman, Jordan	Yes	Electronics	012
PoE Switch	ESCB159	HP	J9138A#ABB	245DZ0PX	USA10551-01	10/11/2013	11-28-13	776.84	JOD 550.00	Contractor Acquired Property	826	Amman, Jordan	Yes	Electronics	012
NAS Storage	ESCB160	Synology	DS412+	D9LIN00966	USA10551-01	10/11/2013	11-28-13	833.33	JOD 590.00	Contractor Acquired Property	826	Amman, Jordan	Yes	Electronics	012
Firewall	ESCB161	Fortinet	60D	FGT60D4613000475	USA10551-01	10/11/2013	11-28-13	1009.89	JOD 715.00	Contractor Acquired Property	826	Amman, Jordan	Yes	Electronics	012
Access Point	ESCB162	Aruba	AP-93	BU0119743	USA10551-01	10/11/2013	11-28-13	282.49	JOD 200.00	Contractor Acquired Property	826	Amman, Jordan	Yes	Electronics	001
Access Point	ESCB163	Aruba	AP-93	BU011945	USA10551-01	10/11/2013	11-28-13	282.49	JOD 200.00	Contractor Acquired Property	826	Amman, Jordan	Yes	Electronics	007
Access Point	ESCB164	Aruba	AP-93	BU0119746	USA10551-01	10/11/2013	11-28-13	282.49	JOD 200.00	Contractor Acquired Property	826	Amman, Jordan	Yes	Electronics	008
Access Point	ESCB165	Aruba	AP-93	BU0119749	USA10551-01	10/11/2013	11-28-13	282.49	JOD 200.00	Contractor Acquired Property	826	Amman, Jordan	Yes	Electronics	002

Server+WinSvrStd 2012+WinSvrCal 2012+KasperSky+WinSvrStd DiskKit 2012 64 Bit	ESCB166	HP	DL 380e	CZJ34Z0ZHW	USA10551-01	10/11/2013	11-28-13	3718.93	JOD 2,633.00	Contractor Acquired Property	826	Amman, Jordan	Yes	Electronics	012
Hard disk 1 TB	ESCB167	Seagate	WD10EFRX-68PJCNO	WD-WCC4J0899189	USA10551-01	10/11/2013	11-28-13	91.81	JOD 65.00	Contractor Acquired Property	826	Amman, Jordan	Yes	Electronics	012

