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ANNUAL REPORT

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I. PROGRAM DESCRIPTION

The Enhancing Sustainable Utility Regulation (ENSURE) program creates a means and structure whereby regulators from the developing world can discuss mutual challenges and examine best practices with their counterparts from the U.S. This NARUC/USAID Cooperative Agreement serves the international regulatory community by offering the ability to interact with counterparts through information and peer-to-peer exchanges between regulatory bodies and associations from around the world and across multiple sectors: energy, water, and telecommunications. As the U.S. boasts a history of multi-sector regulators, NARUC's members are ideally suited to discuss complex regulatory practices with foreign regulators from each of the utility sectors.

II. SUMMARY OF ACTIVITIES AND MAJOR ACCOMPLISHMENTS

a. Task 1: Bilateral Partnerships

i. Jordan

Major Accomplishments

As a direct result of USAID funding, NARUC has provided training on internationally accepted practices. From 2009-2012, NARUC worked closely with the ERC to conduct information exchange activities, workshops and individual staff trainings aimed at increasing the capacity of the ERC to effectively regulate the electricity sector in Jordan. Through exploring U.S. models of utility regulation, examining lessons learned from experiences in the U.S. and training of key staff, the Partnership has introduced new and/or advanced regulatory practices to the ERC and built staff capacity to meet the Commission's mandates. This has enabled the ERC to develop, adopt and implement a number of operational updates and/or new procedures. The ERC has identified the following list of specific results achieved through the Partnership. As a result of USAID support and the Partnership, the ERC has:

- 1) Developed a Regulatory Framework to Support Renewable Energy Investments including:
 - o The Reference Pricelist Record for the Calculation of Electrical Energy Purchase Prices from the Renewable Energy Sources (2012)
 - o The Directive for the Costs of Connecting Renewable Energy Facility to the Distribution System for Direct Proposals and Competitive Tenders (2012)
 - o The Directive Governing the Sale of Electrical Energy Generated from the Renewable Energy Systems (2012, recent updates pending approval from the Cabinet)As well as drafted updates to the following codes to enable renewable energy:
 - o Distribution and Retail Supply Performance Code 2005 (2012 updates pending ERC approval)
 - o Transmission Grid Code 2010 (2012 updates pending ERC approval)
 - o Generation Performance Standards Code 2008 (2012 draft pending ERC approval)
- 2) Increased Transparency by Adopting a Public Comment Model for New Directives
- 3) Established and Adopted a Uniform Chart of Accounts and Proposed Changes to Utility Asset Depreciation Methodology
- 4) Developed Capacity to Evaluate Demand Response, Demand Side Management and Integrated Resources
- 5) Launched 2012 ERC Media Plan to Promote Energy Efficiency
- 6) Analyzed and Revised Tariff Structure to Move towards Cost Reflective Tariffs and to Encourage Energy Conservation

- 7) Developed New Technical Performance Indicators for Electricity Distribution, Transmission and Generation Utilities as Part of the License Granted by the ERC
- 8) Developed a Fuel Clause in Tariff Structure
- 9) Enhanced Consumer Complaint and Dispute Resolution Procedures
- 10) Updated the Methodology for Assessing Rate of Return for Electricity Distribution Companies through Revisions to the Calculation of Weighted Average Cost of Capital (WACC)
- 11) Developed a Case Study on Renewable Energy in Jordan in Collaboration with NARUC for the 2011 USAID Publication *Encouraging Renewable Energy Development: A Handbook for International Energy Regulators*

Summary of Activities (Jordan)

In FY12, NARUC held three major activities. The first activity was a workshop on *Technical and Non-technical Electricity Losses from a Regulatory Perspective* that took place May 15-16, 2012 in Amman. The workshop brought together staff from the ERC, three distribution companies and a generation company to learn about strategies to reduce system losses. Participants agreed that measurement and verification of losses are a key step to creating a plan to reduce losses. To this end, Jordan's largest distribution utility, at the mandate of the ERC, has sought a consultant to study losses. Building on discussions with stakeholders at the workshop and the anticipated measurement study, the ERC plans to develop a strategic plan to reduce losses, in collaboration with utilities and the Ministry of Energy and Mineral Resources in 2013.

NARUC held a Partnership Exchange with the ERC on June 24-28, 2012 in Amman. This activity focused on renewable energy and the ERC's responsibilities under the April 2012 Renewable Energy and Energy Efficiency Law. NARUC members reviewed the ERC's framework to support renewable energy, including transmission, distribution and generation codes as well as the new renewable reference price list, net metering directive and directive governing sale of electricity produced from renewables. Using practical expertise, NARUC members led discussions with the ERC on key considerations for enabling



Engineers from Iowa and Jordan discuss reliability data during June 2012 RCA.

renewables based on the U.S. experience and potential barriers to renewable investments. At the end of the week, NARUC presented their observations and recommendations from the week's discussion.

