USAID-funded Energy Sector Capacity Building (ESCB) Program

Clean energy finance innovation in Jordan

6th International Forum on Energy for Sustainable Development
September 30, 2015
Jordan’s energy sector faces multiple challenges

- **Rapidly growing energy demand**
  - 7% annual growth in primary energy demand
  - 5.5% annual growth in electricity demand

- **Near total dependency on imported fuels**
  - 97% of energy needs met through imports
  - 17% of GDP annual spending on energy imports

- **Large subsidy flows for household electricity consumption**
  - $1.3 billion spent last year on electricity subsidies

- **Mobilizing the investment to expand energy resources**
  - New supplies (conventional and renewable)
  - Transmission additions
Jordan’s energy policy promotes diversifying energy production while reducing consumer demand and subsidies

Renewable Energy
Jordan’s 2007-2020 Energy Strategy calls for increasing the share of renewable energy to 10% by installing an additional 1,000 MW of wind and 800 MW of solar energy by 2020.

Energy Efficiency
The 2012 National Energy Action Plan calls for a 30% increase in solar water heater uptake and 20% improvement in energy efficiency by 2020.

Supply diversity
Jordan is pursuing alternative supplies for power generation, including regional natural gas, oil shale and nuclear.
Jordan’s Energy Ecosystem

- Household
- Industry
- Government
- Commercial
- Energy Consumers
- Government
- Ministry of Energy and Mineral resources
- Regulator
- Jordan Energy Ecosystem
- Energy Suppliers
- Distribution companies
- Transmission company
- Private Sector
- Technology
- Banks
- Energy Service Providers
Public sector financed EE/RE
ESCB delivers a broad range of technical assistance and capacity building throughout the energy sector.

- **Intermittent Renewable Resources Grid Codes**
  - Transmission company
  - Distribution Companies
  - Energy Regulator

- **Operationalizing EE/RE Revolving Fund**
  - Ministry of Energy and Mineral Resources/JREEEF

- **Energy Audit Training**
  - MEMR
  - Other Ministries

- **Energy Saving Action Planning**
  - MEMR
  - Other Ministries

- **Assessment of Efficient Lighting Testing Lab Requirements**
  - JSMO
Operationalizing JREEEF

- Developed fund strategy and business plan
- Organized a consultation process for JREEEF’s stakeholders
- Developed the JREEEF by-law which was approved by Cabinet and Executive Committee
- Designed JREEEF’s EE/RE programs for 2015 implementation, including support to DSM and solar water heater/PV programs
- Providing ongoing analytical and design support to JREEEF
Financial & Technical Support Windows

- Revolving Credit
- Grants
- Equity Financing
  - Guarantees
  - Technical Assistance
JREEEF STRATEGY (2015-2018)

- Household PV Pilot Projects.
- Energy Efficient Lighting Projects.
- Scaling up household SWH and PV with donor co-financing
- Support program for SMEs Market.
- Support for innovation and R&D
Private sector financed EE/RE
ESCB’s activities address the full spectrum of support required to advance DSM in Jordan

Establishing a regulatory and legal framework
- DSM Recommendations adopted
- DSM Guidance issued by regulator
- All 3 distribution companies submitted DSM proposals

Identifying energy-saving opportunities
- Household load surveys
- Billing data analysis

Tools to design and evaluate DSM programs
- DSM financial analysis model developed and training provided
- In use by electric utilities and the regulator

Utilities

DSM Funding
- Jordan Renewable Energy and Energy Efficiency Fund (JREEEF) operational
- Tariff revenues

DSM capacity building
- DSM units at each distribution company
- Establishing DSM oversight capacity for the regulator
Establishing a thriving energy services industry in Jordan

**Build professional credentials of ESPs**
- Needs assessment of companies
- One-on-one support to ESPs
- CEM and CMVP training

**Create capacity for ESP self-regulation**
- Develop private sector led voluntary accreditation system
- Support government to license energy auditors

**Establish an ESP association**
- Coalition of energy associations
- Strengthening individual energy associations

**Improve access to finance**
- Assessment of resources
- Market-reflective financial products
- Performance risk guarantees
- Standardized performance contract
- Working with one bank to develop a specialized product for EE/RE
- Working with National Microfinance Bank to develop small loans for EE/RE
Access to Finance

**Bank Al Etihad: Energy Efficiency Loan Product**

Despite very high electricity prices in some markets segments, RE/EE market penetration has been low.

There is a *lack of confidence in EE technologies* and in the estimated future *savings* being achieved or measured and verified.

No *commercially attractive* financing is available to ESPs & consumers,

Banks are offering their traditional asset-based corporate lending terms for EEPs.

Developed an EEP Loan Product Manual for Bank Al Etihad (BAE) to apply in financing pilot Energy Efficiency Projects (EEPs) at client facilities.

Trained Bank employees-Relationship Managers, Risk Managers, Credit Managers on how to use EEP Loan Product Manual.

Identifying 3 pilot locations for the EE loan
Energy Savings Product Insurance

Jordan Insurance Company expressed interest in offering *Energy Savings Product Insurance* (ESPI) coverage on one or more of BAE’s pilot EEP loans.

**With ESPI** Jordan Insurance Company will provide the following coverages to facility owners and banks:

Guarantees savings of EEPs (*not Host Credit Risk*)

Covers any performance-related shortfall in savings versus Facility Owner’s debt service payments to Bank

Eliminates the risk and instill confidence in Facility Owners and Banks that future savings (cash flow) will be achieved.
Access to Finance-MFIs

National Microfinance Bank (NMB) showed interest to develop and implement micro financing of RE/EE projects.

ESCB is providing technical assistance to NMB to develop EE and RE micro loan product focusing on home appliances, SWH and to a lesser extent PV.

Developing an EE/RE assessment tool for NMB that will be integrated into their loan assessment package

Marketing campaign for NMB to roll out the EE/RE product
Financing Initiatives Designed to Overcome Risks/Barriers

- **Quality**: ESCB is working with the private sector to develop a voluntary accreditation system.
- **EE/RE Performance Risk**: ESCB is developing an insurance product to guarantee savings.
- **Client Credit Risk**: ESCB is working with Bank al Etihad to service their existing clients; with loan guarantee facility to reduce risk.
- **High Interest Rate**: Combination of above will result in lower interest rates due to lower risk factors; interest rate buy-down.
- **Targeted Financial Products**: DSM; BAE; NMB; JREEEF.
Thank you!

For more information:

Mary Worzala
mworzala@deloitte.com