



**National Rural Electric
Cooperative Association**

A Touchstone Energy[®] Cooperative 

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: Additional Comments on Phase I of the QER

The National Rural Electric Cooperative (NRECA) and its 900 member cooperatives around the country appreciate the opportunity to participate in this first ever Quadrennial Energy Review (QER). Since the January 2014 issuance of the Presidential Memorandum that launched the QER,¹ NRECA and its members have actively engaged in the QER process, by submitting comments on various issues and, where possible, participating during the public forums in order to ensure that the co-op perspective is brought forward.

The QER Should Reflect These Key Principles

As the Department of Energy (DOE) pursues the QER and develops recommendations for policy and research going forward, NRECA urges that its work should be informed by these key principles:

- the QER should reflect an “all of the above” vision of the 2030 energy world, one that enables the realization of different potential futures. An “all of the above” strategy empowers energy policymakers and stakeholders to respond to future uncertainties and unknowns; in contrast, a narrow vision limits flexibility in the face of those unknowns. Ten years ago, for example, no one foresaw the “shale gale” and the resulting transformation of the electric generation fleet, with the accompanying new coordination and reliability challenges between electric and gas system operators. Today, no one can foresee what technological advances will occur in the next ten years, much less international developments. Given the broad, encompassing nature of our national energy goals as set out in the QER – Economic

¹, <http://www.whitehouse.gov/the-press-office/2014/01/09/presidential-memorandum-establishing-quadrennial-energy-review>

Competitiveness, Environmental Responsibility, and Energy Security² – an all-of-the-above, no-regrets vision and strategy is critical to their realization.

- **recognize and build upon the value of the US electric grid as the foundation for the “all of the above” vision.** As is often said, the US electric grid is the engineering wonder of the world.³ The grid enables our high standard of living. The grid’s flexibility accommodates a changing generation mix, the impact of increasing variability from renewable resources, and the transition to a low-carbon environment. Going forward, the grid will be called upon to incorporate new technologies that support increased distributed energy resources and facilitate the deployment of cost-effective energy storage. But the demand for highly reliable and affordable electric service will remain constant, and will continue to be the primary responsibility of utilities and utility regulators for the foreseeable future.

- **while pursuing “no-regrets” policy, DOE and policymakers must also “do no harm.”** Given the largely rural nature of their service territories and typically low customer densities, electric co-ops are often early adaptors of electric system technologies when these are shown to be cost-effective and an overall benefit to their systems. However, state and federal policymakers must keep in mind the costs associated with regulatory and policy changes. Rural electric co-ops serve some of the poorest areas in the country, and are always conscious of cost impacts on end use consumers since all costs are paid by their consumer-members.

Rural Electric Cooperatives Play a Critical Role in Maintaining and Expanding the Nation’s Energy Infrastructure

According to the White House and Department of Energy (DOE), the purpose of the QER is “[t]o identify opportunities to improve the nation’s infrastructure for transmission, storage and distribution of energy; the QER will identify the threats, risks and opportunities for U.S. energy and climate security, enabling the federal government to translate policy goals into a set of integrated actions. Meeting these goals is essential to improving U.S. economic productivity, enhancing quality of life, protecting the environment, and ensuring the nation's security.”

NRECA commends DOE for recognizing that electric cooperatives are critical to this inquiry into the state of the nation’s energy infrastructure. Rural electric cooperatives own and maintain 2.5 million miles, or 42 percent, of the nation’s electric distribution lines, covering three quarters of the country’s landmass.⁴ While our poles and wires cover a vast swath of most of the country in 47 states, our co-ops serve an estimated 18.5 million businesses, homes, schools,

² http://www.energy.gov/sites/prod/files/2014/06/f17/qer_public_deck_june_twothree.pdf, slide 15.

³ “As the demand for the benefits of electrification continues to grow around the globe, resourcefulness remains a prime virtue.” <http://www.greatachievements.org/?id=2998>

⁴ A map showing cooperative service territory can be found here: <http://www.nreca.coop/about-electric-cooperatives/co-op-facts-figures/>

churches, farms, irrigation systems and other establishments, or approximately 42 million people, in 2,500 of 3,141 counties in the U.S.

As these figures indicate, co-ops have a much lower customer density per mile of line, and therefore collect much lower revenues per mile of line, than other utilities. According to 2010 Energy Information Administration (EIA) data,⁵ co-ops serve an average of 7.4 consumers and collect annual revenue of approximately \$15,000 per mile of line. In contrast, investor-owned utilities average 34 customers and collect \$75,500 per mile of line. Publicly owned utilities, or municipals, average 48 consumers and collect \$113,000 per mile. It is also important to note that cooperatives do not have independent shareholders who can absorb costs of operation not included in rates. All such costs are paid by the member consumers of the cooperative.