NARUC held the final Partnership Exchange with Jordan September 9-13, 2012 in Amman. This exchange focused on energy efficiency (EE) and as such the ERC and NARUC geared the program towards establishing a foundation for stakeholder collaboration for the advancement of EE. The activity featured short updates from the ERC, Ministry of Energy (MEMR), National Energy Research Center (NERC), JEPSCO, NEPCO, IDECO and EDCO on EE efforts proposed, planned or ongoing to set the stage for a discussion of lessons learned and challenges in Jordan. Funding and coordination of EE projects remain

challenges and as such NARUC experts shared U.S. experiences in coordination for EE program planning, development and implementation, touching on the legal, financial and administrative lessons learned. Under these programs, NARUC experts detailed how EE programs were funded and implemented from a financial point of view, providing examples on time-of-use tariffs, escrow-funded utility EE programs and bill-rider funded demand-side management programs. Through roundtable discussions, NARUC experts helped participants explore how EE projects could move forward. Using a hypothetical pilot project as a model for discussion, participants discussed where the funding would come from, what roles each stakeholder would pay and what goals should be set for such a project. NARUC experts encouraged participants to consider a pilot project, as a best practice from the U.S., that would enable Jordan to work through challenges on a limited scale before launching country-wide programs.

During FY12, NARUC also provided technical training for three ERC staff at U.S.-based courses. Two staff attended the New Mexico State University Utility Basics Training Course, October 23-28, 2011 in Albuquerque, NM and one attended the Public Utilities Research Center/World Bank Training on Utility Regulation and Strategy, June 10-23, 2012 in Gainesville, Florida.

The close of FY12 marks the end of the NARUC/Jordan Partnership.

Constraints Encountered (Jordan)

In the beginning of FY12, activities under the Partnership were slightly delayed due to new leadership at the ERC, including a new Chairman and two new key Commissioners. NARUC and USAID/Jordan worked to collaborate with the ERC to identify priority topics under the new leadership and to adapt the workplan to these issues.

At the institutional level, lack of independence of the ERC continues to be a hurdle. Political pressure and the structure whereby ERC rules must be approved by the Cabinet which has created restrictions on the effectiveness of the regulator, particularly on their ability to move towards cost-reflective tariffs and to hedge volatile fuel prices. Combined with the unreliability of Egyptian natural gas, due to events in the region over the last year, the ERC has not been able to stem the rapidly growing debt of the state-owned transmission company, NEPCO, which is several billion USD in debt. Furthermore, progress on EE issues is delayed because of a lack of clarity of the roles of key stakeholders, sources of funding, priority targets, etc. The ERC continues to wait for the passing of the EE bylaws and for clear signals from MEMR on the role of the ERC in EE as well as funding options for EE.

ii. Nigeria

Major Accomplishments (Nigeria)

As a result of the various Partnership activities with the Nigerian Electricity Regulatory Commission (NERC):

1. NERC has created a safety and health regulation for the electricity industry and has made it mandatory nationwide.
2. NERC has developed a manual for regulations, evaluations and implementation of monitoring tools to Independent Power Producers who NERC issues licenses. In addition they are trying to push for a yearly Key Performance Indicator (KPI) report from the IPPs so the commission can use this tool as a way to monitor and evaluate their performance and activities. This is based on a KPI template they saw in Michigan).

3. NERC has designed and approved a Reporting Compliance Regulations documents that all IPPs use on a monthly basis to report their various activities to the commission.
4. NERC is developing a Uniform System of Accounts for the regulatory financial reporting by its licensees. It is also assisting licensees to convert from Nigerian accounting standards to international accounting standards (in line with Federal Government policy).
5. NERC has enhanced education campaigns for consumers to save on energy and has opened more regional offices throughout Nigeria to allow better public participation..
6. The commission is currently considering setting up a Power Consumer Assistant Fund (PCAF) to make power affordable to low income families. The lifeline tariff (as it currently exists) is based on consumption levels i.e. not more than 50kwh/month

Summary of Activities (Nigeria)

May 7-16, 2012, NARUC organized a study tour with key NERC staff and visited the D.C. Public Service Commission, the Federal Energy Regulatory Commission, the Michigan Public Service Commission, and the U.S. Department of Energy. In addition, NERC staff also attended the World Forum on Energy Regulation V in Quebec, Canada with the goal to learn the most up-to-date techniques in the areas of market competition, regulatory best practices, and renewable energy.

Another group of NERC staff attended the NARUC Utility Rate School in San Diego, California from May 14-18, 2012. NERC has found these trainings to be a great opportunity for hands-on skills instruction in public-utility ratemaking and setting utility rates.

July 25-26, 2012 NARUC staff traveled to Abuja for a mid-term assessment and held several meeting with USAID/Nigeria and NERC to assess the capacity building needs of NERC and plan future activities. In late July, NARUC funded the development and production of a major consumer outreach campaign to sensitize the public of the importance of the new rate increases under the Mutli-Year Tariff Order (MYTO II).



