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ANNUAL REPORT FY14

ENERGY REGULATORY & SECURITY PROGRAM
IN EUROPE & EURASIA

October 1, 2013 – September 30, 2014

February 2015

This publication was produced for review by the United States Agency for International Development. It was prepared by the National Association of Regulatory Utility Commissioners (NARUC).

ANNUAL REPORT

ENERGY REGULATORY & SECURITY PROGRAM IN EUROPE & EURASIA

October 1, 2013 – September 30, 2014

Project Title: Energy Regulatory & Security Program in Europe & Eurasia

Sponsoring USAID Office: Energy and Infrastructure Division of the Bureau for Europe and Eurasia

Cooperative Agreement #: REE-A-00-07-00050-00

Recipient: National Association of Regulatory Utility Commissioners (NARUC)

Date of Publication: February 2015

Author: National Association of Regulatory Utility Commissioners (NARUC)



National
Association of
Regulatory
Utility
Commissioners

This publication was made possible through support provided by the Energy and Infrastructure Division of the Bureau for Europe and Eurasia under the terms of its Cooperative agreement with the National Association of Regulatory Utility Commissioners, No. # REE-A-00-07-00050-00. The opinions expressed herein are those of the National Association of Regulatory Utility Commissioners and do not necessarily reflect the views of the US Agency for International Development.

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I. DESCRIPTION OF PROGRAM

Under the USAID Cooperative Agreement, NARUC aims to:

- develop the Central/Eastern European and Eurasian regions' energy regulatory authorities and their networking opportunities.
- strengthen the institution of independent regulation and regulators' efforts to establish a stable, efficient, and competitive energy industry.

NARUC's partnerships provide regulatory capacity building for national regulators and key stakeholders, including policymakers, utilities, consumer advocates, as relevant. Activities seek to share international best practices and provide a platform for regulatory dialogue to support the development of sound legal, technical and market-based regulatory frameworks. From building accountable regulatory institutions to assisting regulators to make sound cost decisions to stimulate infrastructure investments, to engaging regulators in regional discussions so that they can enable and facilitate cross-border trade, NARUC's partnerships under Central/Eastern Europe & Eurasia Energy Regulatory and Security Program are results-oriented and driven by real needs and priorities of our foreign partners. NARUC collaborates closely with USAID, host regulators, USAID implementing partners and other donors to ensure that partnership activities support energy sector goals and complement the U.S. Government economic growth initiatives.

II. PROGRAMMING FOR RESULTS: MONITORING AND EVALUATION PLAN

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. For its international programs NARUC has a Results Framework to which each project is linked through a Logical Framework. The performance targets are developed or revised on an annual basis with the foreign regulators and drive activity formats. 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 than the original targets. Therefore, NARUC also tracks and reports on secondary results related to enhancements in the regulatory agency's procedures or functions as well as overall energy sector progress. Both targeted results and secondary results can take place over multiple years, emphasized in the "if, then" causal relationship built into the Logical Framework. Individual country partnerships' work plans provide more detail, including the specific Logical Framework, and are available upon request. For the status of Performance Indicators see Annex I.

III. MAJOR ACCOMPLISHMENTS

During the reporting period, NARUC engaged with regulators in Armenia, Bosnia and Herzegovina, Azerbaijan, Georgia, Kosovo, Moldova, and Ukraine to target major energy sector reforms, continue market development processes, and address implementation gaps stemming from the Energy Community Athens Treaty, where appropriate. Each country and the region as a whole worked toward the power and natural gas sector restructuring to achieve more transparent, liquid and interconnected markets. Below are major accomplishments for each project. Detailed accounts of those activities are listed under individual countries, starting on page 9.

Black Sea Regulatory Initiative

The Black Sea region holds strategic significance for regional and broader energy security. NARUC worked with the six regulatory counterparts to improve prospects for cross-border electricity trade by advocating for more harmonized regulatory frameworks and increased efficiency in end-user energy. Each country sees the coordinated electricity flows and more efficient utilization of energy resources as essential to accomplishing national energy objectives. Throughout FY14, regulators met several times to draft an important policymaking tool in the form of ***Regulatory Principles*** that highlight necessary regulatory processes underpinning ***energy efficiency*** incentives. They also continued strong coordination with the national TSOs to formulate critical regulatory inputs for regional transmission planning initiatives in the Black Sea. The two groups issued a joint value

proposition in this regard and began joint activities aimed at cost-benefit analysis of the regional transmission infrastructure build-out. The regulatory group formally approved and adopted a *Regulatory Principles for Cross-Border Trade and Market Integration*, drafting of which took one-and-half years.

Number of climate mitigation tools and methodologies developed/drafted, and /or adopted as a result of USG assistance	2
Number of people receiving USG supported training	40
Person hours completed in USG supported training	1,112

Bosnia and Herzegovina (BiH)

The BiH regulators approved and adopted a number of regulations in support of the much anticipated full opening of the **electricity retail markets** on January 1, 2015. While working with the Federal Electricity Regulatory Commission (FERK), NARUC focused specifically on guiding the regulator to prepare a Rule on Development and Application of Load Curves that transposed technical requirements within the market rules based on the Energy Community Athens Treaty requirements. The Rule, which was adopted in September 2014, will allow the regulators to utilize a realistic load curve model for the cost allocation purposes and anticipate appropriate levels of supply for the tariff-setting purposes. In a fully competitive electricity market, load profile analyses constitute a crucial component of market operations and improving this analytical function of the BiH regulators is an important step.

Following the development of a new market-based concept for Ancillary Services by the State Electricity Regulatory Commission (SERC), ISO BiH, and DNV KEMA consultants, the entity regulator was tasked to draft a corresponding methodology to determine tariffs for the transmission company, ISO for their market-oriented purchasing of secondary and tertiary capacity reserves. NARUC's experts supported the review of the methodology to ensure its compliance with the market-based provisions of the balancing power systems as stipulated by the Energy Community Athens Treaty. The regulator adopted the methodology in July 2014.

Number of policy reforms/regulations/administrative procedures drafted and presented for public consultation to enhance energy sector governance	5
Number of people receiving USG supported training	33
Person hours completed in USG supported training	1,320

Georgia

In FY14, the Georgian regulator focused its work on the review of **electricity tariff methodologies** that were based on old rate agreements. Given steady transition of the Georgian power sector to more market-based and competitive structures, GNERC initiated the process of revising the rate-setting principles that characterized the utility activities. NARUC tariff experts assisted in this process by reviewing different elements and guiding principles of GNERC's draft provisions. As a result of this multi-phase analytical work, GNERC approved two new tariff setting methodologies in July 2014, namely:

1. Tariff Setting Methodology for Electricity Generation, Transmission, Dispatch and Electricity Market Operator Service; and
2. Tariff Setting Methodology for Electricity Distribution, Pass Through and Consumption Tariffs

GNERC applied the rate-setting approaches from the Kentucky, Michigan and Idaho Commissions and included some innovative or missing concepts regarding the treatment of utility assets, such as the salvage and removal value calculations, the long-term RAB data, capital improvement depreciation methods, impairment loss, and the working capital determination.

Number of policy reforms/regulations/administrative procedures adopted or implemented to enhance energy sector governance	5
Number of people receiving USG supported training	45
Person hours completed in USG supported training	1,200

Kosovo

The Energy Regulatory Office (ERO) of Kosovo continued drafting regulatory instruments to improve quality and availability of energy supply and enhancing various rate-setting elements in order to inject more predictability and credibility into the **regulatory process governing cost recovery**. In order to improve ERO’s analytical capacities and understanding of the complex interplay of various rate components, NARUC organized a series of activities to allow ERO to finalize its tariff models, address the existing challenges surrounding the input data, and comprehensively guide ERO through the process of needed changes in its pricing rules and communication strategies addressing the tariff decisions. Two tariff consultancies and a regulatory peer review discussed extensively the recommended approaches to evaluating the maximum allowed revenues (MARs) and related charges for transmission, distribution and retail supply for all licensed activities in Kosovo’s electricity sector. As a result, ERO was in a better position to issue two tariff increases and justify its levels to the key constituents. Additionally, ERO now has an integrated model for calculating MARs that will be applied in future tariff reviews.

Number of policy reforms/regulations/administrative procedures drafted and presented for public consultation to enhance energy sector governance	4
Number of people receiving USG supported training	38
Person hours completed in USG supported training	3,340

Moldova

ANRE continued improving the regulatory environment for the **integration of renewable energy** sources in Moldova by preparing and submitting to the government a draft Law on the Promotion of Energy from Renewable Sources. The Law passed its first reading in the Parliament in July 2014. When adopted, the Law will replace old legislation from 2007 and allow Moldova to move closer to implementing Directive 2009/28/EC, and thus improve the legislative framework to attract investments in renewable energy projects.

The Law includes several comprehensive support schemes and incentives that ANRE discussed with its counterparts from the Missouri, Ohio, Rhode Island and Maine Commissions, demonstrating expanded capacity of the Moldovan regulator to incorporate net-metering principles, queue management rules, and the mechanism of selecting eligible RES projects for support.

ANRE also launched a new website, improving the accessibility and transparency of its information to consumers and the utility industry. The re-designed website is much more user-friendly and offers guidance and useful information to the public based on some proven techniques of the US commissions.

