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# FY15 ANNUAL REPORT

ENHANCING SUSTAINABLE UTILITY REGULATION  
(ENSURE) PROGRAM: EPP-A-00-09-00001-00

October 1, 2014 – September 30, 2015

## **OCTOBER 2015**

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National  
Association of  
Regulatory  
Utility  
Commissioners

## FY15 ANNUAL REPORT

PROGRAM: Enhancing Sustainable Utility Regulation (ENSURE)  
 COUNTRIES IMPACTED: Global/Multi-Regional  
 COOP. AGREEMENT #: EPP-A-00-09-00001-00  
 TIME PERIOD: FY15 (October 1, 2014 – September 30, 2015)  
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## I. DESCRIPTION OF PROGRAM

The Enhancing Sustainable Utility Regulation (ENSURE) program creates a means and structure whereby regulators from the economies in transition can discuss mutual challenges and examine best practices with their counterparts from the U.S and in some cases, with other regulators within the same region. 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 worldwide within the energy sector, and as requested, in others such as water and telecommunications. One of the key benefits of NARUC's relationship with the USAID Bureau for Economic Growth, Education the Environment (E3) is our ability to rapidly respond to requests for assistance and monitor programs on an ongoing basis. In FY15, E3 provided funding for NARUC to design and develop a cost reflective tariff training module that has been implemented in Tanzania and Nigeria, with future implementation plans on a regional and national-level basis.

This training supports a key component of the USAID and Power Africa effort to assist countries in the region to develop and successfully implement cost reflective tariffs. This module is described in depth and is also cross referenced in the individual country sections for Tanzania and Nigeria, below. The Power Africa initiative, a five-year U.S. government program to support increased access to electricity in Sub-Saharan Africa seeks to:

- a) **Attract Investment in Africa's Energy Sector** - accelerate growth of an enabling environment for energy sector investment, by focusing on support for transactions.
- b) **Build Capacity for Project Delivery and Energy Sector Reform** - increase partner government capacity to develop, approve, finance and ultimately bring power projects on line.
- c) **Support Transparent Natural Resource Management** - promote sound legal and regulatory structures to manage discoveries of oil and gas in line with international standards of transparency and good governance.

Although the initial phase of Power Africa engaged the governments of six countries, the initiative is currently expanding activities and presence across all of sub-Saharan Africa. Each country has set landmark power generation goals and is working towards power sector reforms on various levels. In 2015, NARUC, as a USAID implementing partner, supports the Power Africa initiative through both new and continuing regulatory partnerships, including the following:

- **Nigeria Regulatory Partnership** (2008-present)
- **Tanzania Regulatory Partnership** (2013-present)
- **Ethiopia Regulatory Partnership** (2014-present)
- **East Africa Regional Regulatory Partnership** (2014-present)
- **West Africa Regional Regulatory Partnership** (2014-present)

In addition, through its cooperative agreement with USAID, NARUC also implements the **Mexico Regulatory Partnership** (2013-present).

NARUC's partnerships provide regulatory capacity building for national and regional regulators as well as stakeholders, including policymakers and utilities. Activities seek to share international best practices and provide a platform for regulatory dialogue to support sound legal, technical and regulatory frameworks. From providing technical assistance, to support for privatization of the electricity sector, to engaging regulators in regional discussions on harmonization to enable cross-border trade, NARUC's partnerships are results-oriented and driven by our foreign partners. NARUC also collaborates closely and on an ongoing basis with USAID, the U.S. Department of State, foreign partners, USAID implementing partners and other donors to ensure that partnership activities support broader energy sector goals and complement existing programs.

## II. New Initiative: Cost-Reflective Tariffs and Regulatory Risk

Establishing a sound economic basis for energy prices is one of the most critical functions of the energy regulator. Pricing has broad implications for the health of the national utility sectors and countries' economies. Tariffs provide a necessary signal for investors who depend on steady revenue streams to manage stable energy supply and further modernize the sector. The existing inefficiencies have exposed the significant need for stronger efforts to establish cost-reflective tariffs and financially viable electricity sectors.

Under funding support from E3, NARUC developed a scenario-based game simulation on designing and applying cost-reflective tariffs blends capacity-building with scenario-based simulation: energy sector stakeholders participate in an interactive format – a game – that explores regulatory decision-making to promote sustainable energy sector development. Participants work in small teams, debating real-world challenges and analyzing the implications of different regulatory choices. Participants exchange perspectives with each other and learn the pricing and sustainability impacts of these choices. This training can be applied across a number of topics in a modular manner.

The training was extensively tested with NARUC and USAID staff and implemented in Tanzania in August 2015 and Nigeria in September 2015 (the implementation was funded through NARUC's Tanzania and Nigeria Partnerships respectively). The training already has had results by allowing the Tanzanian and Nigerian regulators to interact with energy sector stakeholders in each country and provide a platform to discuss the challenging issues surrounding setting tariffs. Both regulators were able to build their capacity in understanding the components of cost-reflective tariffs and how to translate this into customer rates.

<b>COST-REFLECTIVE TARIFF TRAINING MODULE</b>	
<b>PARTNERSHIP CONTEXT</b>	
<p>Implementing cost-reflective tariffs is a crucial factor in establishing financially viable electricity sectors and creating an environment that promotes private infrastructure investment. In emerging economies, however, tariffs often do not fully cover the cost of power. Government subsidies constitute a moderate-to-substantial component of retail price, distorting price signals for investors and consumers alike. Throughout emerging economies, challenges with bill collections and both technical and non-technical losses seriously undermine the financial stability of the utilities. This leads to chronic underinvestment in new infrastructure and insufficient maintenance of existing facilities, because the utilities do not have access to capital and lack the financial stability to ensure payment to independent power producers.</p>	
<b>RESULTS</b>	
<b>Regulatory Progress and</b>	<ul style="list-style-type: none"> <li>• Participating regulatory bodies' institutional governance to support implementation of cost-reflective tariffs strengthened</li> </ul>

<b>Results</b>	<ul style="list-style-type: none"> <li>Principles of calculating cost-reflective tariffs in participating countries enhanced</li> </ul>
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## SUMMARY OF ACTIVITIES

<b>Cost Reflective Tariffs</b>  <b>Stakeholder Engagement</b>	<p>The computer-based simulation was pilot-tested for representatives from USAID and the US Department of State in Washington, DC from July 21-23, 2015. The participants were able to see the innovative, new training for the first time, and to provide valuable feedback for the fine-tuning of course materials. With this input, the computer simulation was updated and improved for the implementations in Tanzania in August 2015 and Nigeria in September 2015.</p>
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<b>Cost Reflective Tariffs</b>  <b>Stakeholder Engagement</b>	<p>NARUC organized a training on cost-reflective tariffs from August 17-20, in Dar es Salaam, Tanzania. The training was not only attended by EWURA staff but also by representatives from TANESCO, the Tanzania Petroleum Development Corporation (TPDC), the Tanzania Private Sector Foundation (TPSF), the Ministry of Finance (MoF), the Ministry of Energy and Minerals (MEM), Zanzibar Utilities and Regulatory Authority (ZURA), and the Zanzibar Electricity Company (ZECO). As EWURA reviews and approves the tariff applications of TANESCO it is important that the utility also understands how cost-reflective tariffs are derived (and similarly in Zanzibar ZURA reviewing and approving ZECO's tariffs). For natural gas, the TPDC currently acts as quasi utility as they had applied for the natural gas transmission and processing tariff). Additionally, since in Tanzania the utility is government-owned, it is important to also increase the understanding of tariffs and costs of electricity within the relevant government entities – MEM and MoF. As electricity rates among other things determine the attractiveness of Tanzania for the private sector, the TPSF also attended the training to understand the issue of cost-reflective tariffs further.</p>
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<b>Cost Reflective Tariffs</b>  <b>Stakeholder Engagement</b>	<p>NARUC organized a training on cost-reflective tariffs from September 14-17, in Abuja, Nigeria. NERC staff and representatives from the 11 distribution companies (DISCOs) in Nigeria attended the training, which was led by NARUC experts and technical advisors. As NERC reviews and approves the tariff applications of the DISCOs, it is important that they also understand how cost-reflective tariffs are derived. Additionally, since all of the DISCOs were privatized in November 2013, it is important to establish cost-reflective tariffs so that the utilities can be on strong financial footing. As the sole transmission entity in Nigeria, the Transmission Company of Nigeria (TCN) also attended the training to understand the issue of cost-reflective tariffs further. The training featured lectures on the aspects of regulation, cost of service studies, determining the revenue requirement and the tariff design. A simulation then allowed participants to address different policy considerations (such as an increase in electrification of rural areas and renewable energy requirements) into the tariff design.</p>
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## Tariff Module Indicators

### 4.4.1-34

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

#### **Actual FY15**

Male: 0 hrs  
Female: 0 hrs  
Total: 0 hrs

#### **ILLUSTRATIVE**

##### **Tanzania Cost-Reflective Tariff Training\***

Male: 528 hrs  
Female: 168 hrs  
Total: 696 hrs

#### **Target FY15**

Male: 0 hrs  
Female: 0 hrs  
Total: 0 hrs

##### **Nigeria Cost-Reflective Tariff Training\***

Male: 600 hrs  
Female: 144 hrs  
Total: 744 hrs

### 4.4.1-35

Number of days of USG funded technical assistance in technical energy fields provided to counterparts or stakeholders

#### **Actual FY15**

Total: 0 days

#### **ILLUSTRATIVE**

##### **Tanzania Cost-Reflective Tariff Training\***

Total: 3.5 days

#### **Target FY15**

Total: 0 days

##### **Nigeria Cost-Reflective Tariff Training\***

Total: 3.5 days

### 4.8.2-29

Number of person hours of training completed in climate change as a result of USG assistance

