To: Quadrennial Energy Review Team

Energy Policy and Systems Analysis Office

Department of Energy

From: National Rural Electric Cooperative Association

Date: October 10, 2014

Re: Supplemental Comments on Phase I of the QER

On October 3rd, 2014 the National Rural Electric Cooperative (NRECA) submitted comments on Phase I of the Department of Energy’s (DOE) Quadrennial Energy Review (QER). This instant filing supplements those comments with additional observations about the Phase 1 of the QER.

**Industry Initiatives Which Call For Eliminating the Current Utility Business Model Do Not Further the Principles That Are Essential to the QER**

In its October 3rd comments, NRECA addressed key principals that should inform the QER Phase I recommendations, namely adopting an “all of the above” vision for 2030 which is built around the current electric grid as its foundation. NRECA recognizes and agrees with the premise underlying initiatives such as the recent DOE Future of the Grid (FOG) that the grid must evolve in order to meet energy needs and customer expectations in 2030. NRECA does not, however, subscribe to the notion that the grid must be completely overhauled and that the utility of the future will simply be a conduit for customized consumer services.

Vertically-integrated utilities, such as electric co-ops, manage portfolios of resources in order to govern risks and minimize costs and volatility over the long term, in the best interest of all of their consumer member-owners. Disaggregating these core functions would mean that no one entity would be responsible for planning long-term to ensure reliability and to minimize risk and volatility. While use of distributed energy resources and microgrid technologies will certainly advance between now and 2030, they will not be the panacea for providing what customers overwhelmingly require-affordable, reliable and safe energy services. Instead of driving a discussion about what the new business models for delivering energy services should look like across the country, NRECA urges the QER process to focus on resources that may assist regions, states, local utilities and consumers in determining which of the “all of the above” technologies and providers best meet their needs.

NRECA and several of its member systems participated in FOG regional workshops and the executive summit held in June 2014 in Washington, DC. While the regional meetings reflected the nature of the electric industry in their respective areas, a few common themes emerged. In the North East (NE) (largely restructured states) regional meeting, some participants called for more radical changes to the electric business models and infrastructure than others. Regions such as NE have already undergone significant changes to the local utility models, and struggle constantly to maintain reliable and affordable power supply options for consumers. However, even in areas such as this, with a greater appetite for change and a greater need to find solutions to challenges caused by restructuring, there was no strong belief that the utilities should not provide the advanced services and technologies that consumers may want in the future. The cooperatives participating in the NE workshop gave prime examples of how they provided reliable and affordable power supply to their member-consumers, while also addressing the needs and desires of those consumers who want to explore alternative services or technologies, such as distributed generation, demand-side management system and advanced metering.

In other FOG workshops, such as the South East (SE), the larger concerns expressed by some utilities centered around a need for a “level playing field,” where some utilities actually felt restricted by their state regulators in their ability to compete with third party providers for creative or advanced services/technologies. This illustrates an example where regulations implemented with the “good intention” of providing third party service providers an opportunity to fairly compete with the incumbent utility may have the unintended consequences of actually working against the advancement of technologies and services consumers may want. Technologies can change fast and come and go, but consumers on the electric grid need the stability and reliability provided by a local utility to help support these continually changing situations, especially when it comes to new technologies.

Workshop discussions did not conclude that third-party providers should be shut out of the process, rather, that cost issues must be addressed up front to avoid cost shifting or other inequities between consumers regardless of how the services or technologies are provided, or who provides them. Whether third parties or the local utility is the provider of new technologies, the local utility has an essential role in providing reliable information to those consumers about their service and assistance as needed to assure a reliable and safe installation. The cooperatives participating in these workshops provided many examples where the co-ops have deployed new technology projects such as community solar PV at their members’ behest, or provided support to those members who chose to contract with third parties for project installations on their own premises. The cooperative model helps promote opportunities for investing in new technologies or starting new services, while providing the services some consumer members may want without negative impacts on those who like the status quo.