Number of policy reforms/regulations/administrative procedures drafted and presented for public consultation to enhance energy sector governance	5
Number of people receiving USG supported training	41
Person hours completed in USG supported training	1,368

Ukraine

The main result of the FY 2014 activities was a long-awaited adoption of the Law on **Basic Principles of the Electricity Market Functioning** by the Ukrainian Parliament, as part of the so-called “European package.” As such, the Law will facilitate Ukraine’s implementation of the EU Directive 2003/54 EC concerning common rules for the internal electricity market and the EC Regulation 1228/2003 on the conditions for accessing networks for cross-border exchanges of electricity. The step-by step liberalization of the internal electricity market in Ukraine will enter into force through this legal provision in July 2017.

The Law requires NERC to prepare and approve several bylaws to govern its effective and independent oversight of the liberalized market. Some drafting activities have already been initiated. In draft regulations on ancillary services market, NERC reflected some concepts from the implementation of ancillary markets in the PJM RTO, such as a parallel submission of bids based on costs and prices, and procedures for determining the size of sanctions for a failure to provide declared services. Based on discussions in the framework of the partnership activities, U.S. experience related to a phased formation of organized wholesale markets, access to information, provisions for protecting commercially sensitive information, and the principles of regulatory transparency were taken into consideration in NERC’s proposals to the Law.

Number of policy reforms/regulations/administrative procedures adopted or implemented to enhance energy sector governance	5
Number of people receiving USG supported training	12
Person hours completed in USG supported training	432

IV. SUMMARY OF ACTIVITIES

Task I: Regulatory Capacity & Association Institutional Development

A. Training/Capacity Development

ERRA	
NARUC worked collaboratively with members of the Energy Regulators Regional Association (ERRA) to share U.S. experiences, examine lessons learned and assess appropriate regulatory responses to emerging challenges. NARUC member commissioners and staff voluntarily participated in ERRA technical training courses and professional development activities (committee meetings, conferences, etc). Their observational trip reports from various ERRA activities are available by request from NARUC staff.	
ERRA Natural Gas Training course, September 23, 2014, Budapest, Hungary	Ms. Bonnie Janssen, Public Utilities Engineer Specialist at the Michigan Public Service Commission, participated as a course instructor at the ERRA Training Course on Natural Gas Regulation, on September 22-26, in Budapest, Hungary. Ms. Janssen talked about the operational and regulatory issues in the US natural gas markets, the global challenges and geopolitical dimensions, trading, pricing, storage, and retail choice. Ms. Janssen noted a great interest from the participants on the issues of LNG costs and its availability for exports from the US to European markets, as well as firm and interruptible transportation rate ranges, storage rate ranges, weather normalization calculations, rate design, shale gas volumes, and hydraulic fracturing technologies.

B. Institutional Development

ERRA Committee Meetings, Working Group Meetings, Conferences, Workshops

<p>ERRA Tariff Committee (December 9-10, 2013, Yerevan, Armenia)</p>	<p>Denise Parrish from the Office of Consumer Advocate at the Wyoming Public Service Commission and William H. Smith, Jr. from the Organization of MISO States (a regulatory arm of the MISO system planners) discussed national and cross-border network investments and regulatory measures supporting them. ERRA member regulators are interested in improving the regulatory preconditions and rules for regional interconnections, as one of the main tenets of the common European electricity market. Related aspects such as network development through a tariff-setting process (regulatory asset base (RAB) model determination and cost allocation) further illustrated the complexities of network regulation. NARUC representatives noted some emerging concerns among the ERRA regulators, namely that applying conventional rate calculating methods yield unrealistically high price levels in their countries. As a result, the regulators expressed strong interest in studying further various cost allocation methods employed in transmission projects.</p> <p>More information on the meeting agenda is available here: http://www.erranet.org/Events/ERRA/2013/Tariff_Erevan_December</p>
<p>ERRA Licensing Committee (December 12-13, 2013, Bucharest, Romania)</p>	<p>William H. Smith, Jr. from the OMS and Brian Stevens from the California Public Utilities Commission discussed the principles of wholesale market competition and third party access. The Albanian regulators revealed a serious problem with a failing distribution system after the foreign investor’s license was revoked. ERE’s frustration stems from the utility’s lack of actions to ensure the system’s solvency. Turkey, Macedonia, and Lithuania discussed cases of replacing the Board of a regulated utility company and how a regulator needs to act in more extreme cases such as forced mergers, replacement of the utility management, or cancellation of a license. Bosnia and Herzegovina reported a reserve-sharing treaty with Slovenia.</p> <p>More information on the meeting agenda is available here: http://www.erranet.org/Events/ERRA/2013/Licensing_Bukarest_December</p>
<p>ERRA General Assembly, Tariff Committee and ERRA Licensing/Competition Committee meetings, March 31-April 1, 2014, Istanbul, Turkey)</p>	<p>ERRA held its General Assembly and two Committees on March 31-April 1, 2014, in Istanbul, Turkey. NARUC members who participated in the meeting presented and discussed the following topics:</p> <ol style="list-style-type: none"> 1. NARUC President Colette Honorable (Chairman of Arkansas Public Service Commission) - “Economic Regulators’ Role in Ensuring Resilience in the Electric Infrastructure” 2. Hisham Choueiki (Senior Energy Specialist, Public Utilities Commission of Ohio) - “Analysis Results of the Transformation of Market Structures of Vertically Integrated System to a Fully Liberalized Market” 3. Denise Parrish (Deputy Administrator, Office of Consumer Advocate, Wyoming Public Service Commission) – „US Perspectives on the Principles and Practices of Regulated and/or Free Market Price of Different Consumer Classes during Transient Market Building Process” <p>Mr. Choueiki pointed out the importance of regulatory and political certainties in attracting foreign investment. He also discussed that an Independent System Operator (ISO) with market oversight responsibilities was sufficient in achieving a liberalized system, whereas the European guidelines favor ultimate</p>

	<p>separation of system and market responsibilities. However, once an ISO is formed to administer regional competitive energy and ancillary services markets, there is a critical need to establish an independent market monitoring unit that would be responsible for monitoring and mitigating, if necessary, the market power of all pivotal generators/suppliers in a regional electricity market.</p> <p>Denise Parrish observed emerging interest in gas tariff issues in wake of the European regulators efforts to safeguard more diversified energy sources and supply options. This marks a new area for the ERRA members and is less understood than electricity, which has dominated ERRA committee meetings for over 10 years. Countries reported political interference in regulatory decisions on tariffs and asked the US colleagues for experience in this regard.</p> <p>More information on the meeting agendas is available here: http://www.erranet.org/Events/ERRA/2014/generalassembly http://www.erranet.org/Events/ERRA/2014/licensing_istanbul_april http://www.erranet.org/Events/ERRA/2014/tariff_istanbul_april</p>
<p>ERRA Working Group on Customer and Retail Markets, June 16-17, 2014, Vienna, Austria</p>	<p>Mr. Kirk House, Assistant Counsel at the Pennsylvania Public Utility Commission noted increased regulatory efforts and preparatory work for launching customer education campaigns on supplier switching in light of the January 2015 deadline for a full retail market opening. Several European regulators are lagging behind. Mr. House pointed out that while markets may open in January 2015, robust market activity will not occur until customer education and switching protocols are established and well implemented, which may take several years. ERRA's Customer and Retail Markets working group could be instrumental in facilitating and informing the work of regulators in this regard.</p>

Task 2: Regulatory Reporting, Monitoring & Transparency

<p>Chernobyl Site Monitoring and Regulatory Review Process Assessment</p>	<p>From March – July 2014, NARUC managed a consulting agreement with MPR Associates for a Chernobyl Site Monitoring and Regulatory Review Process Assessment. This project provided support to the U.S. government for the New Safe Confinement (NSC) and Interim Spent Fuel Storage (ISF-2) projects.</p> <p>MPR's specific tasks were to:</p> <ol style="list-style-type: none"> 1. Perform a review of the regulatory processes and their specific implementation in the NSC and ISF-2 projects, and identify actionable recommendations to improve the efficiency and effectiveness of the regulatory review process for these projects. 2. Perform a review of the Chernobyl site monitoring grant agreement and its implementation, and identify actionable recommendations to improve the effectiveness of the site monitoring and provide more overall value to the donors in light of changed circumstances since contract initiation. <p>In conjunction with the above tasks, MPR considered the project controls in place for both NSC and ISF-2 projects, and potential measures for improving confidence in project schedule and cost. A final report was provided to NARUC and USAID in July 2014.</p>
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Task 3: Regional Regulatory Cooperation

3. A. BLACK SEA REGULATORY INITIATIVE (BSRI)

	<p>THE BLACK SEA – OMS REGULATORY INITIATIVE (BSRI) www.naruc.org/USAID/BlackSea</p>
	<p>The Black Sea – Organization of MISO Regulatory Initiative was launched in 2010. Through this regional program, USAID and NARUC have been assisting the six Black Sea regulators to establish harmonized and more coordinated cross-border electricity trading frameworks to facilitate flows of conventional and renewable energy resources. The related regulatory efforts are focusing on key ingredients such as common market rules, improved regional coordination, developing effective incentives for clean energy projects at the national level, and eliminating incompatible trade or administrative rules as barriers to more robust electricity flows.</p> <p>Regional optimization - both in the regulatory sphere and the network performance - requires market-based, cross border trade of electricity to take advantage of the region’s diverse generation resources (hydro, wind, solar, coal, gas and nuclear) and seasonal variations in supply and demand of electricity. These arrangements necessitate advancements in supporting regulations, technical procedures and favorable investment conditions. National market reforms are not sufficient to support the growing need for investments in generation and transmission sectors. Each Black Sea country sees the cross-border trade (including clean energy resources) as essential to accomplish national energy strategies and related regional objectives.</p>
<p>Logical Framework Sub-purposes</p>	<p>Clean energy development and cross-border electricity trade are considered critical components and an extension of the Black Sea countries’ efforts to achieve national energy sectors objectives. Additional opportunities are linked to emerging regulatory support for end-user energy efficiency that acknowledges the need to ease dependence of the Black Sea countries on imported energy resources and reduce the pressure on the overall energy consumption.</p> <p>NARUC continued building capacity and guiding the regulators in adopting common approaches that support the advancements in cross-border electricity exchanges, security of supply, and renewable energy integration through the following project logical framework sub-purposes.</p> <ol style="list-style-type: none"> 1. Improving harmonization aspects of national regulatory frameworks for more robust cross-border electricity trade in the Black Sea region 2. Enhancing national regulatory instruments in support of regional renewable energy development and energy security 3. Advancing regulatory frameworks and policy directions for energy efficiency in the Black Sea countries 4. Establishing greater legislative harmonization to support more compatible transmission infrastructure and system planning. <p>These overarching goals have direct implications on the regulatory actions and policies discussed in the three guiding <i>Principles</i></p>