#### **Actual FY15**

Male: 0 hrs  
Female: 0 hrs  
Total: 0 hrs

#### **ILLUSTRATIVE**

##### **Tanzania Cost-Reflective Tariff Training\***

Male: 528 hrs  
Female: 168 hrs  
Total: 696 hrs

#### **Target FY15**

Male: 0 hrs  
Female: 0 hrs  
Total: 0 hrs

##### **Nigeria Cost-Reflective Tariff Training\***

Male: 600 hrs  
Female: 144 hrs  
Total: 744 hrs

### 4.8.2

Number of person hours of training in climate change supported by USG

#### **Actual FY15**

Male: 0 hrs

#### **ILLUSTRATIVE**

##### **Tanzania Cost-Reflective Tariff Training\***

Male: 528 hrs

Female: 0 hrs  
Total: 0 hrs

Female: 168 hrs  
Total: 696 hrs

**Target FY15**

Male: 0 hrs  
Female: 0 hrs  
Total: 0 hrs

**Nigeria Cost-Reflective Tariff Training\***

Male: 600 hrs  
Female: 144 hrs  
Total: 744 hrs

## **II. PROGRAMMING FOR RESULTS: MONITORING AND EVALUATION**

NARUC is committed to systematic and results-based project management in order to promote and capture important changes in operations and processes of the regulatory institutions with which it works. To better capture the results of the ENSURE program, E3 funds were also used to continue to refine NARUC’s monitoring and evaluation plan. Workplans, trip reports and quarterly reports have been enhanced to provide more focus on results reporting than activities. These modifications will assist NARUC to better design programs that are reflective of specific needs in each country, and to closely monitor these programs. Building on work under E3 to develop a comprehensive M&E strategy for NARUC partnership programs, NARUC has been implementing and continuing to improve M&E mechanisms and reporting across all projects in FY15. The M&E strategy helps to better guide, manage and capture results of programs underway in East Africa regional, West Africa regional, Ethiopia, Mexico, Nigeria, and Tanzania. Based on the overarching M&E strategy, NARUC continues to train staff and streamline workplans for individual projects to reflect results-oriented project planning. NARUC also continues to revise templates for reporting, including trip report, quarterly reports, and annual reports. NARUC also is increasing its outreach through new feature stories that communicate to a wider audience in digestible language the value of NARUC’s work with foreign partners and partner’s accomplishments.

In addition to these changes, NARUC continues to have a Results Framework to which each project is linked through a Logical Framework. The performance targets are developed on an annual basis with our partner regulators. These performance targets in turn, direct activity formats. The information sharing that takes place under NARUC’s programs has a wide sphere of influence, often affecting other regulatory processes and/or energy sector stakeholders in addition to the initial stakeholders. Throughout, NARUC tracks and reports on secondary results related to enhancements in a regulatory agency’s procedures or functions, as well as overall energy sector progress. Both targeted results and secondary results often take place over multiple years, emphasized by the “if, then” causal relationship built into the Logical Framework. In addition to this annual report, individual country-specific partnership work plans provide more detail, including the specific Logical Framework, and are available upon request. For the status of Performance Indicators, see Annex I. Below is also a summary of the primary areas of focus for each country program.

### **Topical Summary**

<u>East Africa</u>	<u>Ethiopia</u>	<u>Mexico</u>	<u>Nigeria</u>	<u>Tanzania</u>	<u>West Africa</u>
<b>Regional Transmission and Reliability</b>	<b>Energy Efficiency</b>	<b>Transmission Reliability and Quality</b>	<b>Energy Efficiency</b>	<b>Natural Gas Regulation</b>	<b>Clean Energy</b>
<b>Regional Regulation</b>	<b>Tariff Methodology</b>	<b>Clean Energy</b>	<b>Transmission Reliability and Quality</b>	<b>Natural Gas Transmission Tariffs</b>	
<b>Regional Tariffs</b>	<b>Stakeholder Engagement</b>	<b>Interconnection Regulation</b>	<b>Customer Service</b>	<b>Pipeline Safety</b>	
<b>Uniform System of Accounts</b>	<b>Uniform System of Accounts</b>	<b>Tariff Methodology</b>	<b>Market Monitoring</b>	<b>Cost Reflective Tariffs</b>	
<b>Utility Regulation</b>		<b>Market Monitoring</b>	<b>Cost Reflective Tariffs</b>	<b>Stakeholder Engagement</b>	
			<b>Stakeholder Engagement</b>		

### III. TASK I: BILATERAL PARTNERSHIPS

	<h2>ETHIOPIA</h2> <p><a href="http://www.naruc.org/USAID/Ethiopia">www.naruc.org/USAID/Ethiopia</a></p>
<h3>PARTNERSHIP CONTEXT</h3>	
<p>The <i>Ethiopia Energy Regulatory Partnership</i> is an institutional strengthening program designed to enhance the Ethiopia Energy Authority’s (EEA) legal, technical and regulatory frameworks to oversee the energy sector and create an enabling environment for private investment. The Ethiopian government is striving to increase economic growth, expand electricity access and improve living conditions. In an effort to meet its economic goals, Ethiopia has focused on reform of its electricity sector and is on its way to unlocking its massive energy potential through development of its hydro and renewable energy sources. The EEA will play a key role in enhancing the production, supply and distribution of renewable and conventional energy alike. Therefore, this partnership aims to strengthen EEA’s capacity, specifically, as it relates to tariff methodologies, stakeholder engagement and energy efficiency mandates. The partnership complements the <i>East Africa Regional Regulatory Partnership</i> by providing tailored capacity building support in key areas for the advancement of national level regulatory initiatives.</p>	
<h3>RESULTS</h3>	

<b>Logical Framework Sub-purposes</b>	<ol style="list-style-type: none"> <li>1) Enhance its regulatory frameworks to encourage private investment</li> <li>2) Strengthen its institutional governance</li> </ol>
<b>Regulatory Progress and Results</b>	<p><b>Tariff Methodologies</b></p> <ul style="list-style-type: none"> <li>• EEA’s knowledge and skills enhanced to implement Tariff Guidelines and Methodologies, an initial step towards establishment of cost reflective tariffs. EEA has submitted the Tariff Guidelines &amp; Methodologies, the basis for an unbundled tariff and a multi-year tariff regime, to the government for approval with input from NARUC peer review.</li> <li>• As a direct result of knowledge shared from the Missouri Public Service Commission, the EEA has updated its tariff reporting template to reflect full calendar years as opposed to sub years to increase accuracy and review of information provided by the utility.</li> </ul> <p><b>Uniform System of Accounts</b></p> <ul style="list-style-type: none"> <li>• Based on exchange with NARUC, EEA identified the need to update their draft Uniform System of Accounts using international best practices and develop an implementation strategy. EEA plans to update its USoA and engage industry to identify consensus reforms as a direct result of practical information exchanged between the regulator and NARUC. This will support NARUC’s regional effort to harmonize across the region to support cross border trade.</li> </ul> <p><b>Organizational Restructuring</b></p> <ul style="list-style-type: none"> <li>• EEA’s institutional capacity was strengthened to monitor and evaluate programs and improve consumer services. EEA has reassessed its internal structure and proposed to the government inclusion of a customer handling team and a measurement and verification (M&amp;V) function.</li> </ul>
<b>Indicator Highlights</b>	<p><b><i>Key points from the indicators for the Ethiopia Partnership for FY2015 activities include the following:</i></b></p> <ul style="list-style-type: none"> <li>• <b>4 institutions</b> improved their capacity to address climate change issues.</li> <li>• <b>4 energy agencies, regulatory bodies, utilities and civil society organizations</b> undertook capacity strengthening.</li> <li>• <b>Exceeded by 46 people:</b> the FY2015 target number to receive training in climate change.</li> <li>• <b>Exceeded by 46 people:</b> the FY2015 target number to receive training in energy related policy and regulatory practices.</li> <li>• <b>Exceeded by 46 people:</b> the FY2015 target number to receive training in technical energy fields.</li> </ul>

<h2 style="margin: 0;">SUMMARY OF ACTIVITIES</h2>
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<p><b>Energy Efficiency</b></p> <p><b>Tariff Methodology</b></p> <p><b>Stakeholder Engagement</b></p>	<p>The first Ethiopia bilateral partnership exchange was an introductory activity to engage the EEA on energy efficiency, tariff methodologies and stakeholder engagement and to build understanding of current status of the Ethiopian energy sector. Discussions were based on elements of Ethiopia’s 2013 Energy Proclamation as well as the EEA’s Framework Strategy to build capacity as they strive to fulfill the mandates listed under the energy sector reform policy. Regulators used the platform to identify capacity building needs and next steps for the Authority that fed into this partnership and in overall enhancement for regulation of Ethiopia’s energy sector.</p>
<p><i>Belayaneh Gizaw of the EEA engages in discussion on rate design</i></p>	
<p><b>Tariff Methodology</b></p>	<p>The Ethiopia Peer Review held April 21-23, 2015 built upon the first partnership exchange on tariff methodologies and energy efficiency held in December 2014. In the December exchange, the EEA highlighted their efforts to construct a cost reflective tariff. As a step forward, the EEA received support from the European Commission through a consultancy, which assessed the EEA’s current tariff schemes and made recommendations that the EEA intends to incorporate. The completed analysis was done through the <i>Tariff Guidelines and Methodology for the Ethiopia Electricity Sector in Ethiopia: Generation, Transmission and Distribution Sectors</i> document completed in February 2015. To build upon this work, NARUC organized a Peer Review on April 21-23, 2015 in which the Missouri Public Service Commission and the EEA worked collaboratively to conduct a detailed review and discussion on the practical implementation of the <i>Tariff Methodologies</i> in a peer to peer exchange format.</p>
<p><b>Price Regulation</b></p> <p><b>Tariff Methodology</b></p>	<p>In an effort to build the technical capacity of the EEA, NARUC sent two technical EEA staff that work on the <i>Tariff Guidelines and Methodologies</i> document to participate in a technical training. The purpose of this Training Course was to equip participants with the core concepts, objectives and techniques of designing and evaluating rate structures in the energy sector. It also considered the cost effective regulation of environmental liabilities. This training was held May 11-15, 2015 in Budapest, Hungary.</p>

<p><b>Uniform System of Accounts</b></p> <p><b>Tariff Methodology</b></p>	<p>As part of the partnership, NARUC organized the second Ethiopia Partnership Exchange held August 17-21, 2015 in Missouri. This activity was designed to support the EEA’s effort to establish sound tariff methodologies and development of cost reflective tariffs. It built upon the European Union’s recommendations in the <i>Tariff Guidelines</i> and provided support towards practical implementation. More specifically, this activity targeted the foundational components of tariff setting as it relates to gathering and analysis of data and regulatory accounting principles. Gathering quality data is a significant challenge for the EEA, so this activity provided an opportunity to discuss decision making practices for EEA given the current context of the availability of only imperfect data.</p> <p>The overarching goal of this exchange was for the EEA to take a step towards the deliverable, <i>Established Principles for Analysis of Utility Data</i>, which will be created collaboratively between NARUC and the EEA. This document, currently in the planning stages, will support the EEA as it works to better gather and analyze data that utilities submit. This includes how to better file and organize the data, analyze it and respond when certain elements of data are missing.</p>
<p><i>Missouri PSC staff and EEA further discuss Missouri tariff hearing procedures</i></p>	

	<p style="text-align: center;"><b>MEXICO</b>  <a href="http://www.naruc.org/USAID/Mexico">www.naruc.org/USAID/Mexico</a></p>
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**PARTNERSHIP CONTEXT**

The National Association of Regulatory Utility Commissioners has, since 2013, partnered with Mexico’s Energy Regulatory Commission (CRE) in the *Mexico Electricity Regulatory Partnership* with the support of the United States Agency for International Development (USAID). The partnership aims to improve CRE’s regulatory capabilities as Mexico moves ahead with landmark reforms to the country’s power and gas sector.