Hard disk 1 TB	ESCB168	Seagate	WD10EFRX-68PJCNO	WD-WCC4J0905059	USA10551-01	10/11/2013	11-28-13	91.81	JOD 65.00	Contractor Acquired Property	826	Amman, Jordan	Yes	Electronics	012
Hard disk 1 TB	ESCB169	Seagate	WD10EFRX-68PJCNO	WD-WCC4J0900354	USA10551-01	10/11/2013	11-28-13	91.81	JOD 65.00	Contractor Acquired Property	826	Amman, Jordan	Yes	Electronics	012
Hard disk 1 TB	ESCB170	Seagate	WD10EFRX-68PJCNO	WD-WCC4J0913890	USA10551-01	10/11/2013	11-28-13	91.81	JOD 65.00	Contractor Acquired Property	826	Amman, Jordan	Yes	Electronics	012
Control Unit+SD card+Ipo License	ESCB171	Avaya	IP 500 v2	13WZ06100AA7	USA10551-01	09-26-13	5/11/2013	646.23	JOD 457.53	Contractor Acquired Property	18	Amman, Jordan	Yes	Electronics	012
Extension Card Dgtl STA 8	ESCB172	Avaya	PCS05	13WZ13600MU3	USA10551-01	09-26-13	5/11/2013	282.49	JOD 200.00	Contractor Acquired Property	18	Amman, Jordan	Yes	Electronics	012
Extension Card Dgtl STA 8	ESCB173	Avaya	PCS05	13WZ13600MK5	USA10551-01	09-26-13	5/11/2013	282.49	JOD 200.00	Contractor Acquired Property	18	Amman, Jordan	Yes	Electronics	012
IP 500 compo card ATM 4	ESCB174	Avaya	PCS08	13WZ050005D7	USA10551-01	09-26-13	5/11/2013	317.80	JOD 225.00	Contractor Acquired Property	18	Amman, Jordan	Yes	Electronics	012
Digital Phone	ESCB175	Avaya	1416	13WZ09670634	USA10551-01	09-26-13	5/11/2013	141.24	JOD 100.00	Contractor Acquired Property	18	Amman, Jordan	Yes	Electronics	001
Digital Phone	ESCB176	Avaya	1408	13WZ1227042V	USA10551-01	09-26-13	5/11/2013	127.12	JOD 90.00	Contractor Acquired Property	18	Amman, Jordan	Yes	Electronics	006
Digital Phone	ESCB177	Avaya	1408	13WZ1227044J	USA10551-01	09-26-13	5/11/2013	127.12	JOD 90.00	Contractor Acquired Property	18	Amman, Jordan	Yes	Electronics	005
Digital Phone	ESCB178	Avaya	1403	13WZ0267080Z	USA10551-01	09-26-13	5/11/2013	74.86	JOD 53.00	Contractor Acquired Property	18	Amman, Jordan	Yes	Electronics	007
Digital Phone	ESCB179	Avaya	1403	13WZ022704WG	USA10551-01	09-26-13	5/11/2013	74.86	JOD 53.00	Contractor Acquired Property	18	Amman, Jordan	Yes	Electronics	007
Digital Phone	ESCB180	Avaya	1403	13WZ026707YA	USA10551-01	09-26-13	5/11/2013	74.86	JOD 53.00	Contractor Acquired Property	18	Amman, Jordan	Yes	Electronics	008
Digital Phone	ESCB181	Avaya	1403	13WZ026707WD	USA10551-01	09-26-13	5/11/2013	74.86	JOD 53.00	Contractor Acquired Property	18	Amman, Jordan	Yes	Electronics	009
Digital Phone	ESCB182	Avaya	1403	13WZ0267080E	USA10551-01	09-26-13	5/11/2013	74.86	JOD 53.00	Contractor Acquired Property	18	Amman, Jordan	Yes	Electronics	010
Digital Phone	ESCB183	Avaya	1403	13WZ333700L2	USA10551-01	09-26-13	5/11/2013	74.86	JOD 53.00	Contractor Acquired Property	18	Amman, Jordan	Yes	Electronics	003
Digital Phone	ESCB184	Avaya	1403	13WZ1347020K	USA10551-01	09-26-13	5/11/2013	74.86	JOD 53.00	Contractor Acquired Property	18	Amman, Jordan	Yes	Electronics	002
Digital Phone	ESCB185	Avaya	1403	13WZ026708U	USA10551-01	09-26-13	5/11/2013	74.86	JOD 53.00	Contractor Acquired Property	18	Amman, Jordan	Yes	Electronics	002
Digital Phone	ESCB186	Avaya	1403	13WZ13470201	USA10551-01	09-26-13	5/11/2013	74.86	JOD 53.00	Contractor Acquired Property	18	Amman, Jordan	Yes	Electronics	002
Digital Phone	ESCB187	Avaya	1403	13WZ026707YM	USA10551-01	09-26-13	5/11/2013	74.86	JOD 53.00	Contractor Acquired Property	18	Amman, Jordan	Yes	Electronics	002
Digital Phone	ESCB188	Avaya	1403	13WZ134701ZN	USA10551-01	09-26-13	5/11/2013	74.86	JOD 53.00	Contractor Acquired Property	18	Amman, Jordan	Yes	Electronics	002
Digital Phone	ESCB189	Avaya	1403	13WZ134701WD	USA10551-01	09-26-13	5/11/2013	74.86	JOD 53.00	Contractor Acquired Property	18	Amman, Jordan	Yes	Electronics	014
Digital Phone	ESCB190	Avaya	1403	13WZ1347021P	USA10551-01	09-26-13	5/11/2013	74.86	JOD 53.00	Contractor Acquired Property	18	Amman, Jordan	Yes	Electronics	014





USAID Jordan Energy Sector Capacity Building Activity  
Saqra Building # 238(C), 6th Floor  
Arar Street