NERC Interns Meet with the DC Public Service Commission, May 2012.

Constraints Encountered (Nigeria)

NARUC had originally proposed a Gas-to-Power forum in FY12, but there was not consensus within NERC how that forum should be organized, and what NERC's role would be. This caused delays in implementation. However, after discussions with USAID/Nigeria and NERC in July, NARUC was better able to identify NERC's need and has scheduled a Gas-to-Power workshop for November 2012.

b. Task 2. Training and Capacity Building for National Regulatory Agencies and Regional Regulatory Associations

i. Bangladesh:

Major Accomplishments (Bangladesh)

1. Energy Audit – NARUC hired Mr. Sabyasachia Pattanai from Tetra Tech to streamline the grouping of accounts and allocation of costs; evaluate and assess costs, pricing, and sales of electric power generation; develop procurement mechanisms and inventory management. The consultant accomplished the following tasks:

- Energy regulatory audit of the Tongi Electric Power Generation Plant was prepared and cost analysis was carried out. It includes observations and recommendations for calculating Key Performance Indicators (KPIs), KPIs comparison to industry benchmark, heat rate comparison, plant load factor. Also, the consultant recommended to reduce auxiliary power consumption; reduce the events of running the Tongi power plant on reduced capacity; gas supply should be made a priority; measure and monitor SO_x and NO_x emissions and install a flue gas analyzer.
- The consultant emphasized the benefits of practicing a Uniform System of Accounts by the Bangladesh Power Development Board (BPDB) and BERC because it will (i) make cost comparison among different power generators easier for tariff determination and decision making; (ii) reduce the work of generation licensees as the Uniform System of Accounts will cater both the regulatory audit and statutory company accounting; (iii) provide investors with consistency, fairness, and transparency.
- Also, the consultant developed a model RFP and ToR for BERC and BPDB to use when conducting an Energy Regulatory Audit.

2. Uniform System of Accounts – NARUC selected a consultant, Mr. Sam West, to work on Uniform System of Accounts for a month in Dhaka. He will arrive in Dhaka in October 2012 and the results of his work will be reported in the next annual report.

3. In-house training –NARUC conducted the following training modules with BERC, BPDB, Tongi Power Station, and Dhaka Electricity Supply Company (DESCO) participants:

- Energy Regulatory Audits – A General Overview
- Energy Regulatory Audits – Further Technical Insight
- The Effect of Regulatory Audits on Rate Cases
- Tariff Rate Design
- Uniform System of Accounts – A General Overview
- Uniform System of Accounts & Its Applications
- Power Purchase Agreements
- Consumer rights and Obligations
- Quality of Service Regulation

4. Settlement and Dispute Resolution – NARUC's Chief of Party (COP) combined and rewrote former working draft "Energy Consumer Rights" and "Dispute Settlement" regulations into the Final Draft "BERC Procedures for the Settlement of Disputes Regulation

2012” which emphasizes the resolution of disputes before being filed as a BERC case and deemphasizes the authority and use of an arbitrator to resolve disputes between and among Licensee’s and between Licensee’s and Customers.

5. Regulatory Internship - BERC indentified three technical staff from the commission and one from Dhaka Electricity Supply Company (DESCO) who will go to the Energy Regulatory Commission (ERC) of Philippines for a two-week internship to learn about the implementation of a Uniform System of Accounts; demand side management; feed-in tariffs for solar, biomass, waste to energy; consumer complaint and dispute resolution. The training will take place in the middle of October 2012 and will be reported on in the next annual report.

Summary of Activities (Bangladesh)

NARUC organized a scoping trip with a consultant after receiving a mission buy-in for FY12 to support the Bangladesh Energy Regulatory Commission (BERC). Following the trip, which assessed BERC’s needs and designed a work plan for FY12, the Chief of Party and Program Manager were hired and put in place by early February 2012. Mike Biddison (COP) refined the workplan and defined tasks after having initial meetings with BERC Commissioners and Staff. NARUC hired a new Chief of Party in August 2012, Dr. Hasso Bhatia, to replace Mike Biddison who left for another consulting opportunity.

In collaboration with BERC, the following short-term consultants were hired for the reporting period:

Energy Audit – BERC requested to conduct work in the audit area in order to: streamline the grouping of accounts and allocation of costs; evaluate and assess costs, pricing, and sales of electric power generation; develop procurement mechanisms and inventory management. NARUC chose a consultant with TetraTech to implement these tasks; the consultant worked with Tongi electric power generation plant in Dhaka, Bangladesh, to conduct an energy regulatory audit and accomplished the following tasks:

- Energy regulatory audit of the Tongi Electric Power Generation Plant was prepared and cost analysis was carried out. It includes observations and recommendations for calculating Key Performance Indicators (KPIs), KPIs comparison to industry benchmark, heat rate comparison, plant load factor. Also, the consultant recommended to reduce auxiliary power consumption; reduce the events of running the Tongi power plant on reduced capacity; gas supply should be made a priority; measure and monitor SOx and NOx emissions and install a flue gas analyzer.
- The consultant emphasized the benefits of practicing a Uniform System of Accounts by the Bangladesh Power Development Board (BPDB) and BERC because it will (i) make cost comparison among different power generators easier for tariff determination and decision making; (ii) reduce the work of generation licensees as the Uniform System of Accounts will cater both the regulatory audit and statutory company accounting; (iii) provide investors with consistency, fairness, and transparency.
- Also, the consultant developed a model RFP and ToR for BERC and BPDB to use when conducting an Energy Regulatory Audit.