Through this partnership, NARUC aims to enhance Mexico’s regulatory framework to support reforms to the electricity sector as well as the development of low emissions energy resources on the nation’s grid. NARUC also aims to aid CRE in strengthening its institutional governance. NARUC will work to realize these goals by framing, designing and implementing activities with its Mexican partners.

## RESULTS

<p><b>Logical Framework Sub-purposes</b></p>	<ol style="list-style-type: none"> <li>1) Regulatory framework to support the reform of the electricity sector enhanced.</li> <li>2) Regulatory mechanisms to support low emissions development energy sector enhanced.</li> <li>3) CRE institutional governance strengthened.</li> </ol>
<p><b>Regulatory Progress and Results</b></p>	<p><b>Reliability and Quality Standards</b></p> <ul style="list-style-type: none"> <li>• Based on the lessons learned and recommendations shared by the three NARUC experts over the course of the workshop, CRE expects to adopt and approve the NERC standards for reliability and the NESC and NEC standards for power quality. In cooperation with the Federal Commission of Electricity (CFE) and future utilities, CRE plans to revise these standards as needed to better suit the Mexican context under the transformed energy environment.</li> <li>• CRE is expected to form working committees or working groups with other stakeholders such as the Ministry of Energy (SENER), the National Energy Control Center (CENACE), CFE, and future new market players in order to meet on an open and regular basis on reliability improvement-related matters, including the expansion of transmission lines.</li> <li>• Budget permitting, CRE will consider contracting with an independent third-party (or parties) to assume the responsibilities of monitoring and compliance with reliability and power standards.</li> <li>• As part of its concerted effort to quickly bolster its human and institutional capacity in order to meet the challenge of taking on 52 new regulatory responsibilities, CRE anticipates doubling or even tripling the size of its staff, including the addition of two commissioners and the creation of a new department — perhaps in the mold of the Oversight and Enforcement Division at the Public Utility Commission of Texas (PUCT) — dedicated to reliability and quality issues.</li> </ul> <p><b>Increasing Clean Energy Generation</b></p> <ul style="list-style-type: none"> <li>• During the Best Practices and Approaches in Implementing Clean Energy Certificates (CECs) Workshop, NARUC experts collaborated with CRE to create a new timeline for CEC implementation SENER originally projected to start the wholesale electricity market of CEC in January, 2016.</li> <li>• Throughout the workshop, CRE refined their understanding of the time constraints of the steps leading up to a well-functioning market which takes into account stakeholder input and builds for the long term.</li> <li>• The new possible start date for a running platform is January 2017. After a year of testing, the market could be operational as soon as January 2018.</li> </ul> <p><b>Tariff Setting</b></p> <ul style="list-style-type: none"> <li>• Staff who attended the NARUC Rate School Training from CRE developed new tariff instructions for electricity. The rough proposal of rate instructions includes all the steps, documents and methodologies for billing and rate design. CRE previously did not have any kind specific procedures or formulas for billing or rate design. After the approvals are finalized, CRE will formalize</li> </ul>

	<p>the tariff obligations.</p> <p><b>Stakeholder Engagement</b></p> <ul style="list-style-type: none"> <li>• SENER mentioned the valuable role that NARUC’s workshops play in facilitating dialogue among stakeholders. Through the workshop format and under the guidance of external experts, the various agencies will understand the strengths and weaknesses of the law and work to create documents and regulations that decrease the gap between the law and reality.</li> <li>• Officials in Mexico have made important in-roads toward greater collaboration and dialogue through NARUC workshops in August 2015 on Interconnection and Market Monitoring. The country’s landmark energy reform process is requiring government agencies, the utility, the regulator and others to work together in new ways and take on new responsibilities, making opportunities for engagement among stakeholders vital for the process to be successful.</li> </ul>
<p><b>Indicator Highlights</b></p>	<p><b>Key points from the indicators for the Mexico Partnership for FY2015 activities include the following:</b></p> <ul style="list-style-type: none"> <li>• <b>11 institutions</b> improved their capacity to address climate change issues.</li> <li>• <b>9 energy agencies, regulatory bodies, utilities and civil society organizations</b> undertook capacity strengthening.</li> <li>• <b>Exceeded by 26 people:</b> the FY2015 target number to receive training in climate change.</li> <li>• <b>Exceeded by 26 people:</b> the FY2015 target number to receive training in energy related policy and regulatory practices.</li> <li>• <b>Exceeded by 26 people:</b> the FY2015 target number to receive training in technical energy fields.</li> <li>• Funds leveraged by NARUC (in-kind) <b>exceed target by \$13,604.22.</b></li> <li>• <b>100% of activity participants</b> stated that the activity met the objective.</li> </ul>

<h2 style="text-align: center;">SUMMARY OF ACTIVITIES</h2>	
<p><b>Transmission Reliability and Quality</b></p>	<p>The October 8-9, 2014, workshop involved the participation of between 10-12 CRE commissioners and staff, the Commissioner of the Arkansas Public Service Commission (APSC), and two NARUC experts from PUCT. The three NARUC experts shared their experience in areas including: the importance of reliability and quality; development of reliability standards and compliance; development of power quality and compliance; and involvement of the regulator in the transmission expansion planning process.</p>
<p><b>Clean Energy</b></p>	<p>During the January 21-23, 2015 Best Practices and Approaches in Implementing Clean Energy Certificates (CECs) Workshop, NARUC experts led discussions on best practices and lessons learned for CRE and other stakeholders. In attendance were over 20 CRE representatives, two representatives from CENACE, which serves as the independent system operator, four from SENER, two representatives from the Ministry of Environment and Natural Resources (SEMARNAT) and two representatives from the Mexican Stock Exchange (BMV).</p>

	<p>To increase donor coordination, consultants supported by the German International Aid organization (GIZ), attended the workshop and collaborated with CRE and NARUC to ensure continuity and greater project success. The NARUC experts shared their knowledge and the successes and failures of clean energy certificate models in the U.S.</p>
<p><b>Clean Energy</b></p>	<p>The April 20 - May 1, 2015 Job Shadow on Lessons Learned in Implementing Clean Energy Certificates (CECs) included two participants from CRE, one representative from CENACE, and one representative from Mexico Low Emissions Development Program (MLED) under USAID/Mexico. The participants spent one week in California working with staff from California Public Utilities Commission (CPUC), the California Energy Commission, and the California Independent System Operator (CAISO).</p> <p>In the second week, participants worked with staff from PUCT and the Electric Reliability Council of Texas (ERCOT). Coordination between NARUC member organizations and non-NARUC member organizations that have specific roles in the U.S. Clean Energy Certificate programs proved valuable for representatives from CRE and CENACE.</p>
<p><i>CRE and NARUC experts discuss how Clean Energy Certificates in California have impacted investment</i></p>	
<p><b>Interconnection Regulation and Tariff Methodology</b></p>	<p>During NARUC's Rate School in San Diego, California from May 11-15, 2015 two staff from CRE received academic-style training on tariff setting. Utility setting best practices were presented by state public utility commissions, utility companies and legal, consulting and academic entities. The participants worked in groups to learn how to set revenue requirements during a mock water utility case.</p>

<p><b>Market Monitoring</b></p>	<p>NARUC organized a technical workshop with CRE in Mexico City August 12-14, 2015. Three NARUC expert volunteers — one from the Arizona Corporation Commission, one from Midcontinent Independent System Operator (MISO) and one from Michael Best &amp; Friedrich LLP — attended the workshop. Representatives from CAISO, ERCOT, the North American Electric Reliability Corporation (NERC) and the California Energy Commission (CEC) participated via teleconference. CAISO, the CEC, ERCOT and NERC were able to participate due to NARUC’s relationship with U.S. regulatory bodies. Attendees at the activity included 15 CRE representatives, five representatives from CENACE, three from SENER, and four representatives from CFE.</p> <p>The Interconnection Technical Workshop aimed to educate Mexican officials on U.S. regulatory frameworks, with emphasis on best practices and pitfalls to avoid. The workshop intended to support CRE and others as Mexico designs, implements and applies regulatory instruments to interconnect power plants with load centers. A well-designed regulation will facilitate the efficient operation of the grid, improved energy security and ease integration of renewables and other clean energy generation resources.</p> <p>Information and knowledge shared in this technical workshop provided key considerations to CRE for enriching its experience and improving its regulatory toolkit for designing and developing interconnection regulations. The regulatory instruments Mexican regulators will ultimately deploy will facilitate the formulation of technical specifications and standards, validation of renewable energy units, transparency, and surveillance mechanisms. The instruments will also provide elements for designing mechanisms that will enable CRE to update the regulatory framework and at the same time allow for a secure, efficient, sustainable, and transparent operation of the National Electricity Grid.</p>
<p><b>Market Monitoring</b></p>	<p>NARUC organized a workshop with CRE in Mexico City from August 18-20, 2015, that focused on the creation of a successful market monitor. Doing so requires the close coordination between the monitoring entity, the ISO or other entity that collects data about the market, and policy makers. As such, the workshop included contingents from CRE, CENACE, and SENER.</p> <p>Eighteen CRE representatives participated, along with five representatives from CENACE and four representatives from SENER. On the U.S. side, NARUC expert volunteers from PUCT, CAISO, and Potomac Economics participated, as did a National Renewable Energy Laboratory (NREL) representative who implemented the Market Monitor in Texas and currently works for ESTA International, a private consultancy.</p> <p>The workshop aimed to educate Mexican partners on the U.S. regulatory framework for market monitoring, including best practices and mistakes to avoid on a monitor’s design and implementation. Well-designed regulations will facilitate efficient market operations, diminish disputes and ensure competition in the Mexican electricity market under the newly restructured format. Since Mexico is undertaking a massive energy reform in attempts to boost the</p>

economy, it is of the utmost importance that the electricity market be efficient, transparent, and competitive to encourage growth and private investment.