	<p>→ Regulatory Principles for Cross-Border Trade and Market Integration, adopted in late 2013 http://www.naruc.org/International/CB MarketIntegration Principles.pdf</p> <p>→ Regulatory Principles for the Promotion of Energy Efficiency, to be adopted in late 2014 http://www.naruc.org/International/Renewable Principles.pdf</p> <p>→ Regulatory Principles for the Development and Integration of Renewable Energy, adopted in 2012 http://www.naruc.org/international/EE Principles.pdf</p>
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Summary of Activities	
	<p>Development of cross-border regulatory frameworks and market monitoring methods</p> <p>The six Black Sea regulators met to continue coordinating discussions on advancing market liberalization regulations, supporting commercial projects for expansion of transmission infrastructure (Turkey, Georgia) and improving regulatory rules for the integration of renewable energy (Moldova, Ukraine, Azerbaijan). The regional group also expanded its interest into the sphere of energy efficiency in order to examine more sustainable approaches to the utilization of regional resources.</p> <p>GNERC/Georgia presented its draft framework for a joint regulatory regime on the Georgia-Turkey interconnection and identified initial measures to harmonize the regimes. Some concerns and discussion emerged related to transmission capacity allocation on the new interconnector, development of supporting grid codes, and regulatory support schemes for the hydro resources to be traded over the new line.</p> <p>The regional group discussed the Cross-Border Trade and Market Integration Principles document, with special attention paid to two new sections on Financial Transmission Rights and Market Monitoring. The regulators approved the final text and recommended deeper engagement with the BSTP working group, identifying the need to conduct joint modelling analyses to improve understanding of transmission activities and related costs.</p> <p>The issue of market monitoring in bilateral markets which are just being developed in the Black Sea region was heavily debated. The path of further market development, it was concluded, will at first involve open-access type arrangements where bilateral traders will be able to use the cross-border interconnections on a non-discriminatory basis. The similar stages of market development in SEE and other parts of Europe were compared, to benefit the learning stages of the Black Sea countries. The U.S. experience of having market monitoring structures in place before market opening was heavily emphasized. This was one motivation for the implementation of market monitoring in SEE: to have regulators ready for the developing market. The debate concluded that the Black Sea regulators need to begin to understand the elements of open-access policies and how these will lead to development of the bilateral energy markets. The Serbian regulator informed the process by discussing the work on:</p> <ol style="list-style-type: none"> 1. cross-border capacity allocation 2. monitoring the control of such capacity by dominant suppliers

	<p>During the discussions on electricity markets and cross-border trade, the regulators collectively agreed that in order to prevent potential abuse by the market participants in the development of wholesale markets (day-ahead, balancing, ancillary), there is a need to build up internal monitoring capacities within each regulator and regionally. More discussions, examination of SEE experience and cooperation on this issue with the Energy Community members was deemed desirable.</p> <p>Based on a pre-defined template, the first round of benchmarking national cross-border regulatory practices against the <i>Regulatory Principles for Cross-Border Trade and Market Integration</i> (see document link on p. 8) and related Regulatory Guideline was completed. The initial results of putting in place basic regulatory provisions were deemed satisfactory. The regional benchmarking will continue at future project gatherings as new cross-border trade activities emerge and regulations are adopted by BSRI members. The benchmarking activities will be driven by regulators who request peer review of their documents by the regional group.</p> <p>The Black Sea regulators continued discussing policy issues related to supporting cross-border activities, transmission planning, and related cost allocation. Georgia and Armenia are considering a new interconnector that could help Armenia transit electricity through Georgia and export to Russia. Several feasibility studies have been completed by KfW. GNERC and PSRC staff informally expressed interest in pursuing more regularized consultations and discussions to determine the regulatory conditions for more coordinated market development between Georgia and Armenia. It is clear that the regional parameters of Armenia’s energy security are limited and opportunities to enhance it on a sub-regional level should be further explored.</p> <p>Further discussions in the regulatory group concentrated on cross-border trade related regulatory issues that emerge with more ambition to introduce EU-compliant retail competition in electricity (e.g. Turkey, Georgia, Moldova, Ukraine) and examine prospects for other forms of electricity exchanges.</p> <p>A representative from MISO contributed relevant information to the regulatory discussions on cost allocation in the context of the regional transmission planning and network protocol developments that is building capacity in Black Sea regulators to evaluate cost feasibility of such investments. The Black Sea regulators are developing harmonized approaches to the cost allocation issues which strengthens their relationship with the Black Sea TSO counterparts.</p>
<p>Regulators’ Feedback</p>	<p><i>“Understanding the existing practices of our U.S. colleagues and my fellow Black Sea regulators on access to interconnection capacities for cross-border trade represents an important prerequisite for the integration of [Moldova’s] energy markets. Here I must mention the debates and discussions within the BSRI group on cross-border capacity allocation rules from previous meetings. All those discussions on existing practices, which we have captured in the [Cross Border Trade] Principles document, and all the presentations on these matters provide me incrementally with a better understanding of the substance of cross border trade and capacity allocation principles. When I do related work, I refer to the Principles for guidance.”</i></p> <p>- Anatol Boscaneanu, ANRE/Moldova</p>

	<p>Benchmarking clean energy regulatory practices</p> <p>All six Black Sea countries presented on the status of RES development in their countries. Georgia, Moldova, Turkey, and Ukraine noted that they have used the RES Principles (2012)' guidelines to improve various provisions and support schemes. The following developments were noted:</p> <ul style="list-style-type: none"> • Very fast penetration of PV and wind projects in Ukraine accompanied by the first unplanned FIT change due to initial excessive allocation scheme. • Steady hydro (small HPPs) development in Armenia, with new installed capacity reaching 151 MW. <p>Azerbaijan has been pursuing an aggressive strategy to develop its alternative energy alongside the bountiful oil and gas reserves. The State Agency for Alternative and Renewable energy (AREA) of Azerbaijan presented on the process to develop 2,500MW wind capacity by 2020 to balance the needs of the domestic market and develop strategies to utilize arising export opportunities. The RES regulator lacks capacity to commercialize the exports and requires comprehensive development of the regulatory environment.</p> <p>The partners and their OMS counterparts engaged in benchmarking primary renewable energy legislation (Moldova) and supporting regulations (Moldova and Ukraine) in select Black Sea countries against the <i>Regulatory Principles for the Development and Integration of Renewable Energy</i> (see document link on p.8). ANRE/Moldova used the <i>RES Principles</i> extensively in drafting a new Law on the Promotion of Energy from Renewable Sources (see III. Major Accomplishments on p. 4 above). The discussion among the regulators affirmed that the legislation, to a large extent, complies with the <i>RES Principles'</i> best practices. As of the meeting, the legislative draft was being discussed by the Government of Moldova and was subsequently submitted to the Parliamentary energy committee by late March, 2014. This is a tangible impact of the BSRI project on framing national renewable regulations.</p> <p>The RES Principles benchmarking session also confirmed the need to re-design the current, excessively expensive RES-E support scheme in Ukraine, especially in the field of PV support. NERC Ukraine requested more information on net-metering which will be added to the BSRI Principles to provide Ukraine with select best practices and recommendations for regulatory treatment.</p> <p>Guarantee of Origin (GoO) regulations in both Moldova and Ukraine were deemed insufficient to support cross-border cooperation in RES between these countries and the EU. In order to extract the potential benefits from such cooperation, a major revision of GoO systems and their harmonization with the EU practice is needed. The BSRI project sees a need to focus on this area in the future.</p>
<p>Regulators' Feedback</p>	<p><i>“ANRE took a full advantage of the RES Principles at its disposal in drafting the new Renewables Law in Moldova. We were aware of the concepts and analysis that needed to be accomplished through this major piece of legislation and the [RES] Principles proved to be a great source of inspiration.”</i></p> <p>- Anatol Bosceanu, ANRE/Moldova</p>

Regulatory support for energy efficiency and review of the Regulatory Principles for the Promotion of Energy Efficiency in the Black Sea Region

The BSRI group discussed several drafts of the *Regulatory Principles for the Promotion of Energy Efficiency* (EE Principles), which dominated the FY14 Black Sea project meetings. Since the associate and prospective Energy Community member countries will soon discuss related guidelines for the implementation of the new EU EE Directive, the regulators regard this topic with importance. Individual comments from regulators requested elaborated discussion on:

- how to encourage large customers to participate in demand response (DR) programs, thus contributing to peak shaving.
- US experiences with utility rate decoupling to engage utilities which may be otherwise reluctant due to lost revenues
- specific financing aspects and verification arrangements for energy efficiency investments

It became evident early on in the drafting process that the regulators favoured a side-by-side discussion of the requirements stemming from the new EU EE Directive, and to include practical experiences of select US States and ECSEE member countries with the application of EE obligation schemes.