Uniform System of Accounts – NARUC selected a consultant, Sam West, to work on Uniform System of Accounts for a month in Dhaka. He will arrive in Dhaka in October 2012 and the results of his work will be reported in the next annual report.

Mr. West's job will be to work with the 10- member team comprised of representatives from BERC and the distribution utilities and complete the following tasks:

- (i) Examine the current system of accounts and determine whether the classification of accounts and subaccounts is compatible with the draft Uniform System of Accounts
- (ii) Resolve any differences and e difficulties faced in adopting the draft Chart of Accounts (COA) by, modifying, adding, deleting or reassigning appropriate accounts/subaccounts as necessary.
- (iii) Develop a synchronized draft of COA with cross-references between the current and the proposed COA with a view to its applicability to all utilities.
- (iv) Identify software that provides the conversion to the synchronized draft Chart of Accounts as mentioned in (iii) above.
- (v) Consultant may select a small segment of accounts and demonstrate the convertibility into the corresponding draft Chart of Accounts.
- (vi) Recommend actions the Commission or the utility may take to harmonize the conversion and facilitate the implementation of USoA.

In-house training –NARUC conducted the following training modules with BERC, BPDB, Tongi Power Station, and Dhaka Electricity Supply Company (DESCO) participants:

- Energy Regulatory Audits – A General Overview
- Energy Regulatory Audits – Further Technical Insight
- The Effect of Regulatory Audits on Rate Cases
- Tariff Rate Design
- Uniform System of Accounts – A General Overview
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Settlement and Dispute Resolution - NARUC COP combined and rewrote former working draft “Energy Consumer Rights” and “Dispute Settlement” regulations into the Final Draft “BERC Procedures for the Settlement of Disputes Regulation 2012”, which emphasizes the resolution of disputes before being filed as a BERC case and deemphasizes the authority and use of an arbitrator to resolve disputes between and among Licensee's and between Licensee's and Customers.

Regulatory Internship - BERC indentified three technical staff from the agency and one from DESCO who will go to the Energy Regulatory Commission (ERC) of Philippines for a two-week internship to learn about other things the implementation of Uniform System of Accounts; demand side management; feed-in tariffs for solar, biomass, waste to energy; consumer complaint and dispute resolution. The training will take place in the middle of October 2012.

Constraints Encountered (Bangladesh)

The one year timeframe for the project was rather short, especially given the status of BERC. With the time required to assess BERC's needs, design a program, and find a

qualified advisor to BERC (Chief of Party), the remaining time to implement the project was limited. Additionally, the Chief of Party, Mike Biddison, resigned from the project after being employed for six months and three months before the completion of the project. Hasso Bhatia was hired to replace him and had one day to overlap with Mr. Biddison. The time needed for Dr. Bhatia to get a grasp of the project and develop a working relationship with BERC slowed down the activities.

BERC was slow in committing to ToRs that had been prepared for short-term consultants. The approval process for the ToRs for the Energy Audit and Uniform System of Accounts took longer than expected, but eventually were approved (Energy Audit in May and Uniform System of Accounts in August). The short-term consultancy for docketing, as outlined in the workplan, was never executed because BERC didn't have strong commitments to invest in technology, human capital, and storage space.

BERC requested to cut back on multiple occasions (June and September) the frequency and number of weekly trainings prepared by NARUC and its team.

The Energy Audit consultant left Bangladesh 10 days before the completion of the contact term due to visa issues, and therefore, was not able to perform a final presentation of his report and receive comments from BERC staff.

Due to limited staff and interest from BERC, NARUC could not conduct work on parallel tracks. For example, NARUC could not have two consultants on different topics working at the same time.

ii. ERERA-WAGPA-NARUC West Africa Technical Assistance

Major Accomplishments (West Africa)

As a direct result of USAID assistance, NARUC has trained ERERA and WAPGA and both organizations have made procedural and technical changes based on internationally accepted best practices learned from NARUC members.

The West African Gas Pipeline Authority (WAGPA):

- Adopted a new damage prevention program, which is being implemented by the West African Gas Pipeline Company (WAPCo) in cooperation with navies in the various countries. Pipeline safety is one of WAGPA's most important areas of concern, as the pipeline is mainly offshore and is laid in highly-trafficked areas (harbors, commercial fishing etc.).