## NIGERIA

[www.naruc.org/USAID/Nigeria](http://www.naruc.org/USAID/Nigeria)

### PARTNERSHIP CONTEXT

NARUC and the Nigerian Electricity Regulatory Commission (NERC) have engaged in a robust Electricity Regulatory Partnership under the auspices of USAID since 2008. Through this partnership, NARUC supports NERC's capacity building efforts on a wide range of topics, including tariff methodology, uniform system of accounts, system planning and demand, institutional transparency, and public education and outreach. The partners are collaborating closely to create a more sustainable electricity sector in Nigeria which will result in a more stable and reliable grid, thereby expanding economic opportunities for Nigerian citizens. This partnership supports the Power Africa initiative and the privatization of the energy sector in Nigeria. In March 2015, the Kentucky Public Service Commission (KPSC) was selected as the new Lead State Commission for the partnership.

The Nigerian political context in which the partnership exists may experience some change following the Spring 2015 elections. The new administration of President Buhari and the All Progressives Congress may advance anticipated energy legislation, introduce new legislation, or alter priorities regarding the electricity sector. As of early October 2015, the National Policy on Renewable Energy and Energy Efficiency, drafted by the Ministry of Power in 2013 with NERC input, awaits approval by the Federal Executive Council. The measure, which contains sections that would provide much needed clarity on national goals and NERC's role in achieving those goals, is still pending. With President Buhari still waiting to appoint important ministers in his new government (in September, Buhari announced that he would assume the role of Oil Minister), there is uncertainty about the new administration's plans for the energy and electricity sectors.

From an institutional perspective, NERC in particular struggles to combat the power of the Ministry of Energy and assert its independence and authority as a regulator of the electricity sector. In many instances, the ministry has taken actions that directly undermine NERC's authority. According to the NERC staff on the July 2015 Study Tour, inter-ministerial battles continue to absorb NERC's leadership at the expense of its regulatory responsibilities and reform efforts.

### RESULTS

#### Logical Framework Sub-purposes

- 1) Regulatory framework to support electricity sector reform drafted.
- 2) NERC institutional governance strengthened.

#### Regulatory Progress and Results

##### Energy Efficiency and Demand-Side Management

- Following the activity on energy efficiency in Dubai in December 2014, NERC has requested an additional technical workshop to increase knowledge and skills on the role of the regulator in energy efficiency and informing a national strategy for FY 2016.

##### Reliability and Quality of Power

- In September, NERC announced that it will prevent distribution companies from connecting new consumers to the grid without individual meters. The policy is designed to stop the current practice of distribution companies using bulk metering practices for entire communities and billing individuals based on estimated consumption. Billing at estimated consumption leaves the door open to inaccuracies and offers little transparency into the billing process. Regulators from the California Public Utilities Commission, who NERC staff visited with during NARUC's July 2015 Study Tour in San Francisco, strongly encouraged NERC staff to do all that it can to incentivize individual metering on the grid. This issue has become a vexing problem for the sector at large, and the new policy will hopefully go a long way toward ensuring that consumers are billed accurately and distribution companies can improve their finances. NERC's Chairman Dr. Sam Amadi stated that this new policy will go into effect following a public consultation period, and violations will be enforced via fines.

#### **Customer Service, Consumer Complaints, and Complaint Handling Procedures and Systems**

- Following the Job Shadow activity in June 2015 on customer service and consumer complaints, NERC has updated its call center standards based on information shared by the Public Utilities Commission of Ohio (PUCO).
- NERC has requested additional support in the area of customer complaint support for FY 2016 activities, which would include improved data usage to communicate complaints to distributions companies, better tracking of enforcement actions, and improved capacity to translate customer complaint data into improved service quality.

#### **Independent System Operator, Market Monitoring, Efficient Dispatch, Transmission Planning and Infrastructure**

- In February 2015, NERC announced that Nigeria's electricity sector had met all of the conditions necessary to achieve the long-awaited Transitional Electricity Market (TEM). Under the TEM, electricity sector trading is to be bound by market rules, official contracts, and the recently approved Multi Year Tariff Order 2.1 (MYTO 2.1). Through its partnership with NERC and with the support of USAID, NARUC provided capacity building for stakeholders and assisted NERC in the assessment of readiness for the TEM and the development of remedial action plans to help prepare market players for the initiation of the TEM.
- The Nigerian Electricity Regulatory Commission (NERC) announced plans in September to present a new regulation designed to stabilize the electricity sector in the event that a major private entity (newly privatized generation or distribution company) goes bankrupt. The regulation draws on lessons learned from the California Energy Crisis in 2000-2001, when Enron exerted significant market power over the transmission sector and engaged in price gouging. The situation that Nigeria seeks to prevent is where a single private entity accumulates enough market power that its bankruptcy eliminates a huge amount of capacity from the system and shocks prices. Also, as was the case in California, a disproportionately powerful private entity may be able to

	<p>manipulate the market to the detriment of consumers. Market monitoring is one of NERC’s essential functions following the privatization of distribution and generation companies in 2013, and this planned regulation represents a significant step to maintain a strong and diversified market. NARUC arranged for regulators from NERC to study the California Energy Crisis and the California electricity system during a two-week study tour in the San Francisco Bay Area in July 2015, and NERC has adopted those lessons learned in this new regulation. After the privatization of distribution and generation companies in 2013, NERC has been especially concerned about potential market power abuse. Diversifying the sector and preventing the emergence of monopolies that could exercise undue power on the sector is an important element of this reform process.</p> <p><b>Cost Reflective Tariffs, Stakeholder Engagement</b></p> <ul style="list-style-type: none"> <li>• NERC has stated its intent to increase electricity tariffs in November 2015 in order to bring revenues more in line with the costs of the electricity grid.</li> </ul>
<p><b>Indicator Highlights</b></p>	<p><b>Key points from the indicators for the Nigeria Partnership for FY2015 activities include the following:</b></p> <ul style="list-style-type: none"> <li>• Nigerian regulators adopted or implemented <b>5 policy reforms/regulations/administrative procedures</b> to enhance the energy sector and/or facilitate private sector participation in competitive markets.</li> <li>• <b>14 institutions</b> improved their capacity to address climate change issues.</li> <li>• <b>Exceeded by 6 people:</b> the FY2015 target number to receive training in climate change.</li> <li>• <b>Exceeded by 13 people:</b> the FY2015 target number to receive training in energy related policy and regulatory practices.</li> <li>• <b>Exceeded by 13 people:</b> the FY2015 target number to receive training in technical energy fields.</li> </ul>

<h2 style="text-align: center;">SUMMARY OF ACTIVITIES</h2>	
<p><b>Energy Efficiency</b></p>	<p>NARUC organized a Technical Workshop on Energy Efficiency with NERC December 3-5, 2014, in Dubai, U.A.E. NARUC experts provided targeted assistance and led seminars on energy efficiency initiatives and demand side management programs in their respective states. Seven NERC representatives participated, presenting information on the conditions, challenges, and opportunities unique to Nigeria and the country’s evolving electrical sector. The participants advanced NERC’s efforts to establish and implement inaugural energy efficiency and demand-side management programs. Under legislation drafted by the Ministry of Power and currently awaiting formal, final approval by the Federal Executive Council, NERC will be mandated to craft and execute such programs.</p>

<p>Participants of the USAID/ NARUC Technical Workshop on Energy Efficiency and Demand-Side Management</p>	
	<p><b><i>“NERC is very grateful for the partnership we have had with NARUC and USAID since 2008. As a result of the partnership activities NARUC has organized and implemented in conjunction with various regulatory commissions in the U.S., NERC is in a much better place in terms of regulatory capacity than we were before this partnership.” – NERC Staff</i></b></p>
<p><b>Transmission Reliability and Quality</b></p>	<p>NARUC organized a Technical Workshop on Reliability and Quality with NERC, May 5-8, 2015. Four NARUC experts advised NERC staff on specific issues and led seminars on best practices and approaches in reliability and quality of power. Six NERC representatives participated, presenting information on the current conditions in Nigeria as it continues to experience challenges with the reliability and quality of electricity service. The workshop increased NERC’s capability to establish relevant service standards, to monitor compliance with those standards, and to take effective enforcement actions when standards are not achieved.</p>
<p><b>Customer Service</b></p>	<p>NARUC organized Job Shadow activities from May through July that brought NERC officials to two Commissions in the U.S. to examine best practices regarding consumer complaints, specifically the regulations governing the handling of complaints and the information technology (IT) systems used to intake, track, and report on complaints.</p> <p>First, the Kentucky Public Service Commission hosted three NERC visitors from May 30 to June 13. The second involved two NERC participants hosted by the Public Utilities Commission of Ohio from June 22 to July 2. The NARUC members, serving as hosts, shared their expertise and experiences to allow the visiting NERC officials to receive a targeted, interactive training. Site visits to utility company’s call centers and other facilities also promoted understanding. The first-hand experiences gained and the lessons learned regarding the regulations governing consumer complaints and the information technology systems will facilitate the development of new regulations and revisions of regulations in Nigeria.</p>