BSRI discussed several improved versions of the policy-guiding document throughout FY14 and proposed substantive revisions required for further modifications. In particular, a more detailed discussion on net-metering and on tariff policies (e.g. block tariffs, TOU tariffs), as well as clear delineation of EE concepts from the supply and demand side, were requested. BSRI participants expressed much interest in learning about how DSO regulation should respond to energy efficiency improvements and a spread of distributed generation. Rate decoupling experiences of US utilities, tariffication of renewables and underlying regulatory issues were identified for future elaboration of the text and the related discussions.

The OMS regulators provided a critical review of several EE Principles drafts. The improved version puts the focus on regulatory (instead of broad policy) related issues, discusses supply and demand side EE regulatory tasks and measures, and expands the regulatory dimensions of metering issues. Based on the request by the Black Sea regulators, significant attention is paid to the relationship of tariff schemes and their EE impact. The partners agreed that the final version of the discussed text should serve:

- As a guide for easier review of country EE regulatory processes and assist in identifying needs for further assistance.
- As a potential basis for future and more targeted regulatory training specifically on energy efficiency issues and regulatory measures

As a policymaking tool to be disseminated to key constituents, particularly those in government and national agencies with overlapping responsibilities in energy efficiency.

Joint regulatory-TSO coordination on transmission planning

The regulators welcomed a proposal from the counterpart Black Sea TSOs to cooperate in the identification of transmission infrastructure projects with regional benefits, data gathering and result evaluation. The BSRI expressed slight concern over the applicability of an initially presented ENTSO-E Cost-benefit analysis (CBA) methodology in the region given the technical and

geopolitical complexities, and electricity market design differences of the participating countries. In this regard, BSRI proposed that key considerations and assumptions regarding the implemented methodology and sensitivity analysis scenarios be consulted and jointly decided by BSTP and BSRI. BSRI acknowledged that parallel to this project identification and joint modelling/analytical work, the regulators will develop underlying regulatory principles for cross-border cost allocation in order to increase the opportunity to examine results in a side-by-side manner. This work is preliminarily planned for FY15.

The regulators reviewed collaboratively with the counterpart TSOs the ENTSO-E CBA methodology adopted for the candidate transmission line projects in the Black Sea region and discussed related regulatory issues.

The BSRI group agreed that further objectives with the BSTP cooperation in identifying projects of regional relevance (PRRs) in the Black Sea region should consider the following needs:

- Understand the role of regulators (versus TSOs) in regional transmission planning (examples to study are ENTSO-E, MISO)
- Understand the aggregate societal benefits of transmission PRRs (study ENTSO-E CBA methodology).
- Understand the distribution of societal benefits among impacted countries and stakeholders (customers, generators, transmission companies). For this objective, the regulators are proposing to engage in market modelling).
- Learn about the costs of regional transmission projects
- Learn about additional regulatory measures that could encourage investment into PRRs (examples from the Energy Community Regulatory Board to support the implementation of Projects of Energy Community Interest (PECI) is to be studied).
- Learn about alternative cross-border cost allocation mechanisms for cost recovery in PRRs (ACER; BSRI regulatory principles).
- Learn about the implications of alternative cost allocation and tariff solutions on the finances of transmission operators.



Black Sea regulators engage with OMS and MISO Representatives in discussion on the economics of and regulatory input into regional transmission planning to incentivize infrastructure expansion in the national energy systems and across the Black Sea region.

Regulators and TSOs' Feedback	<p><i>“The members of the Black Sea Regional Transmission Planning Project and the Black Sea Regulatory Initiative express strong support for continuing the dialogue established through the joint meetings of their projects. Consistent interaction among the Working Groups is resulting in synergies accelerated by their distinct and complementary skills. We seek to improve the understanding of our respective technical, policy and market analyses in support of our shared objective to enhance clean electricity trade for the welfare of our citizens. We find it necessary to communicate consistently to improve cooperation in developing common proposals. To further this objective, we will deepen our cooperation on emerging regional planning and related regulatory challenges.”</i></p> <p style="text-align: right;">-A common value proposition statement between the Black Sea regulators and counterpart TSOs.</p>
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Changes in Partnership Context & Assumptions	
	None.

Forward Planning	
	<ol style="list-style-type: none"> 1. NARUC continued planning a series of workshops under the Black Sea Regulatory Initiative, scheduled for October 6-10, 2014, in Istanbul, Turkey. NARUC reached out to the regulators in Southeast Europe who were invited to express interest in exploring cross-regional issues related to electricity trade, regional security of supply, renewable energy development, and opportunities for increased collaboration with the regulatory counterparts from the Black Sea group. Regulators from Albania, Bosnia, Kosovo, Macedonia, Montenegro, Serbia confirmed participation and discussed their planned contributions to the regional forum discussions. 2. Black Sea and OMS regulators will prepare national case studies to illustrate varied EE practices that can further guide additional regulatory incentives for more efficiency energy consumption. The cases will be discussed in October and incorporated in the <i>EE Principles</i> by end of 2014. 3. NARUC secured participation of three OMS Commissioners (Boyd/Minnesota, Callisto/Wisconsin, Jacobs/Iowa) in the October workshops. Several coordinated discussions between NARUC and OMS were organized in order to elaborate the moderating and presenting roles. 4. NARUC and USAID finalized the three sets of programs for the series of October workshops, namely: <ol style="list-style-type: none"> a) Black Sea Regulatory Initiative working group meeting, October 6-7 b) Black Sea/SEE Regional Trade Forum, October 8-9 c) Black Sea/SEE Regulatory Planning Session, October 10.

Task 4: Promotion of Energy Security

4. A. BILATERAL PARTNERSHIPS

	<p>ARMENIA</p> <p>www.naruc.org/USAID/Armenia</p>
<p>NARUC began supporting the Public Service Regulatory Commission (PSRC) of Armenia in June 2010 in order to increase its capacity and the quality of its economic regulation. NARUC has supported this regulatory work through a bilateral partnership between the Public Services Regulatory Commission (PSRC) of Armenia and the Iowa Utilities Board (IUB) as well as regionally through PSRC's involvement in the Black Sea Regulatory Initiative (BSRI). After six activities, the partnership drew to a close in October 2012, having facilitated exchange of information and best regulatory practices. PSRC's interests shifted from horizontal capacity-building to organizing smaller, problem-solving peer platforms that could facilitate swifter reviews of actual regulatory instruments, pending regulatory decisions and other forms of regulatory process to bring immediate value.</p>	
<p>Summary of Activities</p>	
	<p>Armenia-Georgia regulatory coordination</p> <p>The Georgian National Energy and Water Supply Regulatory Commission (GNERC) is one of the most progressive leaders in regulatory issues in the region. The commission has made steady progress in adopting international best practices and increasing coordination with neighboring regulators (Turkey, in particular). In order to see the practical aspects of GNERC's progress, NARUC invited a PSRC Armenia expert to observe a Georgia partnership activity (see p. 23) with an objective to identify and implement specific approaches.</p> <p>Sergey Aghinyan, Head of Investment Program Division at PSRC, reported the following outcomes from his partnership observation:</p> <ul style="list-style-type: none"> • Armenia is monitoring the regulatory coordination process between GNERC Georgia and EMRA Turkey to consider useful methods of collaboration when it engages more deliberately with Georgia. • The tariff methodology to be applied in Armenia for more open market conditions, as implemented in Georgia, is far from the reality. It was useful to learn what steps Georgia is taking in this regard as it continues preparing its sector for more wholesale market competition. • Approaches the Georgian and Turkish regulators are taking in increasing the share of renewables is relevant for Armenia and PSRC is examining options once the energy sector is more liberalized. <p>Armenia realizes that it needs to make more progress in its regulatory framework on tariffs and market/network activities, given sub-regional developments in Georgia. Its prospects for more secure energy supply can be improved through closer coordination of its activities with neighboring systems. PSRC has keen interest to develop such relationship with GNERC Georgia.</p> <p>A one-week internship opportunity was organized for PSRC Armenia tariff experts under the BSRI intra-regional regulatory capacity building initiative to allow closer examination of drafting and adopting Georgia's new tariff methodology and electronic form of applications, unified system of accounts, and grid code developments.</p>

	<p>Development of natural gas regulations through a peer review</p> <p>PSRC’s gas tariffication system lacks modern techniques of cost-reflective allocation and consumer classification based on cost causation. In light of the efforts to improve the regulation of natural gas consumption, PSRC requested a peer review of its regulatory framework to evaluate:</p> <ul style="list-style-type: none"> • natural gas customer reclassification; • new customer protections against abrupt price fluctuations; and • natural gas storage pricing, and regulation. <ul style="list-style-type: none"> • In order to bring the outdated natural gas tariff methodology to the same standard as a recently adopted electricity tariff methodology, PSRC requested NARUC to assist its tariff experts in transposing the best practices in natural gas tariff regulation. Those specific areas of work include: Creating classification of consumer groups for the most optimal allocation of expenses and usage of the natural gas resource • Identifying mechanisms (financial and non-financial) of balancing risks between consumers and suppliers • Determining the optimal necessary volumes of stored gas without placing the undue cost burden on the consumers <p>While the peer review identified the major shortcomings in Armenia’s natural gas tariff methods, the interactions with the U.S. natural gas experts also revealed that deeper examination and analysis of the natural gas consumer tariff categories and how they relate to each other was needed. Therefore, PSRC requested a short-term consultant to assist with developing regulatory documents necessary to change the current tariff methodology for natural gas. The consultancy will be organized in October 2014 (FY15).</p>
	<div data-bbox="748 1094 1179 1415" data-label="Image"> </div> <p>Andreas Thanos (left) and Thomas Pearce (right) from the US discussing natural gas consumer classification principles in the U.S., June 18, 2014, Yerevan, Armenia.</p>

Changes in Partnership Context & Assumptions	
	<p>NARUC proposed to PSRC to evolve from a traditional bilateral partnership structure to interactive problem-solving information platforms for future engagements to support more concrete and swifter regulatory progress. In response, NARUC organized the peer review format that allows for analysis of current documents being drafted by PSRC. This proved to be a successful format given Armenia’s positive feedback.</p>

Forward Planning	
	NARUC is working with USAID to develop a regional or sub-regional, topically-driven, bridge concept that will engage the regulators, including PSRC, to learn from each other's activities and approaches and converge toward more interconnected markets.