The ECOWAS Regional Electricity Regulatory Authority (ERERA):

- Developed the terms of reference for a transmission tariff study across the entire ECOWAS region. The study will begin in early 2012 and is an important first step in regional harmonization across the 15-member ECOWAS bloc.
- Established two committees, the Regulators Consultative Committee and an Operations Consultative Committee, in order to effectively consult with key stakeholders in the sector. In March 2012 the ERERA Consultative Committees met in Ghana where the members of the two committees adopted their terms of reference and developed annual work plans.
- Launched a procurement process for more development studies on regulatory framework and capacity building for their stakeholders based on international best practices.

- Facilitated an international power purchase agreement between Ghana and Burkina Faso by providing a study of the framework for the commercial and contractual arrangements of the interconnection.

Summary of Activities (West Africa)

From October 31 – November 11, 2012, NARUC conducted a U.S. study tour and internship on gas issues for representatives of WAGPA. WAGPA visited federal and state regulators: the Federal Energy Regulatory Commission, Pipeline Hazardous Material and Safety Administration, Maryland Public Service Commission, and others. They also visited with operators, such as Washington Gas, and during the internship portion of their visit went on site inspections of gas pipelines in Maryland and the District of Colombia.



Allan Freeman of the Michigan Public Service Commission presents on cross-border trading, balancing and congestion management.

February 14-16, 2012 NARUC conducted a gas workshop for WAGPA in Benin. As requested by WAGPA, it focused on open access, pipeline safety, accounting, pricing, dispute resolution, and wholesale gas markets. A course director led the workshop, with the assistance of two NARUC volunteers as presenters. The event was well received and attended by 15 regulators from the countries connected to the pipeline. WAGPA has demonstrated itself to be a highly capable regulator that works very hard to implement market-based regulation and adopt the best practices taught at the workshops put on by NARUC. A key issue up for discussion during the activity this quarter was how to price the gas coming out of Nigeria. Pegging it to Henry Hub would make it much too expensive for African buyers, and not necessarily reflect the true value. WAGPA seemed very interested in adopting the recommendation of the consultant that led the gas workshop in Benin. The recommendation focused on creating a basket of alternative fuels that generators could use and peg it to the basket average, a method often used in the European Union. If WAGPA does implement this pricing model, this would reflect international best practices and further illustrate WAGPA's commitment to improving the gas market in West Africa through transparent, independent regulation.

On April 24-26, 2012 NARUC held the 3rd ERERA/WAGPA workshop in Lome, Togo. This workshop focused on regulating to reduce power system losses, including the topics of gas transportation and sales, gas meters, safety valves, losses in electricity networks, transmission planning in the ECOWAS region, power system reinforcement and expansion, among other relevant issues. One of the issues that emerged during workshop discussions was the need for clarity of management structure within WAGPA. As a result of these issues, WAGPA may need to consider revising its founding legislation. WAGPA, as well as ERERA, also continues to face challenges in lack of the staff needed to fulfill the organization's duties.

May 14-18, 2012, NARUC facilitated technical training of one ERERA member to participate in the NARUC Utility Rate School in San Diego, California. The importance of cost recovery

and the need for reform of rate policies in West African utilities emerged as the key takeaways from his participation.

For the remainder of FY12, NARUC has coordinated with ERERA and WAGPA on the updated workplan focusing on clean energy. NARUC also introduced a new partner, the ECOWAS Center for Renewable Energy and Energy Efficiency (ECREEE), to the program. ECREEE supports NARUC's efforts to advance clean energy in West Africa and is in the process of preparing a basic Memorandum of Understanding to formalize the relationship with NARUC. ECREEE is currently working closely with ECOWAS to finalize a regional renewable energy policy, expected to be signed by the ECOWAS energy ministers in late 2012. ECREEE will then collaborate with each country in the region over the following year to develop action plans to implement the policy. NARUC's and ECREEE's work will cross fertilize and support each other as relevant.

Finally, NARUC received an information request from WAGPA following an offshore pipeline break in September 2012. WAGPA is looking for advice on how to respond to and prevent such emergencies. NARUC has contacted member regulators in Ohio and Massachusetts to collect and share relevant information.

Constraints Encountered (West Africa)

- The biggest challenge going forward for WAGPA and WAPCo will be the availability of Nigerian gas. Despite Nigeria's supply commitments to WAPCo, an official from the country's Department of Petroleum Resources stated at the second NARUC workshop (June 21-23, 2011, Abuja) that Nigeria may or may not honor obligations based on its internal market.
- ERERA's hiring of professional staff has been frozen until new appointments are made to the ECOWAS Council of Ministers, according to ERERA Commission Ifey Ikeonu. This means that the three council members (i.e. commissioners) are acting as both commissioners and technical staff. Assuming ERERA can hire the staff it needs in early 2012, there should be more improvements in the electricity market structure within ECOWAS.
- The new workplan focusing on clean energy, as requested by USAID/West Africa, has posed some challenges for the partnership. National regulators have shown limited interest in hosting national level policy forums on clean energy so NARUC is working with USAID/West Africa, ERERA and ECREEE to identify what were exactly challenges lay and to adapt the workplan to suit the more immediate needs of these countries.
- NARUC will look to ERERA and ECREEE to help facilitate communication with national regulators, leveraging their relationships and English/French language capabilities.
- As of the end of September 2012, responses to an RFP for National Policy Forums in the region were extremely limited, with no formal submissions. NARUC may need to reconsider its approach for FY13 and will be discussing other formats for activities with partners and USAID/West Africa in October.