<p><b>Independent System Operator</b></p> <p><b>Market Monitoring</b></p> <p><b>Efficient Dispatch</b></p> <p><b>Transmission Planning and Infrastructure</b></p>	<p>NARUC organized a Study Tour for seven NERC staff and one official from the Nigeria Ministry of Planning in the San Francisco Bay area from July 21-30, 2015. The Nigerian officials visited with regulators from the California Public Utilities Commission (CPUC), utility operators from Pacific Gas &amp; Electric, and officials from the California Independent System Operator (CAISO). They also participated in a three-day training on bid and cost-based wholesale electricity markets led by Professors Frank Wolak and Mark Thurber of Stanford University's Program on Energy and Sustainable Development.</p> <p>The Stanford training allowed the participants to use advanced simulation software to make decisions on the quantity and type of electricity to produce and what sale price to bid at based on changing market factors. At PG&amp;E and the CAISO, the Nigerian officials were able to tour the control floors that allow the operators to coordinate real-time dispatch and monitor generation and transmission infrastructure. Nigerian-born regulators at the CPUC had extensive knowledge about the Nigerian electricity market and regulatory environment, and were able to provide the Nigerian officials with country-specific recommendations to enhance regulation and improve market conditions.</p>
<p><b>Cost Reflective Tariffs</b></p> <p><b>Stakeholder Engagement</b></p>	<p>NARUC organized a training on cost-reflective tariffs from September 14-17, in Abuja, Nigeria. NERC staff and representatives from the 11 distribution companies (DISCOs) in Nigeria attended the training, which was led by NARUC experts and technical advisors. As NERC reviews and approves the tariff applications of the DISCOs, it is important that they also understand how cost-reflective tariffs are derived. Additionally, since all of the DISCOs were privatized in November 2013, it is important to establish cost-reflective tariffs so that the utilities can be on strong financial footing. As the sole transmission entity in Nigeria, the Transmission Company of Nigeria (TCN) also attended the training to understand the issue of cost-reflective tariffs further. The training featured lectures on the aspects of regulation, cost of service studies, determining the revenue requirement and the tariff design. A simulation then allowed participants to address different policy considerations (such as an increase in electrification of rural areas and renewable energy requirements) into the tariff design.</p>



## TANZANIA

[www.naruc.org/USAID/Tanzania](http://www.naruc.org/USAID/Tanzania)

### PARTNERSHIP CONTEXT

Since 2013, the National Association of Regulatory Utility Commissioners (NARUC) has implemented an institutional strengthening program with the Tanzanian Energy and Water Utilities Regulatory Authority (EWURA) under the auspices of the United States Agency for International Development (USAID) in support of the Power Africa Initiative. This partnership is designed to enhance EWURA's ability to oversee the country's energy sector by strengthening its technical capabilities to regulate electricity and natural gas.

Faced with low level of electricity access, Tanzania has taken steps to increase generation capacity by entering into contracts with independent power producers (IPPs). However, the offtaker, government-owned utility Tanzania Electric Supply Company Limited (TANESCO), is struggling to make payments and faces technical, financial and operational challenges that undermine its financial viability. EWURA is tasked with balancing the utility's needs and protecting the public to ensure the delivery of essential services. EWURA is also in the midst of building a new natural gas regulatory framework from scratch, after it was designated regulator for midstream and downstream natural gas activities. Therefore, NARUC and EWURA will continue focusing on improving regulation to enhance financial viability of the energy sector and building a natural gas regulatory framework.

EWURA is also a partner of the NARUC East Africa Regional Partnership supporting regulatory capacity building at the regional level. The regional partnership will provide specific support for cross-border trade-related issues and both inform and complement the capacity building goals of the bilateral NARUC/EWURA partnership.

<b>Logical Framework Sub-purposes</b>	<ol style="list-style-type: none"> <li>1) EWURA's institutional governance for regulating energy sector improved.</li> <li>2) Legal, technical and regulatory frameworks for energy sector strengthened.</li> <li>3) Regulatory framework to encourage private investment enhanced.</li> </ol>
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## RESULTS

<b>Regulatory Progress and Results</b>	<p><b>Renewable Feed-In Tariff</b></p> <ul style="list-style-type: none"> <li>• NARUC Peer Reviewed the Renewable Energy Feed-in Tariff (REFIT) with EWURA during a Peer Review in August 2014. EWURA subsequently passed the Second Generation SPP Framework in March 2015, following the advice of the NARUC experts. The rules as well as the method to calculate the REFIT price will be an important regulatory tool for EWURA to increase investment in renewable energy and consequently in increasing renewable energy generation, falling in line with the policy goals outlined by the Tanzania Ministry of Energy and Minerals. Additionally, increased investment supports Power Africa's goal to advance private sector energy transactions and thus increase electricity generation in Sub-Saharan Africa. NARUC members together with EWURA staff also drafted a data request to the consultant to provide further information especially on the pricing of the REFIT.</li> </ul> <p><b>Natural Gas</b></p> <ul style="list-style-type: none"> <li>• During a peer review in March 2015, NARUC experts advised EWURA on a proposed natural gas transmission tariff (\$4.18/MMBtu) suggesting it was too high and proposed adopting an interim tariff reflecting separate costs for processing and transmission instead. The lower interim tariff (\$2.14/MMBtu) separated into the two proposed components was passed in February 2015. The separation of processing and transmission costs is an essential step in unbundling the vertically integrated utility to attract private investment, which is a major goal of Tanzania's vision for its power sector. The Peer Review also addressed long-term improvements EWURA can make such as providing TPDC with guidelines on future applications and instituting a Uniform System of Accounts – issues that NARUC will continue to address through its regulatory partnership.</li> </ul>
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	<p><b>Petroleum Act (Natural Gas)</b></p> <ul style="list-style-type: none"> <li>The Government of Tanzania approved the Petroleum Act, which absorbed the previously proposed Natural Gas Act. Last October, NARUC facilitated a review of the draft version of the Petroleum Act, which provided targeted suggestions to improve the legislation. EWURA was designated the regulatory authority for natural gas midstream and downstream activities. It will issue, renew, cancel and suspend licenses and review and approve tariffs and prices. Clear legal authority will enable EWURA to pass regulations needed to ensure enabling environment in the natural gas sector.</li> </ul>
<p><b>Indicator Highlights</b></p>	<p><b>Key points from the indicators for the Tanzania Partnership for FY2015 activities include the following:</b></p> <ul style="list-style-type: none"> <li><b>9 energy agencies, regulatory bodies, utilities and civil society organizations</b> undertook capacity strengthening</li> <li><b>Exceeded by 29 people:</b> the FY2015 target number to receive training in climate change.</li> </ul>

<h2 style="text-align: center;">SUMMARY OF ACTIVITIES</h2>	
<p><b>Natural Gas Regulation</b></p>	<p>To support EWURA’s regulatory capacity in regulating Tanzania’s nascent natural gas sector and to support the Power Africa Initiative’s goal to support transparent natural resource management, NARUC organized a Peer Review on the Interim Natural Gas Processing and Transportation Tariff Order with EWURA from March 17-19, 2015, in Dar es Salaam, Tanzania with NARUC experts from the Illinois Commerce Commission (ICC).</p>
<p><i>EWURA Staff at the USAID/ NARUC Peer Review on Natural Gas Transmission Tariffs</i></p>	
<p><b>Natural Gas Transmission Tariffs</b></p>	<p>To support EWURA’s regulatory capacity in regulating Tanzania’s nascent natural gas sector and to support the Power Africa Initiative’s goal to support transparent natural resource management, NARUC organized for two EWURA Staff to attend</p>

	<p>the NARUC Rate School in San Diego, California May 11-15, 2015. Two staff from EWURA worked for a week on academic style training on tariff setting. Utility setting best practices were presented by state public utility commissions, utility companies and legal, consulting and academic entities. The participants worked in groups to learn how to set revenue requirements during a “mock” water utility case.</p>
<p><b>Natural Gas Regulation</b></p> <p><b>Pipeline Safety</b></p>	<p>To support EWURA’s regulatory capacity in regulating Tanzania’s natural gas sector and to support the Power Africa Initiative’s goal to support transparent natural resource management, NARUC organized for two Natural Gas Department staff to attend a Job Shadow on Natural Gas Regulation at the Illinois Commerce Commission June 1-5, 2015 in Springfield, IL.</p>
<p><b>Cost Reflective Tariffs</b></p> <p><b>Stakeholder Engagement</b></p>	<p>NARUC organized a training on cost-reflective tariffs from August 17-20, in Dar es Salaam, Tanzania. The training was not only attended by EWURA staff but also by representatives from TANESCO, the Tanzania Petroleum Development Corporation (TPDC), the Tanzania Private Sector Foundation (TPSF), the Ministry of Finance (MoF), the Ministry of Energy and Minerals (MEM), Zanzibar Utilities and Regulatory Authority (ZURA), and the Zanzibar Electricity Company (ZECO). As EWURA reviews and approves the tariff applications of TANESCO it is important that the utility also understands how cost-reflective tariffs are derived (and similarly in Zanzibar ZURA reviewing and approving ZECO’s tariffs). For natural gas, the TPDC currently acts as quasi utility as they had applied for the natural gas transmission and processing tariff). Additionally, since in Tanzania the utility is government-owned, it is important to also increase the understanding of tariffs and costs of electricity within the relevant government entities – MEM and MoF. As electricity rates among other things determine the attractiveness of Tanzania for the private sector, the TPSF also attended the training to understand the issue of cost-reflective tariffs further.</p>
<p><b>Cost Reflective Tariffs</b></p> <p><b>Stakeholder Engagement</b></p>	<p>NARUC organized a training on cost-reflective tariffs from August 17-20, in Dar es Salaam, Tanzania. The training was not only attended by EWURA staff but also by representatives from TANESCO, the Tanzania Petroleum Development Corporation (TPDC), the Tanzania Private Sector Foundation (TPSF), the Ministry of Finance (MoF), the Ministry of Energy and Minerals (MEM), Zanzibar Utilities and Regulatory Authority (ZURA), and the Zanzibar Electricity Company (ZECO). As EWURA reviews and approves the tariff applications of TANESCO it is important that the utility also understands how cost-reflective tariffs are derived (and similarly in Zanzibar ZURA reviewing and approving ZECO’s tariffs). For natural gas, the TPDC currently acts as quasi utility as they had applied for the natural gas transmission and processing tariff). Additionally, since in Tanzania the utility is government-owned, it is important to also increase the understanding of tariffs and costs of electricity within the relevant government entities – MEM and MoF. As electricity rates among other things determine the attractiveness of Tanzania for the private sector, the TPSF also attended the training to understand</p>

	the issue of cost-reflective tariffs further.
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**IV. Task 2: Training and Capacity Building for National Regulatory Agencies and Regional Regulatory Associations**

	<h2 style="margin: 0;">EAST AFRICA REGIONAL</h2> <p style="margin: 0;"><a href="http://www.naruc.org/USAID/EastAfrica">www.naruc.org/USAID/EastAfrica</a></p>
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**PARTNERSHIP CONTEXT**

NARUC’s *East Africa Regional Regulatory Partnership* works with regulators from six countries in the Eastern African Power Pool (EAPP) — Burundi, Ethiopia, Kenya, Rwanda, Tanzania and Uganda — as well as the regional regulator, the Independent Regulatory Board (IRB). All of these countries are suffering from inadequate electricity generation, high losses, an aging and underinvested infrastructure and low energy access, especially in rural areas. By increasing regional electricity trade, the EAPP member countries are seeking to pool energy resources more efficiently and increase access to electricity.