	<p>BOSNIA AND HERZEGOVINA</p> <p>www.naruc.org/USAID/BiH</p>
	<p>In early 2014, NARUC launched the BiH partnership with the three regulatory agencies: the State Electricity Regulatory Commission (SERC), the Regulatory Commission for Electricity in the Federation of Bosnia and Herzegovina (FERK), and the Regulatory Commission for Energy of Republika Srpska (RERS). The Public Utilities Commission of Ohio (PUCO) serves as the lead U.S. State in this partnership and guides the BiH regulators in adopting market-based regulatory approaches.</p>
Logical Framework Sub-purposes	<p>As a signatory to the Energy Community Athens Treaty, the BiH regulators are responsible for implementing the <i>acquis communautaire</i> in the energy sector to secure more transparent, liquid and interconnected markets. NARUC partnership activities, through shared Ohio's market liberalization experience, are assisting Bosnia and Herzegovina to achieve the following regulatory instruments that the BiH regulators have to draft, adopt and implement by early 2015¹:</p> <ol style="list-style-type: none"> 1.1 Market opening and regional market integration 1.2 Licensing provisions for unbundled distribution system operators 1.3 Retail customer switching
Regulatory Progress and Results	<p>SERC utilized the knowledge gained during the first regulatory partnership exchange and reflected applicable provisions in its market rules that were adopted, as indicated below:</p> <ol style="list-style-type: none"> 1. Concept on Ancillary Services for Power System Balancing (March 2014) 2. Decision on Changes and Amendments to the Tariff Pricing Methodology for transmission services, independent system operation and ancillary services (public hearing on June 10, 2014 and adopted in July 2014) 3. Decision on Approval of the Amendments to the General Conditions for Electricity Supply in Brcko District (May 2014) <p>FERK utilized the knowledge gained during the two regulatory partnership exchanges and reflected applicable provisions in several regulatory instruments. Mr. Ognjen Markovic, NARUC's Bosnia-based part-time project consultant, actively engaged with FERK by analyzing its draft rules, attending regulatory meetings, and proposing changes. FERK drafted and presented the following rules at public hearings:</p> <ol style="list-style-type: none"> 1. General Conditions of Supply (public hearings on February 25, April

¹ The harmonization of Bosnia and Herzegovina's primary and secondary legislation with the EU Directives to create preconditions for market opening in compliance with the Energy Community Athens Treaty provisions and the energy reform process will continue as indicated by the EU Directives.

	<p>24-25, and July 8, 2014 and adopted in October 2014)</p> <ol style="list-style-type: none"> 2. Rule on Methodology for Calculation of Connection Fees and Defining Conditions and Deadlines for Connection to the Distribution Network (public hearing on February 25, 2014 and adopted on January 1, 2015) 3. Rule on Development and Application of Load Curve (public hearings on April 2, August 27 and September 2, 2014 and adopted in November 2014) 4. Amendments to Rulebook on Eligible Customers Supply (public hearing on April 15, 2014 and adopted in October 2014) <p>Note: The Rule on Licensing (FERC) was one of NARUC's performance targets; however, FERC adopted the Rule in May 2014, before NARUC held a discussion on the topic in Sep 2014.</p> <p>RERS utilized the knowledge gained during the second regulatory partnership exchange and reflected applicable provisions in one of its regulatory instruments. Mr. Ognjen Markovic engaged with RERS by analyzing the draft rule, attending a regulatory meeting, and proposing changes to:</p> <ol style="list-style-type: none"> 1. Draft Rulebook on Quality Standards for Supply (public hearing on September 30, 2014)
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Summary of Activities	
	<p>Adopted regulations for the functioning of wholesale and retail markets</p> <p>The targets the three BiH regulators set to achieve on improving market regulations were indicative of their separate authorities in the oversight of the BiH energy sector. SERC identified priorities in defining the retail market parameters. Therefore, it sought clarifying discussions on default supplier/universal service, functioning of a balancing market, and interconnection of regional markets. Earlier reports by REAP/USAID (Regulatory and Energy Assistance Project active in BiH during 2007-2013) on Ancillary Services and Balancing in the Wholesale Market of Bosnia and Herzegovina, and a Gap Analysis of Legal and Regulatory Barriers to the Successful Functioning of BiH Market were used as a basis for the discussions.</p> <p>The entity regulators FERK and RERS saw priorities in defining the rules and regulations in the unbundled distribution environment. The targets that they focused on included identifying a default electricity provider, providing quality of supply metrics, rights and obligations of DSOs, metering provisions, and managing customer databases with new market data. The following pre-existing documents from the BiH regulators were used as a basis for discussions and drafting of instruments noted under Regulatory Results above:</p> <ul style="list-style-type: none"> • Conditions of Supply (FERK and RERS); • a Rulebook on Eligible Customers (FERK and RERS); • Distribution system codes for power utilities in FERK and RERS jurisdiction; and • a REAP report on the Role of a DSO as a Neutral Retail Market Facilitator <p>Discussions explored a variety of relevant topics for regulation of market</p>

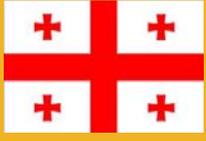
activities that dominated the regulatory agenda in 2014. The BiH regulators prepared specific questions that would address challenges they face in establishing proper conditions for market activities in Bosnia and Herzegovina. Representatives from PJM greatly enhanced the examination of market issues by addressing functional, organizational and contractual matters. The variety and depth of inquiries from the BiH regulators illustrated their efforts to adopt best and proven practices in the organization of wholesale markets in BiH.

Although FERK is on target with drafting and editing relevant regulations and has the support of primary legislation to align with the EU Third Package, RERS is facing obstacles in adopting its own instruments (such as assigning a public (incumbent) supplier in the market conditions). The politicians in the Republic of Srpska are delaying the adoption of the market law because of concerns that it may result in increased electricity prices which would be socially unacceptable. RERS noted that due to low depreciation costs, low rate of return on capital and cheap electricity produced in hydro power plants, the prices offered by current utilities are lower than the market prices. This reality greatly complicates the understanding that more competition in the generation sector would eventually lead to price levelization.



Forward Planning

As the electricity market for all residential consumers in Bosnia and Herzegovina prepares for its opening on January 1, 2015, it will be a testing period for regulators to follow the initial developments and discuss with the Ohio colleagues the market dynamics during the next partnership activity in the spring of 2015.

	<p>GEORGIA</p> <p>www.naruc.org/USAID/Georgia</p>
<p>The regulatory partnership between NARUC and the Georgian National Energy and Water Supply Regulatory Commission (GNERC) was established in 2008, with the Vermont Public Service Board</p>	

(VPSB) serving as a lead U.S. State for three activities. Cooperation between GNERC and the Kentucky Public Service Commission (KPSC) started in 2010 and strengthened GNERC’s basic regulatory functions. In 2014, the Michigan PSC began working with GNERC on developing the Georgian regulator’s understanding of market activities.

Logical Framework Sub-purposes

The Government of Georgia is committed to facilitating private sector-led development of hydropower resources in line with the strategy to further develop the competitive structure of the country’s energy sector. The necessary infrastructure in support of the cross-border trading path to facilitate the export of resources requires heavy involvement of GNERC. The regulator is working on establishing clear market rules, approve cross-border trading protocols, including allocation of transmission capacities, and developing supporting regulations to prepare for its competitive market oversight role.

These overarching goals have direct implications for GNERC’s activities to develop and implement:

1. A regulatory framework for a competitive electricity market model (GEMM2015) and related trading mechanism (ETM)
2. Regulatory procedures to support security of supply
3. Stronger institutional governance

Regulatory Progress and Results

→ **Amended Electricity Market Rules** approved on October 18, 2013. The modifications include allocation rules on the new Georgia-Turkey 400kV transmission line which was launched in December 2013, and increased priorities for electricity exports reflecting the Government strategy.

→ **Amended Law on “Electricity and Natural Gas,”** adopted by the Parliament on December 29, 2013. A new article on the Uniform System of Accounting (USoA) represents aggregate experience gained during the partnership program.

→ **Institutionalized sessions for energy journalists,** initiated by GNERC to deliver presentations on a variety of topics to raise awareness and quality of energy reporting. This proactive regulatory outreach to the media builds expertise in organizations that can positively support the work of independent regulatory bodies and inform the public.