c. Task 3. Technical Workshops

i. Regulating Clean Energy: An International Partnership

Major Accomplishments (Clean Energy)

As a direct result of USAID assistance, NARUC has trained national energy regulators from selected countries on the regulatory treatment of clean energy. These organizations have made procedural and technical changes based on internationally accepted best practices learned from NARUC members.

The Gambia Public Utilities Regulatory Authority (PURA):

- Drafted net-metering guidelines, based on the Wisconsin Public Service Commission “PSC 119”
- Drafted interconnection guidelines
- Collaborated with the Ministry of Energy in the drafting of a first ever renewable energy law, including proposing to include energy efficiency as part of the overall national clean energy strategy, based on best practices from the U.S.
- Assisted with an application for a 20MW solar park
- Evaluated Renewable Energy IPP Power Purchase Agreements
- Reviewed tariff-setting framework with focus on Renewable Energy
- Reviewed project appraisal procedures for clean energy investments.

Notably, these efforts to provide a regulatory framework for clean energy have given a clear signal to investors in The Gambia’s interest in clean energy and construction has started on a 1MW wind park by GAMWIND, West Africa’s first wind energy company.

Energy Regulatory Commission (CRE) of Mexico:

- Developed a report on next steps to address specific energy stakeholder concerns on the development of a renewable energy auction, based on discussions from the March 2012 *The National Regulatory Forum on Renewable Energy in Mexico: An Approach to Auctions* organized by NARUC
- Increased efforts and procedures on stakeholder engagement in the development of the auction
- Developed a pilot renewable energy auction mechanism for small-scale projects in collaboration with the Comisión Federal de Electricidad (CFE) and the Ministry of Energy (SENER) with a target of carrying out a first energy auction in late 2012.

Guatemalan National Electricity Regulatory Commission (CNEE):

- Co-hosted the first multi-stakeholder policy dialogue on renewable energy regulation in Guatemala.
- The RE internship (Aug 2011) highlighted ways to promote the development of renewable distributed generation and the intern worked with CNEE to carry out actions to encourage its development in Guatemala (allowing generators to sell energy into the whole sale market and the biggest distributor of the country began a tender process to accept offers of renewable distribution generators). Today there are 18 generators operating.
- Taking into consideration NARUC member expertise through the Clean Energy Partnership, CNEE has used lessons learned to create an action plan for expansion of RE (Perspectivas de los Planes de Expansion available at www.cnee.gob.gt).

Summary of Activities (Clean Energy)

Regulating Clean Energy: An International Partnership Program is designed to give regulators the tools and knowledge they need to make informed policy choices to meet national renewable energy and energy efficiency policy goals. Following regional workshops in 2011 introducing the regulatory treatment of clean energy, this program has progressed to results-oriented “mini-partnerships” between NARUC and national energy regulators from countries that show the potential to advance clean energy. NARUC works closely with the regulatory agencies to identify goals, tailor agendas, identify key stakeholders and implement activities. In FY12, NARUC organized three National Policy Forums on clean

energy (Guatemala, the Gambia and Mexico) and two peer reviews building on National Forums (The Gambia and Mexico).

The Gambia

NARUC held *The Gambia National Forum on Renewable Energy Regulation* January 31 – February 1, 2012, in Banjul, The Gambia. The forum was designed to facilitate dialogue on national level policy on clean energy and to increase stakeholder collaboration (regulatory authority, Ministry of Energy, Ministry of Environment, utilities, academics, etc.) in identifying next steps and moving towards tangible progress in promoting renewables. Sompou Ceesay of PURA noted that, “the



Commissioner Ifey Ikeonu of the ECOWAS Regional Electricity Regulatory Authority (ERERA) shares comments on the importance of clean energy development in West Africa.

forum was the injection many of our stakeholders were waiting for,” to jumpstart change in the legal and regulatory frameworks to promote new, clean energy investments in The Gambia. Key topics and follow-on topics identified through the forum included the need to a) create a comprehensive clean energy policy through the establishment of a renewable energy law, b) to establish interconnection rules and update licensing procedures to enable renewable energy generation, c) establish energy efficiency and electrical product standards in coordination with relevant government bodies, and d) establish ancillary services, particularly the metering of reactive power.