Another distinguishing characteristic of NRECA member service territories is that cooperatives provide service in 327 of 353, or 93% of the nation's "persistent poverty" counties. Of the 42 million Americans served by cooperatives, an estimated 4 million live in persistent poverty counties. The Economic Research Service of USDA defines these counties as those where the poverty rate has exceeded 20% of the population for the last 30 years. A map showing the cooperative service areas that include these persistent poverty counties, and the percentage of the population living in poverty by county, can be found here: <http://www.nreca.coop/wp-content/plugins/nreca-interactive-maps/persistent-poverty/index.html>.⁶

In addition to the above, yet another challenge especially for cooperatives in the West is the extent to which federal lands overlap co-op service territories. For example, Tri-State G&T Assoc., Inc. serves a territory of approximately 200,000 square miles that covers parts of Colorado, Nebraska, New Mexico and Wyoming. Over 35% of the land in Tri-State's service territory is managed by the US Department of the Interior (DOI) Bureau of Land Management (BLM) and the USDA Forest Service.⁷ For Tri-State and other similarly situated co-ops, infrastructure development and maintenance is a particular challenge given the need to engage with multiple federal agencies in applying for new, or amending and renewing existing permits for infrastructure project development.

Notwithstanding those challenges, the electric cooperative sector has achieved national recognition for its early and widespread deployment of smart grid technologies, energy efficiency, and local distributed generation such as community-based solar. A 2012 report by the Federal Energy Regulatory Commission noted that of the three utility sectors, cooperatives

⁵ <http://www.eia.gov/electricity/data.cfm#sales>

⁶ This map and accompanying comments has already been submitted to the QER.

⁷ Tri-State's October 31, 2013 comments to DOE in response to the "Improving Performance of Federal Permitting and Review of Infrastructure Projects" RFI, 78 Fed.Reg. 53436 (2013) have been submitted to the QER in conjunction with the August 21, 2014 public forum on Infrastructure Siting.

showed the largest penetration of advanced metering infrastructure.⁸ In addition, thirty percent of cooperatives with AMI/AMR have begun to integrate their metering systems with other systems such as outage management systems, customer information systems, and geographic information systems.⁹

Cooperatives have traditionally promoted energy efficiency and demand-side management (DSM) as a means to keep members' bills low. According to EIA data, while cooperatives have ten percent of retail electricity sales they are responsible for twenty percent of actual peak reduction, through deployment of efficiency programs.¹⁰

At a White House solar event earlier this year, three rural electric cooperative CEOs shared the stage with President Obama as he launched a new solar energy initiative. A White House statement highlighted the number of co-ops that are deploying a variety of solar options, including more than 50 community solar projects.¹¹

Co-op Representatives Have Actively Participated in the QER Process

As part of the QER inquiry, the DOE team has held a series of public forums around the country exploring different aspects of energy infrastructure. Co-op representatives participated and filed comments in a number of these proceedings, including: April 11, "Infrastructure Resilience and Vulnerabilities," Washington, DC; July 11, "Electricity Transmission, Storage and Distribution in the West," Portland, OR; July 28, "Gas-Electric Interdependencies," Denver, CO; August 8, "Rail, Barge and Truck Transportation," Chicago, IL; August 8, "Infrastructure Constraints in North Dakota," Bismarck, ND; August 21, "Infrastructure Siting," Cheyenne, WY; and September 8, "Electricity Transmission and Distribution in the East," Newark, NJ.

In all these forums, as well as the filed written comments, NRECA and its member co-ops have emphasized that their first priority is to provide safe, reliable and affordable electric service to their members. As Arkansas Electric Cooperative President and CEO Duane Highley put it in his remarks at the April 11 forum, "as non-profit power supply and services cooperative[s], we aren't in business to make a profit; we exist to improve the quality of our member owners' lives and the communities in which they live."¹²

We look forward to a continued engagement and participation with DOE in this QER effort.

⁸ <http://www.ferc.gov/legal/staff-reports/12-20-12-demand-response.pdf>

⁹ A map showing the extent of electric co-op deployment of AMI/AMR can be found here: <http://www.nreca.coop/about-electric-cooperatives/maps/>.

¹⁰ <http://www.nreca.coop/about-electric-cooperatives/maps/>

¹¹ <http://cleaneasyenergy.com/cecblog/index.php/cec-utility-partners-recognized-at-white-house-solar-summit/>

¹² [http://www.energy.gov/sites/prod/files/2014/04/f15/RemarksofDuaneHighley Ark Elec Coop April11.pdf](http://www.energy.gov/sites/prod/files/2014/04/f15/RemarksofDuaneHighley%20Ark%20Elec%20Coop%20April11.pdf)