→ **Adopted electricity tariff methodologies:**

- a) Tariff Setting Methodology for Electricity Generation, Transmission, Dispatch and Electricity Market Operator Service
- b) Tariff Setting Methodology for Electricity Distribution, Pass Through and Consumption
- c) Regulated assets depreciation/amortization rates

The draft methodologies were reviewed in January and May 2014. GNERC took into consideration tariff-setting methods of Kentucky, Michigan and Idaho Commissions related to the salvage value, removal value of assets, long-term RAB data, and working capital determination. Subsequent to adopting the methodologies, GNERC approved tariffs for electricity distribution, pass through and consumption for the largest distribution company JSC Energo-Pro Georgia (EPG). These tariffs are based on the incentive regulatory principles and mechanisms.

	<p>→ <u>Developed deeper regulatory coordination between Georgia and Turkey, and conducted joint analyses of the Georgian grid code</u> Several interactions between GNERC and EMRA commissioners and staff took place during 2014, spurred by continued dynamic collaboration within the Black Sea regulatory project. Issues of mutual interest were discussed and a joint expert working group was established to develop principles of regulatory coordination underlying cross-border electricity trade between the two countries. National TSOs (GSE and TEIAS) also engaged to coordinate technical, operational and system planning protocols. Joint meetings were held to facilitate discussions on trade, capacity allocation procedures, and harmonizing grid codes. During several interactions, useful analysis was done to identify elements of the Georgian regulatory framework that need to be harmonized with relevant cross border electricity trade provisions in the Turkish framework. The Georgian Grid Code was jointly analyzed and compared to the Turkish Grid Code.</p> <p>→ <u>Initiated analytical work on establishing an ancillary services market model</u> Georgia has already defined ancillary services in the transmission network code but the market component of such services has not been elaborated. Having discussed and reviewed the Turkish ancillary services framework regulation, developed by EMRA, GNERC experts have been closely coordinating their drafting process with the Georgian Ministry of Energy and Natural Resources, and the system and market operators in order to facilitate the process and prepare a market-based model.</p>
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Summary of Activities	
	<p>Development of cross-border regulations and tariff methodologies NARUC facilitated a regulatory and technical review of cross-border trading issues for the newly opened Georgia-Turkey interconnector, with involvement of the Georgian (GNERC, GSE/TSO, ESCO, Ministry of Energy and Natural Resources) and Turkish (EMRA, TEIAS)/TSO stakeholders. The regulatory discussions focused on the uniform system of accounts and integration of renewable energy sources into the grid. GNERC’s current electricity transmission methodology was reviewed in order to identify elements that needed further revision to comply with the evolving changes in the electricity market structure.</p> <p>Deputy Minister of Energy and Natural Resources of Georgia and ERRA Chairman (EMRA Commissioner) Bayraktar participated in the activity to demonstrate support for the increased cross-border electricity trading activities and stronger regional regulatory coordination. An expert from PSRC Armenia observed the discussions in order to gather information about enhanced cross-border linkages with Georgia, which Armenia is pursuing with interest.</p>

	 <p style="text-align: center;"><i>Regulatory discussions in Tbilisi, January 27-31, 2014</i></p>
<p>Regulators' Feedback</p>	<p><i>“This meeting was very important for GNERC in order to gain more experience when adopting rules and procedures required to commence cross-border electricity trade between Turkey and Georgia. Given the ultimate goal to create a common electricity market in the region, the synchronized operational standards and harmonized market rules are an important requirement that we are addressing. Regulators and TSOs of both countries must co-ordinate and co-operate openly to reach this goal.”</i></p> <p style="text-align: right;"><i>– Nugzar Beridze, Head of Electricity Department, GNERC–</i></p>
	<p>Technical visit by GNERC to EMRA to elaborate market regulations</p> <p>NARUC organized a visit by a GNERC expert to EMRA focused on the following two tasks:</p> <p>Task 1. Examine the Turkish internal electricity market regulation and monitoring of day-ahead and balancing market performance</p> <p>Task 2. Examine the operational aspects of cross border electricity trade with Turkey</p> <p>During the technical meetings, the GNERC expert reviewed the regulatory, technical and functional aspects of the Turkish wholesale market in order to inform the development of the Georgian regulatory framework to:</p> <ul style="list-style-type: none"> • set guidelines for procuring ancillary service by system operators • set regulatory conditions for long-term power purchase agreements (PPA), bilateral contracts, and the third party access • elaborate a regulation for electricity imports-exports • elaborate a practice regarding cross-border transfer capacity allocation procedures • elaborate a regulation for monitoring transparency and competition related to transmission rights and capacity auction performance. <p>The technical visit included practical examination of key challenges on-site at a day-ahead electricity market operator (PMUM) and the National Load Dispatch Center that operates a balancing market. The counterparts also compared the Georgian and Turkish grid codes, and TSO Interconnection Agreements in order to identify requirements that should be harmonized by the Georgian side. EMRA energy experts also expressed readiness to participate in joint simulation of Georgian and Turkish electricity market coupling through a customized market coupling simulator.</p>
	<p>Rate audit activities for Georgia-Moldova collaboration</p> <p>In the framework of NARUC’s Black sea intra-regional capacity-building efforts, a GNERC expert observed a Moldova-NARUC Partnership activity in Chisinau, March 24-28, 2014, in order to:</p> <ul style="list-style-type: none"> • Develop internal guidelines for organizing and conducting rate audit activities, including an initiating party, funding streams, etc.

	<ul style="list-style-type: none"> • Develop types of audit (financial, compliance and performance audits) of the regulated companies • Develop procedures of planning/reporting stage of audit and software used in a regulatory audit • Develop cost allocation procedures during the tariff approval process • Develop reporting system used at the monitoring of regulated companies and tariffs. • Develop tariff incentives for renewable energy producers <p>GNERC staff also explored various regulatory approaches regarding the functioning of wholesale and retail markets in Maine. The expert reviewed the background issues (wholesale competition, divestiture, utilities as TOs, unbundling, supplier switching, rules governing relations between market participants, separation of accounts and the structure of retail electricity market in Maine) in an effort to understand what elements can be applied in the Georgian market context.</p>
Regulators' Feedback	<p><i>"...The internship program was an important contribution to furthering the regional cooperation between GNERC and EMRA. New knowledge gained from examining the Turkish electricity market developments will be used in harmonizing Georgian electricity market regulations, especially in import-export activities, renewable support mechanisms and market operation rules."</i></p> <p style="text-align: right;"><i>– Zviad Gachechiladze, GNERC expert, September 1-5, 2014, Ankara, Turkey –</i></p>

Changes in Partnership Context & Assumptions	
	None.

Forward Planning	
	<p><u>Georgia-NARUC Partnership Exchange on Retail Market Liberalization</u></p> <p>NARUC continued program development for a partnership exchange in Tbilisi on October 20-24, 2014, with a focus on</p> <ol style="list-style-type: none"> 1. Retail Market Liberalization, namely <ol style="list-style-type: none"> a. Supplier switching rules b. Retail market rules 2. Consumption and supply rules; 3. Procurement and Investment assessment audits and monitoring <p>This activity is in accordance with the project logical framework's sub-purposes to assist GNERC to develop a regulatory framework for a Competitive Electricity Market Model (GEMM-2015) and related Electricity Trading Mechanism (ETM).</p> <p>Additional topics proposed by GNERC for FY2015 activities:</p> <ol style="list-style-type: none"> 1. Day-ahead market elaboration 2. Grid code elaboration 3. Market monitoring rules 4. USoA for natural gas sector

	<p>KOSOVO</p> <p>www.naruc.org/USAID/Kosovo</p>
<p>The regulatory partnership between NARUC and the Energy Regulatory Office (ERO) of Kosovo was established in 2008, with the Illinois Commerce Commission (ICC) serving as a lead U.S. State for six activities. After a one-half-year hiatus (2012-2013), during which Kosovo underwent a privatization of its electricity distribution sector, NARUC re-engaged ERO on enhancing its institutional, decisional, and regulatory-technical capacities in post-privatization oversight and environmental sustainability of its energy sector. In November 2013, NARUC signed a second Memorandum of Understanding with ERO and the Pennsylvania Public Utilities Commission (PA PUC) to serve as a new lead U.S. State and guide the Kosovo regulator in understanding of more complex market activities.</p>	
<p>Logical Framework Sub-purposes</p>	<p>The USAID energy assistance program in Kosovo promotes the overall sector reform, including private sector participation in generation and distribution networks for improved electricity supply, as well as merits and functions of sound regulatory environment by engaging relevant regulatory, utility and government stakeholders.</p> <p>NARUC continued building capacity with the Kosovo stakeholders and guiding the regulators in adopting best practices in market-based rate-setting that support the development of:</p> <ol style="list-style-type: none"> 1. Regulatory Instruments for improving quality and availability of energy supply 2. Regulatory instruments to promote further integration into the European energy markets 3. Regulatory instruments to enhance consumer knowledge on the energy sector and tariff structures 4. Harmonized approaches for utility inputs toward rate applications 5. Cost-reflective tariffs through gradual elimination of cross-subsidies 6. Regulatory implementation of Kosovo-Serbia energy sector agreement
<p>Regulatory Progress and Results</p>	<p>➔ Improved pricing regulations for generation, transmission, distribution and retail supply</p> <p>➔ Integrated regulatory model for calculation of utilities' maximum allowed revenues (MARs)</p>
<p>Summary of Activities</p>	
	<p>Improved regulatory process for rate-setting</p> <p>NARUC launched the first visit of the new Kosovo ERO – Pennsylvania PUC regulatory partnership program as a regulatory and technical peer review of tariff proceedings and evolving post-privatization market structures.</p> <p>The <u>first</u> module engaged the ERO tariff experts in a rigorous review of ERO's rate-making challenges. The discussions briefly reviewed the objectives and major components of the tariff process and focused on various elements of assessing the utilities' applied charges as carried out by the tariff department of ERO. Five NARUC experts from PA PUC and PUC of Ohio analyzed ERO's utility filings and corresponding analyses against the agency's pricing rules, as well as the final tariff rulings for the first multi-year price control period, 2013-</p>

