

**Written Testimony of Wes Kelley  
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**Before the Department of Energy, Quadrennial Energy Review  
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Secretary Moniz, it is a pleasure to be here today to speak about the challenges and opportunities facing distribution utilities, especially with the advent and rapid growth of distributed energy resources (DERs).

My name is Wes Kelley, and I serve as the Executive Director of Columbia Power and Water Systems (CPWS), the municipal, not-for-profit, utility serving the City of Columbia and much of Maury County, Tennessee. My utility provides electricity, water, and broadband services to 25,000 homes and businesses.

I also serve on the Tennessee Valley Authority's (TVA) Regional Energy Resource Council (RERC), which is the engine by which TVA gathers stakeholder input for its Integrated Resource Plan and provides energy policy advice to the TVA Board.

The electric utility industry is facing unprecedented challenges. We are about to witness a radical change to the business model that has powered our industry for the last 100 years. I believe that utilities must actively manage this change if we are to continue providing affordable and reliable electric service.

I would like to make two points. First, the development of distributed energy resources (DERs) has initiated a significant transformation of the electric industry. The integration of these technology-enabled resources require a thoughtful transition so that existing utilities are not merely reacting to these changes, but rather are able to actively plan and participate in their development. Second, any transformative policy proposals must maintain safety, reliability, and the lowest possible rates for all customers.

The bulk electric grid was designed for central station power plants to provide electricity to transmission and then distribution systems for delivery to customers. Now, recent advances in distributed generation make it possible for industrial, commercial, and even residential customers (or third parties) to supply at least a portion of their electricity needs. This disaggregation will continue because there is a drive by consumers to adopt distributed generation technologies and because central station assets face an ever-increasing array of environmental regulation, creating uncertainty and making it difficult to plan and build these assets.

Columbia Power, and my peers in the Tennessee Valley, appreciate these advances. In fact, my public power brethren are at the forefront of this trend. Many public power systems have used small-scale local generation for peak shaving and reliability for decades. In the Tennessee Valley, the Green Power Provider program has been a model for promoting and integrating small-scale solar into the distribution grid. We are working with TVA and other stakeholders to determine the value of these solar resources to ensure that they can be integrated for a price that is fair to all ratepayers. We have also pioneered energy efficiency measures and demand

response programs, working hard to engage customers by providing valuable opportunities to reduce demand. With these advances, we must recognize that a level playing field must emerge if traditional assets and distributed energy resources (DERs) are to co-exist without compromising electric reliability and grid safety.

The central challenge before us can be captured in the following question:

- How do we, as public power systems and utility regulators, provide stable rates and ensure electric reliability as DER adoption increases?

The scale on which DERs are being deployed is unprecedented and made even more complex because DERs are often installed behind the meter and thus invisible to traditional power supply planning processes. How DERs are accounted for, and valued, in the grid cannot be dismissed. We cannot simply install new DERs and ignore the inevitable shift that utilities must make to accommodate a) the variability of the new resource and b) the need to recover existing infrastructure costs and c) deliver reliable backup power when DER resources are not operating.

Utility rates reflect not just the price of the energy consumed, but the recovery of costs associated with building, and maintaining, the physical distribution assets needed to deliver power every day and all night. It is essential then, that the intermittent nature of DERs be accurately valued in the retail rates. Specifically with distributed generation, I believe that net-metering rate schedules do not fully recognize this fact. In the Tennessee Valley, we have a dual-metering policy that helps ensure that costs can be appropriately allocated to participants and non-participants alike. In general, utilities should not have to recover existing infrastructure costs only from customers unable to, or uninterested in, installing DERs.

**In closing, I would like to make the following recommendations to the Department of Energy (DOE) for inclusion in its QER report:**

- The DOE should work with utilities to promote and encourage the development of innovative energy efficiency (EE) and demand response (DR) products and services that enable the efficient and effective management of the electric grid.
- Also, the DOE should encourage communication between state regulators, utilities, and DER developers to ensure that DER benefits are not over-incentivized and that existing distribution assets and reliability continue to be adequately valued, especially avoiding undesirable cost-recovery models that disadvantage non-DER customers.
- To facilitate the transition to a new model, DOE should provide equivalent assistance (in the form of grants, loans, technical guidance, and otherwise) to utilities working to integrate DERs in their service territory, as well as to developers and installers of DERs.
- Finally, I would ask that DOE recognize that public power systems, serving more than 2,000 communities across the country, are locally-governed organizations. Therefore, monolithic and top-down solutions are difficult to implement and may be unrealistic.

At this point, I will close my prepared remarks, and I would be happy to address your questions.