NARUC organized a Peer Review on September 3-7, 2012 in The Gambia. The Peer Review further supported PURA on the development and implementation of a renewable energy framework by providing practical review of key regulations/rules, sharing models from the U.S. and engaging in interactive exercises to work through the challenges and identify areas for further clarification under the current regulatory framework. Through the Peer Review, PURA identified several future areas for improvements including: streamlining licensing and permitting procedures, providing comments to the RE law and creating a Feed-in-Tariff framework. Advancements on these issues are significant steps for The Gambia in promoting clean energy.

Mexico

On March 6-7, 2012 NARUC held the National Regulatory Forum on Renewable Energy in Mexico: An Approach to Auctions in Mexico City, Mexico. CRE looks to auctions as a strategy to remove barriers to renewable energy investments, thereby complementing existing RE schemes and creating a more comprehensive regulatory framework to support RE. The Forum brought together stakeholders from across the energy sector, including CFE, SENER, financial institutions, and energy developers, to a) share lessons learned from approaches to renewable energy auctions in the U.S., Guatemala and Peru and b) facilitate a dialogue on challenges to RE in Mexico, particularly as it relates to auctions.

On August 20-23, 2012, NARUC held a Peer Review with CRE in Mexico City to provide targeted assistance to CRE on the development of the renewable energy auction

mechanism. The activity featured presentations from NARUC experts who had developed the Californian Renewable Energy Mechanism, an innovative and groundbreaking reverse auction mechanisms to promote clean energy investment. These experts shared lessons learned from the California experience and covered topics including:

- pricing methodologies, including externalities
- contract models for Power Purchase Agreements (PPA)
- application, approval process and implementation of energy auctions



Sergio Velasquez from CNEE shares the regulator's approach to the new RE auction mechanism in Guatemala.

Through this activity, NARUC and CRE collaboratively reviewed the preliminary design of the energy auction and the legal and regulatory framework for small-scale renewable energy projects. NARUC experts provided an overall assessment of CRE's technical ability to respond to the various areas of responsibilities defined under laws and regulations as a regulator and specifically in the context of energy auctions based in practical experience

Guatemala

NARUC held the *Guatemala Renewable Energy National Policy Forum* November 10-11, 2011, in Guatemala City, Guatemala. This event, engaged stakeholders from government and industry such as Instituto Nacional de Electrificación (INDE) to academics such as Universidad de San Pablo in a dialogue on clean energy priorities and policy dialogue, the first such dialogues in the country and a landmark step forward in promoting clean energy in Guatemala using a participatory model. Topics of discussion included:

- Guatemala's National Energy Policy
- Guatemala's National Renewable Energy Legal Framework
- Guatemala's Generation Expansion System Plan
- Experiences in Promoting RE Projects (International experience)
- The role of the regulator in promoting RE (International experience)
- Ways in which the National Energy Policy Influences the Promotion of RE (International experience)
- Specific barriers to consider in the Promotion of Development of Geothermal, Wind, Biomass, Solar, and Small Hydraulic Generation Technologies

In January 2012, the Guatemala Energy Regulator (CNEE) self-funded a NARUC expert to participate in discussions with industry prior to beginning an energy auction in March, helping important stakeholders understand the role of the regulator and the administration of auctions.

Asia (Pacific Energy Summit):

NARUC staff and a Commissioner participated in the Pacific Energy Summit in Hanoi, Vietnam. This was an opportunity to begin investigating the value of implementing a new Asia track for *Regulating Clean Energy: An International Partnership*.

Philippines:

NARUC participated in and presented at 1) The 3rd Asia-Pacific Dialogue on Clean Energy Governance, Policy, Law and Regulation (June 4-5) and 2) the Asia Clean Energy Forum, June 4-8, 2012.

Constraints Encountered**The Gambia**

Because of its small size, the country has little access to donor support and relies heavily on NARUC expertise and training opportunities. Limited investment, also due to the size of the country, creates incentive issues for RE development.

Mexico

The regulator does not have authority to set tariffs and has limited authority over the Federal Electricity Commission (CFE). NARUC is working to better complement existing work with CRE under the Mexico Low Emissions Development Program (MLED) and USAID/Mexico.

Guatemala

The outcome of the first RE auction process in Guatemala in March 2012 did not facilitate growth of RE to the degree expected. Guatemala is reviewing and modifying the auction in order to obtain better results.

Namibia

NARUC communicated with the Namibian regulator in FY12 to identify priority areas for a potential National Policy Forum. Additionally, NARUC met with USAID and Nexant to coordinate efforts in supporting the Namibian regulator and will continue to look at options in FY13 pending USAID approval.