	<p>2017. The examination process included an analysis of the preceding annual rate reviews and the transition to the 5-year regulated tariff period which is currently in effect and subject to annual adjustments. The discreetness of the meetings in an environment conducive to informality, openness and critical thinking produced unified opinions among the ERO staff which they were able to present formally before other stakeholders in the subsequent module. The closed meetings allowed for additional debate and analysis of open challenges related to the misalignment of regulatory and financial reporting periods, of incongruous timing between the assets transfer from KEK (GoK) to KEDS (private disco), and the projections of sales by KEDS in their tariff application, resulting in an ongoing litigated dispute.</p> <p>The <u>second</u> module included accounting managers, regulatory officers, chief financial directors and in some cases CEOs from KEK, KEDS, and KOSTT, in addition to ERO's Commissioners and tariff experts. This higher-level engagement ensured the full investment into the controversial and openly sensitive issues, culminating in a successful agreement to continue stakeholder engagements with the regulators in order to reconcile various inputs for the applied charges, treatment of costs and losses, approaches used in determining the MARs, and final charges applications. In total, 29 representatives from five institutions participated in the second module.</p> 
<p>Regulators' Feedback</p>	<p><i>"This activity is exactly what we needed. The partnership will provide us with the visibility that we need. We are evolving the way we regulate from short-term mitigation and stop gap measures to sustainable regulation. In this respect, the partnership platform is a relevant and timely sounding board for us and provides us with the second level of reasoning. We want to review all relevant experiences, good and bad lessons, and adopt applicable measures that have provided Pennsylvania and Ohio consumers with stable rates and regulatory institutions they can trust."</i></p> <p><i>– ERO Commissioner Krenar Bujupi–</i></p>
	<p>Tariff Consultancies at ERO</p> <p>2014 was the first year when one of ERO's licensees, the Kosovo Electricity Distribution and Supply (KEDS) company, was a fully privately-owned enterprise. ERO's tariff decisions have wider implications as they show the willingness of Kosovo institutions to treat foreign private investors in a fair manner. A local Kosovo tariff expert conducted a short-term consultancy that assisted ERO's understaffed tariff department with reviewing licensees' tariff applications for the first annual adjustment period under the multi-year electricity tariff (ETR7) process. The technical scope also included ERO's consultation report for the current electricity tariff structures with an aim to inform the public and stakeholders about possible options to simplify the complex, multi-block and multi-seasonal structure.</p>

	<p>A local consultant assisted in the review and analysis of the licensee applications, and provided advice to ERO in determining appropriate tariff levels for the period April 1, 2014 – March 31, 2015.</p> <p>Due to the complex nature of work under Tariff Consultancy I, USAID/Kosovo requested continued support to ERO tariff department to analyze issues in the framework of the electricity tariff review 7 (ETR7), which included the following components:</p> <ol style="list-style-type: none"> 1. Assist with Strengthening of Existing MAR Models 2. Review and Evaluate Transmission Use of System (TUOS) Tariff Applications and Rate Calculations 3. Review and Evaluate Distribution Use of System (DUOS) Tariff Applications and Rate Calculations 4. Review and Evaluate Retail Tariff Applications 5. Address the Circularities in Current Pricing Rules of ERO <p>With the energy sector landscape changing toward longer-term sustainability of supply and system reliability, the 5-year revenue-cap price control period represents a measure of regulatory confidence to ensure clarity and financial liquidity of utility revenue streams. However, ERO collects vast information from licensees and its limited staff cannot provide timely review, analysis and prepare tariff decisions.</p>
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Changes in Partnership Context & Assumptions	
	None.

Forward Planning	
	<ol style="list-style-type: none"> 1. The Pennsylvania Commission’s team of fixed utility experts and rate case analysts confirmed December 8-12, 2014 for travel to Prishtina to engage with ERO in fine-tuning the tariff challenges and address recommendations from the Tariff Consultancy II. 2. NARUC started discussing programmatic components and work structures for the December activity with ERO to ensure alignment with its regulatory objectives and addressing post-consultancy needs.

	<p>MOLDOVA</p> <p>www.naruc.org/USAID/Moldova</p>
<p>In June 2010, NARUC signed a Memorandum of Understanding with the National Agency for Energy Regulation of Moldova (ANRE) that initiated the NARUC/Moldova Regulatory Partnership. The Missouri Public Service Commission (MPSC) was a lead U.S. State during 2010-2014. The PUCs of Ohio and Rhode Island were also involved in this Partnership to provide varied regulatory practices. In March 2014, ANRE engaged in a new partnership with the Maine Public Utilities Commission (Maine PUC) to focus on addressing complex market issues given its compliance with the EU <i>acquis communautaire</i> on energy, competition and environment.</p>	

<p>Logical Framework Sub-purposes</p>	<p>The Government of Moldova is committed to develop competitive market structures within the country's energy sector. The key objectives are to ensure stable energy supply, modernization of energy infrastructure and integration into the European energy market. Reforms in the Moldovan energy sector are, therefore, oriented toward establishing a market model compatible with the principles and standards of the Energy Community Athens Treaty. The regulator will work on improving electricity and natural gas market rules and developing supporting regulations to prepare for its competitive market oversight role. These overarching goals have direct implications for ANRE's ability to develop and implement:</p> <ol style="list-style-type: none"> 1. Regulatory framework for market liberalization 2. Regulatory procedures for improved security of supply 3. Stronger institutional governance
<p>Regulatory Progress and Results</p>	<p>→ Improved regulatory support for renewable energy ANRE prepared and presented a draft Law on the Promotion of Energy from Renewable Sources to the Ministry of Economy. The Law passed the first reading in Parliament in July 2014. When adopted, it will replace the existing Law on Renewable Energy from 2007 and allow Moldova to move much closer to implementing Directive 2009/28/EC and improving the regulatory framework needed to attract investment in renewable energy projects. ANRE incorporated the following best practices of RES support schemes from Missouri, Ohio, Rhode Island and Maine: net-metering principles, queue management procedures, and the mechanism of selecting eligible RES projects.</p> <p>→ Peer reviewed regulation on cross-border capacity allocation and congestion management The Maine PUC experts provided several recommendations to the regulation, namely:</p> <ul style="list-style-type: none"> • Nomination process to allocate cross-border capacities • Provision of financial guarantees for participants in capacity allocation • Monitoring of capacity allocations in order to prevent discriminatory actions and abuses by market participants • System planning information about congestions for future transmission planning process • TSO Guidelines for transactions on secondary market <p>→ Improved Commission website and governance In August, a newly redesigned ANRE website was launched. The website is more interactive and designed to offer practical guidance and information to the public given the changing nature of Moldova's energy sector activities. Additionally, ANRE's Council of Administration (CA) adopted a regulation on the organization and conduct of its meetings, inspired by principles set out in the Missouri MPSC Statutes and Chapter 110 of Maine PUC's Rules of practice and procedure.</p> <p>→ Improved market rules and investment principles ANRE transposed learned concepts on the regulatory treatment of investments and included "prudence reviews" in its draft Regulation on principles of planning, approval and execution of investments. Additionally, several practices in organizing market rules were applied from Maine's process, namely distribution system operator's incentives to reduce losses, terms of contracts in a grid code, and provisions on financial assurance for payment of procured energy.</p>

→ **Drafted regulation on quality of service for transmission and distribution activities**

Based on new requirements from the Energy Community process, several provisions on the quality of service need to be included in ANRE regulations. These requirements were discussed with the Maine experts and included as follows:

- Gradual implementation of the penalties mechanism, depending on the penalty points accumulated by a regulated company
- The implementation of quality control mechanisms for call center services
- Application of statistical methods to determine "Force Majeure event days"
- Customer information on a company annual performance (Customer Report ScoreCard).

Summary of Activities

Elaboration of electricity market liberalization regulations

Following a four-year partnership with the Missouri PSC (2010-2014), ANRE launched a new regulatory engagement with the Maine PUC in order to focus more deeply on formulating regulations in support of wholesale and retail electricity markets liberalization and improving rate-setting and investment mechanisms to support those market activities.

The evolving market structures in Moldova require ANRE to develop internal guidelines for organizing and conducting investments and rate audit activities, including support for renewable energy. ANRE needs to build this new capacity by reviewing and incorporating best practices from established regulators who have adopted and tested similar methods.

The Maine commission guided ANRE in exploring the functional experience of the wholesale and retail markets in the US in order to assist the Moldovan regulator in elaborating its own Regulation on capacity allocation and congestion management; tendering procedures for required RES-E generation capacities; designing net-metering schemes; and developing rules for the connection of RES generators to the grid.

As part of the Energy Community REMIT regulation requirements, ANRE is looking into elaborating a new reporting system for the license holders according to the present methodologies. The partners discussed the comprehensive regulatory methods for monitoring requirements and reviewed Maine's practices in this regard so that ANRE can evaluate their feasibility for its own monitoring activities.



ANRE explored various issues to improve its understanding and application of market liberalization methods to support compliance with the Energy Community Athens Treaty. The targeted work included:

1. Evaluating criteria for approving and monitoring utility investments and their economic efficiencies
2. Classification of assets and methods for calculating their depreciation for tariff purposes
3. Improving licensing process for construction and extension of electricity networks.
4. Developing regulatory guidelines for monitoring utility's outsourced activities and affiliate transactions
5. Peer review of ANRE's draft electricity and natural gas market rules.