The purpose of NARUC’s partnership is to enhance the legal, technical and regulatory frameworks for regional power trade in the participating EAPP countries and ultimately strengthen regulatory frameworks that promote an enabling environment for investment as part of the Power Africa Initiative. The *East Africa Regional Regulatory Partnership* coordinates with the bilateral partnership with Ethiopia and Tanzania to maximize synergies and inform capacity building needs at the national level.

<b>Logical Framework Sub-purposes</b>	<ol style="list-style-type: none"> <li>1) Legal, technical and regulatory frameworks at the national and regional level, to support an enabling environment for regional trade enhanced.</li> <li>2) IRB’s and national regulators’ institutional governance and regulatory frameworks for monitoring of regional trade developed.</li> </ol>
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**RESULTS**

<b>Regulatory Progress and Results</b>	<p><b>Transmission and Wheeling Tariff</b></p> <ul style="list-style-type: none"> <li>• Nexant’s Transaction Working Group (TWG) that developed the Transmission and Wheeling Tariff Principles incorporated NARUC experts’ recommendations on the documents as discussed during the first Regional Workshop in October 2014. NARUC experts recommended that it might be useful to test the principles and formulas by using actual numbers and providing numerical examples in the document to make it more understandable to key decision-makers and stakeholders. NARUC experts also agreed that explicit definitions for terms may help communicate key concepts, such as defining “national peak demand” as national use of the line or the entire country peak demand.</li> </ul> <p><b>IRB and EAPP Development</b></p> <ul style="list-style-type: none"> <li>• Between January and March, the EAPP and IRB revised its work and action</li> </ul>
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plans. NARUC provided substantial input to these revisions and shared sample working plans from the Economic Community of West African States Regional Electricity Regulatory Authority (ERERA) and the Energy Regulators Regional Association (ERRA).

- NARUC provided regulatory input into the IRB Options Paper outline developed by Nexant.

#### **EAPP Reliability Standards**

- NARUC provided a platform regulators by reviewing sections of EAPP Interconnection Code to achieve consensus on compliance and raise awareness for potential cost/tariff implications for necessary upgrades to achieve compliance.
- Regional regulators reviewed components of the EAPP Interconnection Code through the NARUC partnership and reached consensus that Key Performance Indicators as well as a functioning dispute mechanism is needed. Additional reliability standards such as black start capabilities were also discussed.
- The North American Electric Reliability Corporation (NERC) model on coordinating regional reliability standards in the U.S. was examined with national and regional regulators.
- The Kenyan parliament requested a less technical version of the Kenyan grid code, which is based on the EAPP Interconnection Code. The Kenyan regulator came up with a solution of providing the parliament with an abridged version but offering a schedule with the technical details for approval. When Kenya presented on their grid code at a partnership activity, the Tanzanian regulator, facing similar challenges, asked Kenya for additional details and was able to take the information to adapt the solution to their own context.

#### **Harmonization of Draft Uniform System of Accounts and Financial Data Collection Tool Template**

- Representatives from the IRB and national regulators have agreed to draft a common Uniform System of Accounts and a common regional reporting form for financial data. Both will enable more transparent cost allocation for wheeling and transmission tariffs, harmonize revenue requirements and pave the way for cross-border trade. Targeted completion date for both drafts is FY16.

#### **Power Purchase Agreement and Wheeling Agreement for Electricity Export from Kenya to Rwanda**

- The skills gained during the June 2015 NARUC East Africa Regional Partnership Exchange in Kampala provided the Kenya Energy Regulatory Commission (ERC) with the necessary training to approve a Power Purchase Agreement (PPA) for 30 MW between Kenya Power and Rwanda Energy Group, which involves the exchange of power between the two countries.
- In addition, partnership meetings in October 2014 and June 2015 equipped the ERC with greater knowledge on how to review and approve wheeling tariffs. Through the exchange, ERC staff has been able to approve the wheeling agreement to transmit electricity from Kenya to Rwanda through Uganda. The parties have come to an agreement on wheeling tariffs based on knowledge gained through the exchange.

#### **Tariff Review**

- Information gained in the June partnership exchange enabled the Kenyan

	<p>regulator to prepare more efficiently for the next tariff review. While the next tariff review will not take place until 2016, the Kenyan regulator has already determined what information is needed from the utility and has begun the conversation with the utility about the tariff application, which will provide the utility with enough time to collect the data. The early action by the Kenyan regulator will decrease the back and forth between it and the utility, which in turn reduces the time needed for review of the tariff application.</p> <ul style="list-style-type: none"> <li>• The Rwanda regulator incorporated lessons learned from the East Africa Regional Regulatory Exchange in June 2015 into the planned updates for a Cost of Service Study. They are also considering moving from the Rate of Return Regulation to a Price Cap Regulation to incentivize productivity improvements and cost reductions to achieve a lower tariff.</li> </ul> <p><b>Capacity Building of New Burundi Regulator</b></p> <ul style="list-style-type: none"> <li>• NARUC facilitated the attendance of the Director General of the newly formed Burundian regulator at a two-week introductory regulatory training in the U.S. The training program enabled the Director General to develop the scope of work of the consultancy needed to assist the newly formed regulator. The Director General also learned best practices for organizing the structure of the agency and received insights for how to build out the capabilities of the agency's staff.</li> </ul>
<p><b>Indicator Highlights</b></p>	<p><b>Key points from the indicators for the East Africa Regional Partnership for FY2015 activities include the following:</b></p> <ul style="list-style-type: none"> <li>• <b>3 policy reforms/regulations/administrative procedures</b> drafted and presented for public/stakeholder consultation to enhance energy sector governance and/or facilitate private sector participation and competitive markets.</li> <li>• <b>7 institutions</b> improved their capacity to address climate change issues.</li> <li>• <b>7 energy agencies, regulatory bodies, utilities and civil society organizations</b> undertook capacity strengthening.</li> <li>• <b>Exceeded by 55 people:</b> the FY2015 target number to receive training in climate change.</li> <li>• <b>Exceeded by 55 people:</b> the FY2015 target number to receive training in energy related policy and regulatory practices.</li> <li>• <b>Exceeded by 55 people:</b> the FY2015 target number to receive training in technical energy fields.</li> </ul>

<h2 style="text-align: center;">SUMMARY OF ACTIVITIES</h2>	
<p><b>Regional Transmission and Reliability</b></p>	<p>NARUC organized the First East Africa Regional Partnership Exchange on October 21-23, 2014 in Dar es Salaam, Tanzania. This partnership exchange included representatives from regulators from Ethiopia, Kenya, Tanzania and the IRB. Four NARUC members shared their practical experience and expertise on key elements of regional trade such as regional transmission organizations, transmission tariffs, cost allocation and grid code. The peer-to-peer aspect of the activity provided an opportunity to share valuable lessons learned from the U.S. and to gain an</p>

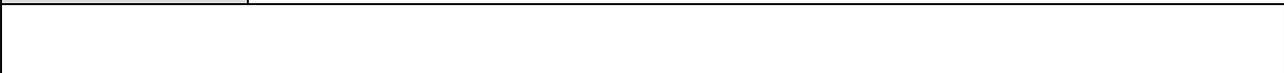
	<p>understanding of the current developments in the region.</p>
<p><i>Participants of the first East Africa Regional Partnership Exchange</i></p>	
<p><b>Regional Regulatory Harmonization</b></p>	<p>NARUC has been organizing a monthly conference call with USAID and other implementing partners in the region (Nexant, the United States Energy Association, the United States Trade and Development Agency, TetraTech, the U.S. Department of State, among others). These conference calls are designed to provide the following:</p> <ul style="list-style-type: none"> <li>• Updates on planned activities in the region</li> <li>• Coordination on workplans and goals among donors and implementers</li> <li>• Information on relevant news from region on energy sectors</li> </ul> <p>Through donor coordination, NARUC and other implementers have collaborated on the follow-up work on the African Infrastructure Project (AIP), recommendations on workplan harmonization, and drafts of IRB and EAPP action plans and workplans.</p> <p>Additionally, these monthly calls and summaries have been used as a model by USAID for their Geothermal Partnership, highlighting the need for continued donor and implementing partner coordination.</p>
<p><b>Regional Tariff Implementation</b></p>	<p>The Second East Africa Regional Partnership Exchange on June 9-11, 2015 took place in Kampala, Uganda. In attendance were representatives of regulators from Burundi, Ethiopia, Kenya, Rwanda, Tanzania and Uganda, as well as the IRB of the EAPP. NARUC experts shared their practical experience and expertise on key elements of regional trade such as transmission tariffs, cost allocation, revenue requirements, and reliability standards. The peer-to-peer aspect of the activity provided an opportunity to share valuable lessons learned from the U.S. and to gain an understanding of the current developments in the region.</p>

<p>Participants of the Second East Africa Regional Regulatory Partnership Exchange discuss cost-allocation issues.</p>	
<p><b>Regional Harmonization</b></p>	<p>NARUC staff participated in donor meetings in Kigali, Rwanda, from June 24-26, 2015. The donor meetings had three objectives:</p> <ol style="list-style-type: none"> <li>1. Align U.S. government and U.S. government implementers on short-term and long-term needs and workplans</li> <li>2. Harmonize U.S. government and other donor and financial supporters' initiatives</li> <li>3. Coordinate donor support with regional organization's needs</li> </ol> <p>Additionally, NARUC staff conducted individual meetings with USAID/Rwanda, the Ministry of Infrastructure, the Rwanda Utilities Regulatory Authority (RURA), and the Rwandan utility, Rwanda Energy Group (REG). During these meetings, NARUC staff received input not only on regional energy matters, but also on domestic needs for a potential bilateral partnership with RURA.</p>
<p><b>Uniform System of Accounts</b></p> <p><b>Accounting</b></p> <p><b>Regional Harmonization</b></p>	<p>NARUC organized the Third East Africa Regional Partnership Exchange on September 15-17, 2015 in Kigali, Rwanda. In attendance were representatives of regulators from Burundi, Ethiopia, Kenya, Rwanda, and Tanzania, as well as the IRB of the EAPP. NARUC experts shared their practical experience and expertise on key elements of regulatory accounting, which underpins regional trade: accounting principles and Uniform System of Accounts (USoA,) regulatory reporting of financial data, and data analysis.</p> <p>The peer-to-peer aspect of the activity provided an opportunity to share valuable lessons learned from the U.S. and offer an understanding of the current developments in the region. The objectives of this partnership exchange included:</p> <ul style="list-style-type: none"> <li>• Developing a thorough understanding of financial information collected from utilities in the U.S., including balance sheets, income statements, cash flow statements, and operating statistics.</li> <li>• Examining USoA and Generally Accepted Accounting Principles in the U.S.</li> <li>• Understanding how regulators collect, manage and verify the financial information collected from utilities.</li> <li>• Building consensus on financial information necessary for regional projects in</li> </ul>

East Africa.