FOG workshop participants discussed the role ratemaking plays in striking a balance between encouraging technologies such as solar PV and avoiding cost shifting among consumers or utility under-recovery of fixed costs for its T&D facilities. The overall conclusion at the SE workshop was that regardless of the local utility business structure, the utility must be able to recover the costs of capital investments for infrastructure from all those who use and benefit from those facilities, including customers with DG who will be taking less energy from the system, or potentially providing/selling energy back onto the local system. Utilities need to know what their fixed and variable costs are, and to be prepared to develop new rates for customers with DG to be able to recover investment costs for facilities fairly from all customers. With proper ratemaking approaches in place that equitably allocate and recover costs, there is no need to embark on complex and expensive processes to disaggregate core utility functions to meet customers changing needs.

**Co-ops, Including the Cooperative Research Network (CRN), Are Doing Their Part to Advance Grid Technologies in Cost-effective Ways**

By working directly with their member-consumers, co-ops are widely exploring and developing new projects for DG, smart grid installations and distribution system enhancements, to name a few. Partnership with and support from the DOE has been crucial in helping many of these projects become viable. That support is needed to continue to advance the ball on the improved reliability and economics of new technologies. For example**,** NRECA urges DOE to continue its support for research into data analytics that can improve the operational efficiency of smaller utilities. CRN, a research consortium composed of all 905 NRECA member cooperatives, has previously collaborated with DOE and the national labs to develop tools and accelerate the adoption of smart grid technology. With these advances in automation and communication comes a volume of data whose full value remains to be discovered. In order to fully realize the value of the significant investments made equipment and analysis in this area to date, the support for the analytics process must continue.

**Continued Valuable Support From DOE’s Office of Electricity Delivery and Energy Reliability (OE) is Critical to Advancing Technologies and Grid Operations**

Industry collaborative efforts, funded through OE in the last few years, have been instrumental in providing valuable analysis and education on the potential impacts of expanding renewable energy, energy efficiency, demand response and greenhouse gas reduction programs. Programs such as the Eastern Interconnection Planning Collaborative (EIPC), and its companion organization the Eastern Interconnections States Planning Collaborative (EISPC), have helped identify many evolving technology and market risks and advances that will impact the interconnected grid. Support for the research projects and meetings of these groups has been extremely helpful for regulators and electric utilities who face tough choices over new policy and technology options on the potential impacts to reliability and economics due to the changing resource mix, the risks of increasing gas penetration for electric generation and the realistic impacts of increasing levels of renewables (both DG and grid-based). In addition, large scale study initiatives supported by DOE/OE, such as the Eastern Renewable Generation Interconnection Study (ERGIS) have provided valuable insights and models for the advancement and integration of renewable generation penetration levels in a reliable and affordable way, and identifying costs and impacts of these changes on the electric system. Similar initiatives in the Western Interconnection such as the Western Wind and Solar Integration Studies (WWSIS) and the Public Utility Commission-Energy Imbalance Market (PUC-EIM) activities have provided valuable insights to policy makers and the utilities on the potential risks and rewards for continued integration of large-scale renewable projects. This type of financial support for continued analysis and collaboration is still needed to help answer many remaining unanswered questions for policy makers and the electric industry.

Even aside from its work on integrating renewables with the grid, the work being done by OE on grid engineering and operations, reliability and resilience is critical to the industry. NRECA values the opportunity to work with Assistant Secretary Pat Hoffman and her team. In recent years, the work being done by each of the offices within OE- Power Systems Engineering, National Electricity Delivery, Infrastructure Security and Energy Restoration, Energy Infrastructure and Advanced Grid Integration- has been extremely valuable. Staff members in those offices have a depth of practical understanding of the electric grid and its operations, as well as a level of credibility with the electric utility industry, that cannot be matched elsewhere in DOE, allowing them to contribute significantly to the accuracy, usefulness, and credibility of the Department’s activities.