Maine PUC conducted a line by line peer review of ANRE's draft market rules for electricity and natural gas whose modifications were initiated in the context of continued market liberalization under the Third Energy package requirements. This includes the provision for the full opening of retail electricity markets on January 1, 2015. In this context, the Maine experts discussed issues that ANRE should consider including in its market rules (eg. customer choice, supplier of last resort, separation of network from supply, non-discriminatory supply access, new market entry, dispatch and balancing, enforcement of market obligations, consumer protections, and others). Maine's experience related to each of these issues was directly cross-referenced with the applicable EU Directives and guidelines.

The New England ISO and IBERDROLA USA (Maine's largest utility) representatives participated in the activity to illustrate the regulatory-utility interactions that are initiated under more complex markets.

To strengthen the direct exchange of information and application of learned market practices, an expert from GNERC Georgia participated in this activity to transpose applicable approaches and inform ANRE's activities in market liberalization.

Regulators' Feedback

"I consider that the Electronic Filing and Information System (EFIS) [donated by the Missouri PSC] will represent to ANRE the most important element of the work that we have done together."

– Sabina Rusnac, the Secretary of the Administration Council of ANRE–

"ANRE received detailed answers to questions and gained new ideas that will be used in developing new regulations and amending the existing ones."

– Octavian Lungu, Director, ANRE Moldova–

	<p>Technical visit by ANRE to Georgia to elaborate regulations on investments</p> <p>ANRE has elaborated a regulation of accounts unbundling in electricity and natural gas markets but desired information on direct regulatory practices regarding enforcement. GNERC has progressed farther in its implementation of the accounts unbundling and, therefore, explained its guidelines for the required documentation, and the structure/guidelines of accounts for regulated and non-regulated activities.</p> <p>ANRE experts also learned that GNERC establishes the useful life rate elements for the regulated assets. ANRE does not establish such rates. Operators of assets in Moldova use outdated amortization methods. Based on the informed dialogue with the Georgian colleagues, ANRE will be elaborating similar guidelines in Moldova by</p> <ul style="list-style-type: none"> • Examining regulatory principles and criteria for approving investments in tariffs established by GNERC, and how to evaluate the economic efficiencies of planned or realized investments • Examining regulatory methods of calculating asset depreciation for tariff purposes during a regulatory period • Studying the Georgian experience in unbundling of utility accounts, and their harmonization with the national accounting rules.
	<div data-bbox="727 898 1198 1157" data-label="Image"> </div> <p><i>Moldovan and Armenian experts at GNERC Georgia, September 22-26, 2014</i></p>

Changes in Partnership Context & Assumptions	
	None.

Forward Planning	
	<ol style="list-style-type: none"> 1. ANRE to submit detailed terms of reference for a technical assistance on unbundling of its distribution activities. 2. ANRE to identify regulatory targets for FY2015 activities and how they support the project logical framework implementation. 3. NARUC to continue assisting ANRE to review existing and new draft regulatory instruments and decisions in order to improve their quality and effectiveness in the changing market conditions.

	<p>UKRAINE</p> <p>www.naruc.org/USAID/Ukraine</p>
	<p>In June 2010, NARUC signed a Memorandum of Understanding with the National Commission for Energy State Regulation (NERC) that initiated the NARUC/Ukraine Regulatory Partnership. To date, NERC Commissioners and staff have engaged in nine formal exchanges with select U.S. commissions. This partnership program promotes the merits of sound regulatory environment and provides assistance to NERC to reform the national electricity and natural gas markets in accordance with the Directives of the European Union on functioning of internal electricity markets.</p>
<p>Logical Framework Sub-purposes</p>	<p>In February 2011, Ukraine became a member of the Energy Community. The membership provides Ukraine with the opportunity to introduce more intense competition, higher technical standards and regulations, better investment environment for its internal market, and deeper integration with energy markets of the EU countries, including strengthened regional energy security.</p> <p>These overarching goals have direct implications for NERC's ability to develop and implement</p> <ol style="list-style-type: none"> 1. Regulatory framework for market liberalization 2. Regulatory procedures to support internal and regional security of supply 3. Stronger institutional governance
<p>Regulatory Progress and Results</p>	<p>The following legal acts and regulations, drafted by NERC, are a culmination of efforts straddling several partnership activities. This shows commitment by Ukraine to elaborating incrementally rules and procedures which underline new liberalized structures within its energy sector.</p> <p>→ Adopted Law on the Basic Principles of the Electricity Market Functioning</p> <p>The Law, adopted by the Ukrainian Parliament as part of the “European package,” will facilitate Ukraine’s implementation of the EU Directive 2003/54 EC concerning common rules for the internal electricity market and the EC Regulation 1228/2003 on the conditions for accessing networks for cross-border exchanges of electricity. The step-by step liberalization of the internal electricity market in Ukraine will enter into force through this legal provision in July 2017.</p> <p>The Law requires NERC to prepare and approve several bylaws to govern its effective and independent oversight of the liberalized market. Some drafting activities have already been initiated, namely:</p> <ol style="list-style-type: none"> 1. Procedure for Conducting Electronic Auctions on Allocation of Transfer Capacity of Interstate Power Networks, developed and approved, and published by NERC on April 17, 2014. 2. Amendments to the Procedure on Setting, Revising and Terminating Validity of the “Green” Tariff, published by NERC on May 12, 2014. 3. Amendments to Determining revenues from regulated licensed transmission and supply activities, re-approved by NERC on May 19, 2014. 4. Procedure for determining the regulatory asset base of electric natural monopolies, approved by NERC on January 10, 2014. 5. Procedure for setting a rate of return on the regulatory asset base, approved on January 10, 2014. 6. Amendments in the Rules for connecting electric installations to the power

	<p>networks, approved and published by NERC in April 2014.</p> <ol style="list-style-type: none"> 7. Amendments in the Methodology for calculation of power networks connection fees, approved and published by NERC in April 2014. 8. Procedures for acquisition, pricing and monitoring of ancillary services 9. Procedures for sale, metering and settlements for private solar generators, introducing the “net metering” principle 10. Procedure for compensation of technical losses in main and interstate electric power networks <p>→ Draft Law on State Regulation in the Energy Sector in Ukraine Experts from the New York, D.C., and Kentucky Commissions provided comprehensive information related to the authority and functions of U.S. State commissions in setting rates that was used in the draft Law.</p>
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Summary of Activities

	<p>Wholesale electricity market liberalization and information management</p> <p>NERC studied select U.S. experiences related to regulation of ancillary services markets, regulatory treatment of technical losses in transmission and distribution power networks, and information management of such systems. The Ukrainian experts met with representatives of the U.S. Federal Energy Regulatory Commission to understand how to regulate information platforms in the organization of electricity markets. Such information will be used to make recommendations related to the protection, disclosure and public information in the related regulatory framework in Ukraine. NERC also observed a public hearing at the DC Commission in order to understand how to organize information from rate reviews and broaden the participation of general public in its regulatory processes and decision making.</p> <p>NERC selected several targets for improvement in FY2014 and conducted meetings to advance its understanding and regulation of</p> <ol style="list-style-type: none"> 1. Renewable energy <ol style="list-style-type: none"> a) Energy purchases from private household generation units b) Net metering c) Certificates of Origin as instruments of “green” origin verification d) Imbalance settlements in electricity markets resulting from the operational specificities of renewable energy sources 2. Access to markets through licenses and franchises 3. Requirements, practical issues and specifics of setting up and operating information systems to support functioning of various aspects electricity markets (day-ahead, balancing, ancillary services). <p>Regulators from DC, Ohio, and representatives from the PJM RTO and local utility PEPCO discussed the renewable and market information system issues. In particular, NERC explored the experience of organizing purchases, metering and accounting for the renewable electricity generated by residential generators, specifics of adjusting system imbalances resulting from the renewable energy operational characteristics, and specifics of certifying the origins of green energy. This knowledge will be applied in developing the guidelines, recommendations and pertinent proposals at the regulatory level.</p>
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<p>Regulators' Feedback</p>	 <p><i>"...The program gave us valuable insight, provided new ideas, and broadened our perspectives to solve the current challenges in our efforts to transform Ukraine's energy markets."</i></p> <p><i>– Commissioner Dmytro Usatyuk, NERC Ukraine, November 7, 2013 –</i></p>
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Changes in Partnership Context & Assumptions	
	Liquidation of the original commission and its reorganization.

Forward Planning	
	<p>NARUC will maintain close contact with NEURC representatives to track the impact of the reorganization process,² after which NARUC will consult with USAID on timing and scope of future regulatory assistance. These developments impact the following canceled activities:</p> <ol style="list-style-type: none"> 1. Technical visit by NEURC to Georgia and Turkey, postponed from September 2014. 2. Next partnership exchange postponed from December 2014.

V. IN-KIND SERVICE FOR FY14

The in-kind contribution from the voluntary time of NARUC members for this cooperative agreement totaled \$260,606.18 for FY14.

VI. ANNEX I: PERFORMANCE INDICATORS

Please see the excel-based performance indicator chart on the following pages.

² On August 27, 2014, President of Ukraine signed a Decree on liquidation of the National Commission for State Energy Regulation of Ukraine (NERC). The new National Commission for State Energy and Public Utilities Regulation (NCSEPUR) was established.

For questions regarding this publication, please contact Erin Hammel (ehammel@naruc.org) or Martina Schwartz (mschwartz@naruc.org).

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