- Beginning to draft a regionally harmonized form for financial information collected from utilities

*Participants discuss Uniform System of Accounts at the Third East Africa Regional Regulatory Partnership Exchange*



**Utility Regulation**

Donat Niyonzima, Director General of the Agence de Contrôle et de Régulation du secteur de l'eau potable et de l'électricité in Burundi (ACR), attended a two-week regulatory introductory training program called Camp NARUC from August 10-21, 2015, in East Lansing, Michigan.

The Fundamentals Course (week 1) focused on the foundations and fundamentals of utility regulation. Core economic, legal, accounting, finance, and policy theories and concepts were introduced. The Intermediate Course (week 2) concentrated on dynamic structural and regulatory issues, including emerging methods, issues, and sector-specific market concerns.



**WEST AFRICA PARTNERSHIP**  
[www.naruc.org/USAID/WestAfrica](http://www.naruc.org/USAID/WestAfrica)

**PARTNERSHIP CONTEXT**

NARUC partnered with the Economic Community of West African States (ECOWAS) Regional Electricity Regulatory Authority (ERERA) and the West African Gas Pipeline Authority (WAGPA) from 2011 to 2014. Through this partnership NARUC provided regulatory capacity building for both regional and national energy regulatory bodies in support of the development of more sustainable and efficient electricity and natural gas sectors in West Africa. From 2013 to 2014, the USAID/NARUC West Africa Regional Regulatory Partnership increased its focus on clean energy, welcoming the ECOWAS Center for Renewable Energy and Energy Efficiency (ECREEE) to join the project. In 2013, ECOWAS introduced the development of renewable energy as an ECOWAS policy target and continued this focus in 2014.

Throughout this timeframe, the NARUC/USAID partnership supported the development of a well-regulated, functional, and sustainable electricity generation sector in West Africa by promoting the development of policies, regulations and institutions which work collaboratively to strengthen utility regulatory and system planning capacities in the region. In addition, NARUC conducted targeted activities which sought to improve the understanding of the impact of clean energy sources within the energy sector and within a national and regional context.

**Logical Framework Sub-purposes**

- 1) Promoting development of the harmonized enabling environment (policies, regulations and institutions) to strengthen utility regulatory and system planning capacities
- 2) Improving the understanding of the impact of clean energy sources on the national and regional energy sector
- 3) Introducing tools to develop clean energy regulation on the national and regional levels

**RESULTS**

**Regulatory Progress and Results**

**Principles of Regulating Clean Energy in the ECOWAS Region**

- NARUC released the *Principles of Clean Energy Regulation in the ECOWAS Region* in December 2014 in English and French and distributed the publication widely to its partners in the region and worldwide. The Principles will assist regulatory authorities in the region as they seek to integrate renewable energy into existing electricity markets.
- As a living document, the *Principles* were adopted by the ECOWAS Regional Electricity Regulatory Authority (ERERA) for continued updating. ERERA also distributed the Principles through a press release to additional regulatory authorities and other stakeholders in the region.

**V. IN-KIND SERVICE FOR FY15**

The total in-kind service for ENSURE totaled \$216,496.50 for FY15.

**ANNEX: NARUC Indicators FY15**

<b>NARUC Indicators</b>	<b>FY15</b>	<b>E3</b>	<b>EAST AFRICA REGIONAL</b>	<b>ETHIOPIA</b>	<b>MEXICO</b>	<b>NIGERIA</b>	<b>TANZANIA</b>
<b>Indicator 1a - Number of laws, policies, strategies, plans, agreements, or regulations, addressing climate change (mitigation or adaptation) and/or biodiversity conservation officially adopted or implemented as a result of USG assistance</b>	<b>FY15 Target</b>	0	0	0	0	0	1
	<b>FY15 Total</b>	0	0	0	0	0	1
	Q1	0	0	0	0	0	0
	Q2	0	0	0	0	0	0
	Q3	0	0	0	0	0	1
	Q4	0	0	0	0	0	0
	Notes:						
<b>Indicator 1b - Number of laws, policies, strategies, plans, agreements, or regulations, addressing climate change (mitigation or adaptation) and/or biodiversity conservation officially proposed as a result of USG assistance</b>	<b>FY15 Target</b>	0	0	0	4	1	1
	<b>FY15 Total</b>	0	0	0	5	0	1
	Q1	0	0	0	1	0	0
	Q2	0	0	0	1	0	1
	Q3	0	0	0	1	0	0
	Q4	0	0	0	2	0	0
	Notes:				Q1 NARUC proposed CRE adopt NERC reliability & quality standards for power quality Q2- NARUC proposed		

					adjusting REC implementation timeline Q3 New tariff methodologies proposed by CRE after NARUC rate school Q4 NARUC proposed stakeholder meetings on interconnection, NARUC proposed stakeholder meetings on market monitoring units		
<b>Indicator I - Number of laws, policies, strategies, plans, agreements, or regulations, addressing climate change (mitigation or adaptation) and/or biodiversity conservation officially proposed, adopted, or implemented as a result of USG assistance</b>	FY15 Target	1	0	0	4	1	1
	FY15 Total	0	0	0	5	0	1
	Q1	0	0	0	1	0	0
	Q2	0	0	0	1	0	1
	Q3	0	0	0	1	0	1
	Q4	0	0	0	2	0	0
	Notes:	FY15 target exceed FY15 actual due to delayed				Q1 NARUC proposed CRE adopt NERC reliability & quality standards for	

		start to the project based on extended periods for contract completion.			power quality Q2- NARUC proposed adjusting REC implementation timeline Q3 New tariff methodologies proposed by CRE after NARUC rate school Q4 NARUC proposed stakeholder meetings on interconnection, NARUC proposed stakeholder meetings on market monitoring units		2015); REFIT Passed in March as SPP Framework II
<b>Indicator 2a - Number of climate mitigation tools, technologies and methodologies tested and/or adopted as a result of USG assistance (e.g., model updates, reports, analyses, software, principles</b>	FY15 Target	0	0	0	0	1	0
	FY15 Total	0	0	0	0	0	0
	Q1	0	0	0	0	0	0
	Q2	0	0	0	0	0	0
	Q3	0	0	0	0	0	0
	Q4	0	0	0	0	0	0

documents, MRV questionnaires)	Notes:						
Indicator 2b - Number of climate mitigation tools, technologies and methodologies developed (or drafted) as a result of USG assistance (e.g., model updates, reports, analyses, software, principles documents, MRV questionnaires)	FY15 Target	0	0	0	0	1	0
	FY15 Total	0	0	0	0	0	0
	Q1	0	0	0	0	0	0
	Q2	0	0	0	0	0	0
	Q3	0	0	0	0	0	0
	Q4	0	0	0	0	0	0
	Notes:						
Indicator 2 - Number of climate mitigation tools, technologies and methodologies developed (or drafted), tested, and/or adopted as a result of USG assistance (e.g., model updates, reports, analyses, software, principles documents, MRV questionnaires)	FY15 Target	0	0	0	0	1	0
	FY15 Total	0	0	0	0	0	0
	Q1	0	0	0	0	0	0
	Q2	0	0	0	0	0	0
	Q3	0	0	0	0	0	0
	Q4	0	0	0	0	0	0
	Notes:						
Indicator 3 - Number of policy reforms/ regulations/ administrative procedures drafted and presented for public/stakeholder	FY15 Target	0	0	0	1	1	1
	FY15 Total	0	3	0	1	1	2
	Q1	0	0	0	0	1	0

consultation to enhance energy sector governance and/or facilitate private sector participation and competitive markets as a result of USG assistance	Q2	0	2	0	0	0	1
	Q3	0	0	0	1	0	1
	Q4	0	1	0	0	0	0
	Notes:		EAPP and IRB Action and Workplans, discussed with regulators and donors (stakeholders) during meetings in January and March 2015 (Q2), Kenya Wheeling Tariff (Q4)		Q3 New tariff methodologies proposed by CRE after NARUC rate school	MYTO 2.1, containing elements recommended in past activities, presented in Dec. 2014.	Natural Gas Act was absorbed into the Petroleum Law passed in May 2015; REFIT Program Proposed (EWURA public notice on Feb 8, 2015); Petroleum Act presented to stakeholders (The Gazette of the United Republic of Tanzania No. 22 Vol. 96 presented bill for the Petroleum Act, 2015 on May 29, 2015)
Indicator 4 - Number of policy reforms/ regulations/ administrative procedures adopted or implemented to	FY15 Target	1	0	0	0	1	0
	FY15 Total	0	0	0	0	4	2

enhance energy sector governance and/or facilitate private sector participation and competitive markets as a result of USG assistance	Q1	0	0	0	0	0	0
	Q2	0	0	0	0	2	0
	Q3	0	0	0	0	1	1
	Q4	0	0	0	0	1	1
	Notes:	FY15 target did not meet FY15 actual due to delayed start to the project based on extended periods for contract completion				IT functions for Uniform System of Accounts implemented Jan 2015; Contract trading phase of Transitional Market implemented Feb 2015, MYTO 2.1 revision implemented Apr 2015, Metering regulation implemented in Sept 2015	REFIT Passed in March as SPP Framework II; Petroleum Act
Indicator 5 - Number of institutions with improved capacity to address climate change issues as a result of USG assistance (e.g., DSO's and TSO's, ministries and statistical agencies [including those	FY15 Target	0	0	0	3	14	0
	FY15 Total	0	7	4	8	14	0
	Q1	0	4	4	1	1	0
	Q2	0	0	0	4	0	0
	Q3	0	3	0	0	13	0
	Q4	0	0	0	3	0	0

