Quadrennial Energy Review
Second Installment
Electricity: Generation to End Use
Stakeholder Meeting #7: Atlanta, GA
May 24, 2016
Georgia Institute of Technology
GTRI Conference Center
250 14th Street, NW

Atlanta is the seventh public stakeholder input meeting for the second installment of the Quadrennial Energy Review (QER), and the last of six regional meetings. The regions were based on wholesale market footprints as a convenient approach to capturing and assisting the Interagency QER Task Force in understanding the nation's regional electricity diversity, which is also characterized by differing resource mixes, state policies, and a host of other factors. The Atlanta meeting covers the footprint of the ten Southeastern states that, all or in part, have bilateral wholesale electricity markets.

9:00 AM	**Doors Open**
10:00 – 11:00 AM	**Opening Remarks by Secretary of Energy Ernest Moniz and Deputy Administrator of the Rural Utilities Service Josh Cohen, and Dr. Tim Lieuwen, Georgia Tech**
11:00 AM – 12:15 PM	**<u>Panel 1</u>** **Bulk Power Generation and Transmission: How Can We Plan, Build, and Operate the Appropriate Amount for Future Needs?**

The first panel will speak to the many responsibilities and challenges involved in maintenance and operation of the bulk power system of generation and transmission: The system's role in reliability, including how to maintain reliability with an evolving resource mix; cyber- and physical security; the structure of centrally organized and bilateral wholesale electricity markets; the planning, financing, cost-allocation and state & federal siting processes needed to build new generation and transmission; resource diversity; policies affecting how much, if, and when to build, including reducing greenhouse gas emissions and other environmental impacts; multiple jurisdictions and overlapping regulations; changing load growth patterns; innovation and new technologies; increasing interdependencies; and many more.

- Stacy S, Dochoda, President and Chief Executive Officer, Florida Reliability Coordinating Council (FRCC)
- Brian Thumm, Senior Director of Compliance and Reliability, SERC Reliability Corporation (SERC)
- Doug Esamann, Executive Vice President, and President, Midwest and Florida Regions, Duke Energy Corporation
- Mike Langford, National President, Utility Workers of America, AFL-CIO
- Lisa Johnson, Chief Executive Officer and General Manager, Seminole Electric Cooperative, Inc.

12:15 – 1:15 PM **Lunch (on your own)**

1:15 – 1:30 PM **Remarks by Principal Deputy Assistant Secretary for Energy Efficiency and Renewable Energy David Friedman**

1:30 – 2:45 PM **Panel 2**
Electricity Distribution and End Use: How Do We Manage Challenges and Opportunities?

The second panel will consider the implications of a broad array of existing and emerging technologies, as well as new uses on the distribution grid and grid-edge, which together provide both technical and policy challenges and opportunities to the delivery of energy services to customers. Among many others, some of these factors affecting the developing distribution grid include: Energy efficiency; demand response; distributed generation; digital communications, sensors and control systems; "smart" meters; greater customer engagement; storage; microgrids; electric vehicles. Additionally, seventeen states and the District of Columbia have adopted some form of electric retail choice programs allowing end-use customers to buy electricity from competitive retail suppliers.

Separately, these factors can be challenging for grid operators. Taken together, these evolving characteristics will tend to have impacts which must figure into the planning, operations, reliability, resiliency, and economics of the distribution grid. These new sets of circumstances raise important questions on infrastructure financing and development, affordability, rate design, appropriate valuation, as well as numerous jurisdictional and regulatory issues. Regardless of the challenges these changes present to industry planners and government regulators, they also can create opportunities for customers to enjoy the benefits of new and improved services and with carbon reduction and other environmental improvements, with services sometimes provided by new market entrants.

- Gordon L. Gillette, President, Tampa Electric and Peoples Gas Systems
- Greg Merritt, Vice President, Marketing and Public Affairs, Cree, Inc.
- Dr. Deepak Divan, John E. Pippin Chair and Georgia Research Alliance Eminent Scholar, Director, Georgia Tech Center for Distributed Energy, and, Professor, School of Electrical and Computer Engineering, Georgia Institute of Technology
- Cameron Griffith, Energy Solutions Advisor, Trane
- Stan Wise, Commissioner, Georgia Public Service Commission

2:45 – 4:00 PM **Panel 3**

Financing New Electricity Infrastructure

The third panel will examine the complex nature of electricity infrastructure finance. Commerce in electricity in this country involves multiple actors, overseen differently, depending on where the electricity is made, by what type of entity, over what route it gets to the ultimate consumer, where the consumers reside, and from what type of entity the electricity is purchased. Financing these activities' capital-intensive infrastructure involves a similarly diverse set of actors, using an array of financial vehicles, with differing and likewise complex governance regimes. Much of the nation's electric infrastructure has been financed through cost-of-service regulation, which allows asset owners to recover their capital, and operations and maintenance costs. In this structure, investor-owned utilities and merchant transmission operators are allowed the opportunity to earn a profit, as measured by a return on equity.

However, a significant and increasing portion of electric infrastructure is not financed under cost-of-service regulation, including merchant generation, power marketers, and much of distributed generation and end use. Infrastructure developers, depending on the actor, may access a mix of private, shareholder-based, or tax-exempt funds, among other channels to capital markets, as well as state or federal financing that can take the form of loans, grants, or tax incentives. Some entities use operating revenue or retained earnings for infrastructure investment. Infrastructure affecting electricity end use can be financed through a combination of investment capital provided by consumers, ratepayers, the capital markets, or taxpayer-funded government programs. Vehicles for infrastructure financing have always evolved to meet changes in the marketplace, and that evolution is in a period of rapid acceleration today.

Panelists will discuss whether current means of electric infrastructure finance are adequate to build and maintain future electric infrastructure, while keeping electricity reliable, affordable, and increasingly clean. Further, panelists may be asked whether existing market and business structures can attract appropriate financing and investment in new technologies (including low- or no-carbon), some of which are still on the drawing board. Finally, among other topics, panelists may be asked to delve into whether centrally organized and bilateral wholesale electricity markets are adequately structured to remain part of the financing of the appropriate mix of future electricity resources.

- Bruce Edelston, Vice President, Energy Policy, Southern Company
- Tres Carpenter, Principal, ZWJ Investment Counsel
- Cheryl Roberto, Partner, Utility Transformation & Regulation, Twenty First Century Utilities LLC
- James E. Fuller, President and Chief Executive Officer, Municipal Electric Authority of Georgia (MEAG Power)
- John T. W. Mercer, Chairman, Mercer Thompson LLC

4:00 PM **Public Comment Period ("Open Mic")**

Each member of the audience who chooses to speak will be permitted five minutes to speak and offer written materials for inclusion in the QER record. Participants will be asked to sign up to speak when they check in.