Asia/Pacific

FY12 provided NARUC opportunities to strengthen relationships with regulatory agencies in the Asia and Pacific regions. At this stage in the clean energy partnership, NARUC believes stronger results will be achieved by focusing resources on countries in the Africa and/or Latin America region who have already benefited from prior participation in the partnership. NARUC will continue to see for ways to strengthen relations in the Asia/Pacific region and remains open to pursuing opportunities to provide support as they arise.

d. Task 4. Information Dissemination**i. Program Monitoring and Evaluation**

- NARUC's Practitioner's Guide for Monitoring and Evaluation, which is tailored to NARUC's international programs, continues to be a living document as NARUC begins to implement the various components of this monitoring and evaluation plan. The scaling tool is now in the pilot/implementation stage and NARUC expects there will be minor changes to the tool as we evaluate its effectiveness.

ii. Outreach to Regional Regulatory Associations

n/a

iii. Mission Programs

- Southern Africa: NARUC discussed a potential buy-in with USAID/Southern Africa during early FY12.
- NARUC continued discussions with USAID/Mexico as well as Tetra Tech, the contractor implementing the Mexico Low Emissions Development Program, to discuss the potential value of a Regulatory Partnership between the Mexican Energy Regulatory Commission (CRE). Per discussions with USAID/Mexico and Tetra Tech, NARUC began working on a proposal for a two year program with CRE. If approved, NARUC would work as a subcontractor to Tetra Tech.
- NARUC reached out to USAID/Namibia and Nexant, as the contractor implementing the African Infrastructure Development Project, which has a significant focus on clean energy project in Namibia, to discuss the potential for targeting Namibia for a National Renewable Energy Policy Forum and follow-on support under the Regulating Clean Energy International Partnership Program.
- NARUC began discussions with USAID regarding a potential buy-in from Ghana.

III. USAID PERFORMANCE INDICATORS

FY 12 Indicators for ENSURE	EGAT		Jordan		Nigeria		West Africa		Bangladesh	
	<i>men</i>		<i>men</i>		<i>men</i>		<i>men</i>		<i>men</i>	
Number of people receiving USG supported training in energy related policy and regulatory practices	<i>men</i>	186	<i>men</i>	41	<i>men</i>	23	<i>men</i>	37	<i>men</i>	n/a
	<i>women</i>	46	<i>women</i>	3	<i>women</i>	13	<i>women</i>	3	<i>women</i>	n/a
	TOTAL	232	TOTAL	44	TOTAL	36	TOTAL	40	TOTAL	n/a
Number of people receiving USG supported training in technical energy fields	<i>men</i>	n/a	<i>men</i>	27	<i>men</i>	3	<i>men</i>	1	<i>men</i>	59
	<i>women</i>	n/a	<i>women</i>	5	<i>women</i>	2	<i>women</i>	n/a	<i>women</i>	4
	TOTAL	n/a	TOTAL	32	TOTAL	5	TOTAL	1	TOTAL	63
Number of energy agencies, regulatory bodies, utilities and civil society organizations undertaking capacity strengthening as a result of USG assistance										
	TOTAL	78	TOTAL	8	TOTAL	1	TOTAL	10	TOTAL	7
Number of people receiving USG supported training in global climate change including in clean energy technologies (mitigation)	<i>men</i>	186	<i>men</i>	66	<i>men</i>	20	<i>men</i>	n/a	<i>men</i>	n/a
	<i>women</i>	46	<i>women</i>	7	<i>women</i>	12	<i>women</i>	n/a	<i>women</i>	n/a
	TOTAL	232	TOTAL	73	TOTAL	32	TOTAL	n/a	TOTAL	n/a

INDICATOR TARGETS FOR E3 FUNDING

FY12 Indicator Targets and Actual for E3 Funds only

1. Total public and private funds leveraged by USG for energy projects

FY12 Target: \$40,000

FY12 Total: \$61,826.40

FY13 Target: \$48,450

Note: The In-Kind contribution is higher than expected due to RE Internship program that took place in August 2011, but the In-Kind was not submitted, reported, and added to NARUC accounting until after close of FY11 period.

2. Person hours of training completed in technical energy fields supported by USG assistance-men

FY12 Target: 1875 hours

FY12 Total: 3,132 hours

FY13 Target: 3056

Note: The number of hours of training is higher than expected due to greater interest and participation in the National Policy Forums and the Peer Reviews in The Gambia, Mexico, and Guatemala.

3. Person hours of training completed in technical energy fields supported by USG assistance-women

FY 12 Target: 625 hours

FY12 Total: 796 hours

FY13 Target: 488 hours

Note: The number of hours of training is higher than expected due to greater interest and participation in the National Policy Forums and the Peer Reviews in The Gambia, Mexico, and Guatemala.

FY2012 In-Kind Services for EPP-A-00-09-00001-00 (as reported during Oct 1, 2011-Sept 30, 2012 period)

California PUC	\$9,216.00
Florida PSC	\$3,078.13
Iowa UB	\$11,387.52
Maine PUC	\$1,054.00
Minnesota PUC	\$4,419.36
Montana PSC	\$1,376.61
Ohio PUC	\$7,077.61
Oregon PUC	\$2,835.00
Private (USAID EE meeting)	\$2,062.50
Vermont PSC	\$7,453.00
Washington UTC	\$8,961.39
Wisconsin PSC	\$2,905.28
Total	\$61,826.40