<p>participating in inter-ministerial LEDS groups], regulators, homeowners' associations, etc.)</p>	<p>Notes:</p>		<p>Ethiopia Energy Authority (EEA), Kenya Regulatory Commission (ERC), Tanzania Energy, Water Utility Regulatory Authority (EWURA), Independent Regulatory Board of the Eastern Africa Power Pool (IRB), Burundi Agence de Contrôle et de Régulation du Secteur de l'Eau Potable et de l'Électricité (ACR), Rwanda Utilities Regulatory Authority (RURA, Uganda Electricity Regulatory Authority (ERA)</p>	<p>EEA, Ministry of Energy, Water and Irrigation (MoWIE), Ethiopia Electricity Utility (EEU) and Ethiopia Electric Power (EEP)</p>	<p>CRE, SENER, CENACE, SEMARNAT, Mexican Stock Exchange, CFE, ANCE, and LAPEM</p>	<p>Nigeria Electricity Regulatory Commission, Ministry of Planning, Jos, Enugu, Eko, Port Harcourt, Abuja, Yola, Benin, Kaduna, Ikeja, Ibadan, Kano DISCOS, Transmission Company of Nigeria</p>	
<p><b>Indicator 6 - Number of energy agencies, regulatory bodies, utilities and civil society organizations undertaking capacity strengthening as a result of USG assistance</b></p>	<p><b>FY15 Target</b></p>	<p>0</p>	<p>0</p>	<p>0</p>	<p>1</p>	<p>14</p>	<p>6</p>
	<p><b>FY15 Total</b></p>	<p>0</p>	<p>7</p>	<p>4</p>	<p>8</p>	<p>14</p>	<p>9</p>
	<p>Q1</p>	<p>0</p>	<p>4</p>	<p>4</p>	<p>1</p>	<p>1</p>	<p>6</p>
	<p>Q2</p>	<p>0</p>	<p>0</p>	<p>0</p>	<p>4</p>	<p>0</p>	<p>0</p>
	<p>Q3</p>	<p>0</p>	<p>3</p>	<p>0</p>	<p>0</p>	<p>0</p>	<p>0</p>
	<p>Q4</p>	<p>0</p>	<p>0</p>	<p>0</p>	<p>3</p>	<p>13</p>	<p>3</p>

	Notes:		Ethiopia Energy Authority (EEA), Kenya Regulatory Commission (ERC), Tanzania Energy, Water Utility Regulatory Authority (EWURA), Independent Regulatory Board of the Eastern Africa Power Pool (IRB), Burundi Agence de Contrôle et de Régulation du Secteur de l'Eau Potable et de l'Électricité (ACR), Rwanda Utilities Regulatory Authority (RURA), Uganda Electricity Regulatory Authority (ERA)	EEA, Ministry of Energy, Water and Irrigation (MoWIE), Ethiopia Electricity Utility (EEU) and Ethiopia Electric Power (EEP)	CRE, SENER, CENACE, SEMARNAT, Mexican Stock Exchange, CFE, ANCE, and LAPDEM	Nigeria Electricity Regulatory Commission, Ministry of Planning, Jos, Enugu, Eko, Port Harcourt, Abuja, Yola, Benin, Kaduna, Ikeja, Ibadan, Kano DISCOS, Transmission Company of Nigeria	EWURA, Ministry of Finance, TPDC, Ministry of Energy and Minerals, TANESCO, WAGPA, TPSF, ZECO, ZURA						
<b>Indicator 7 - Number of people receiving training in climate change supported by USG assistance</b>	FY15 Target	0	0	0	67	40	0						
	M:F	0	0	0	0	45	22	25	15	0	0		
	FY15 Total	0	55	29	133	46	29						
	M:F	0	0	47	8	28	1	87	46	37	9	22	7
	Q1	0	19	29	12	7	0						
	M:F	0	0	16	3	28	1	8	4	6	1	0	0

	Q2	0		0		0		39		0		0	
	M:F	0	0	0	0	0	0	14	25	0	0	0	0
	Q3	0		17		0		5		0		0	
	M:F	0	0	15	2	0	0	2	3	0	0	0	0
	Q4	0		19		0		77		39		29	
	M:F	0	0	16	3	0	0	63	14	31	8	22	7
	Notes:							All activities are focused on climate change				Cost-Reflective Tariff Training	
<b>Indicator 8 - Number of person hours of training completed in climate change as a result of USG assistance</b>	<b>FY15 Target</b>	1,240		0		0		2680		1550		0	
	<b>M:F</b>	0	0	0	0	0	0	2010	670	1050	500	0	0
	<b>FY15 Total</b>	1,440		1376		1160		3361		1104		696	
	<b>M:F</b>	1,128	312	1184	192	1120	40	2323	1038	888	216	528	168
	Q1	0		456		1160		192		168		0	
	M:F	0	0	384	72	1120	40	128	64	144	24	0	0
	Q2	0		0		0		819		0		0	
	M:F	0	0	0	0	0	0	525	294	0	0	0	0
	Q3	0		408				600		0		0	
	M:F	0	0	360	48	0	0	240	360	0	0	0	0
	Q4	1,440		512				1750		936		696	
	M:F	1,128	312	440	72	0	0	1430	320	744	192	528	168
	Notes:	Tanzania and Nigeria Cost-Reflective Tariff Trainings						All activities are focused on climate change				Cost-Reflective Tariff Training	
<b>Indicator 9 - Number of people receiving USG supported training in energy</b>	<b>FY15 Target</b>	0		0		0		107		45		81	
	<b>M:F</b>	0	0	0	0	0	0	80	27	28	17	69	12

related policy and regulatory practices	FY15 Total	0		55		47		133		58		63	
	M:F	0	0	47	8	45	2	98	35	46	12	43	16
	Q1	0		19		29		12		7		19	
	M:F	0	0	16	3	28	1	8	4	6	1	14	5
	Q2	0		0		0		39		0		11	
	M:F	0	0	0	0	0	0	25	14	0	0	7	4
	Q3	0		17		13		5		12		4	
	M:F	0	0	15	2	12	1	2	3	9	3	3	1
	Q4	0		19		5		77		39		29	
	M:F	0	0	16	3	5	0	63	14	31	8	22	7
Notes:	A 3-day technical workshop on USoA was moved to FY16 (under East Africa Regulatory Partnership)												
Indicator 10 - Person hours of training completed in USG supported training in energy related policy and regulatory practices	FY15 Target	0		0		0		2680		3000		1976	
	M:F	0	0	0	0	0	0	2010	670	2000	1000	1680	296
	FY15 Total	0		1376		1704		3361		1968		1416	
	M:F	0	0	1184	192	1640	64	2323	1038	1544	424	1032	384
	Q1	0		456		1160		192		168		456	
	M:F	0	0	384	72	1120	40	128	64	144	24	336	120
	Q2	0		0		0		819		0		264	
	M:F	0	0	0	0	0	0	525	294	0	0	168	96
	Q3	0		408		344		600		608		160	
	M:F	0	0	360	48	320	24	240	360	464	144	120	40
Q4	0		512		200		1750		1192		696		

	M:F	0	0	440	72	200	0	1430	320	936	256	528	168
	Notes:											A 3-day technical workshop on USoA was moved to FY16 (under East Africa Regulatory Partnership)	
<b>Indicator 11 - Number of people receiving training in technical energy fields supported by USG assistance</b>	<b>FY15 Target</b>	1240		0		0		107		45		81	
	M:F	0	0	0	0	0	0	80	27	28	17	69	12
	<b>FY15 Total</b>	1,440		55		47		133		58		63	
	M:F	1,128	312	47	8	45	2	98	35	46	12	43	16
	Q1	0		19		29		12		7		19	
	M:F	0	0	16	3	28	1	8	4	6	1	14	5
	Q2	0		0		0		39		0		11	
	M:F	0	0	0	0	0	0	25	14	0	0	7	4
	Q3	0		17		13		5		12		4	
	M:F	0	0	15	2	12	1	2	3	9	3	3	1
	Q4	1,440		19		5		77		39		29	
	M:F	1,128	312	16	3	5	0	63	14	31	8	22	7
Notes:	Tanzania and Nigeria Cost-Reflective Tariff Trainings											A 3-day technical workshop on USoA was moved to FY16 (under East Africa Regulatory Partnership)	
<b>Indicator 12 - Person hours</b>	<b>FY15</b>	0		0		0		2680		3000		1976	

of training completed in technical energy fields supported by USG assistance

Target												
M:F	0	0	0	0	0	0	2010	670	2000	1000	1680	296
FY15 Total	0		1376		1704		3361		1936		1416	
M:F	0	0	1184	192	1640	64	2323	1038	1512	424	1032	384
Q1	0		456		1160		192		168		456	
M:F	0	0	384	72	1120	40	128	64	144	24	336	120
Q2	0		0		0		819		0		264	
M:F	0	0	0	0	0	0	525	294	0	0	168	96
Q3	0		408		344		600		576		160	
M:F	0	0	360	48	320	24	240	360	432	144	120	40
Q4	0		512		200		1750		1192		696	
M:F	0	0	440	72	200	0	1430	320	936	256	528	168
Notes:	A 3-day technical workshop on USoA was moved to FY16 (under East Africa Regulatory Partnership)											

## MEXICO CUSTOM INDICATORS

### Custom Indicator 3 – Funds Leveraged by NARUC (In-Kind)

**Actual FY15**  
Total: \$42,819.28

**Mexico Transmission Tariff Workshop**  
Sub Total: \$1,980.00

**Target FY15**  
Total: \$18,348.88

**Mexico Smart Grid Workshop**  
Sub Total: \$1,890.00

**Mexico Reliability and Quality Workshop**  
Sub Total: \$5,765.79

**Mexico Renewable Energy Certificate Workshop**  
Sub Total: \$11,429.20

**Mexico Clean Energy Certificates Internship**  
Sub Total: \$2,183.50

**Mexico Market Monitoring Technical Workshop**  
Sub Total: \$12,564.00

**Mexico Interconnection Technical Workshop**  
Sub Total: \$7,006.79

### Custom Indicator 4 – Percentage of Participants Stating that Activity Met Objective

**Actual FY15**  
Total: 100%

**Target FY15**  
Total: 100%