



**Quadrennial Energy Review
Second Installment
Electricity: Generation to End Use
Stakeholder Meeting #5: Austin, TX
May 9, 2016**



**University of Texas
Peter O'Donnell, Jr. Applied Computational Engineering and Sciences Building
Avaya Auditorium (POB 2.302)
201 E. 24th Street**

Austin is the fourth of six regional QER public input meetings, all of which are 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 Austin meeting covers the footprint of the state of Texas, the grid operations and flow of energy for most of which is managed by the Electric Reliability Council of Texas (ERCOT).

8:00 AM

Doors Open

8:30 – 9:30 AM

Opening Remarks by Secretary Ernest Moniz, University of Texas Vice President for Research Daniel Jaffe, Mayor of Austin Steve Adler, and USDA Deputy Under Secretary for Rural Development Lillian Salerno

9:30 – 10:45 AM

Panel 1

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 and 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.

- Cheryl Mele, Senior Vice President and Chief Operating Officer, Electric Reliability Council of Texas (ERCOT)
- Cris Eugster, Group Executive Vice President and Chief Generation & Strategy Officer, CPS Energy
- Mark Schwirtz, President and Chief Executive Officer, Golden Spread Electric Cooperative
- Franklin Maduzia, Associate Commercial Director – Energy, The Dow Chemical Company

- Dr. Michael Webber, Deputy Director of the Energy Institute, Co-Director of the Clean Energy Incubator, Josey Centennial Fellow in Energy Resources, and Professor of Mechanical Engineering , The University of Texas at Austin

10:45 AM – Noon

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.

- Mark Carpenter, Senior Vice President, Transmission & Distribution Operations, Oncor
- John Hewa, Chief Executive Officer, Pedernales Electric Cooperative
- Phil Williams, General Manager, Denton Municipal Electric
- Jennifer Smith, Executive Director, Congregation Beth Israel
- Tonya Baer, Public Counsel, Texas Office of Public Utility Counsel
- Michelle Foss, Chief Energy Economist, University of Texas at Austin

12:00 – 1:00 PM

Lunch

1:00 – 2:15 PM

Panel 3
New Technologies and Actors in the Grid Edge Space

Innovative technologies and new market players and services are transforming the electricity sector, often increasing efficiency, reliability, and the role of the customer, but also injecting uncertainty into grid operations, traditional regulatory structures, and utility business models. The introduction of new technologies and services in the distribution system is particularly apparent in the “grid-edge” space, the interface between distribution assets owned by utilities and those end-use technologies on the customer side of the system. Much of the new, emerging, and even not-yet-invented grid edge technologies involve the digital and information revolution that continues to profoundly affect the rest of our society. Some provide self-generation options to the consumer. Other technologies include storage, microgrids, sensors and controls, and electric vehicles. The ability to aggregate individual customer transactions has led to new market entrants who can bid demand response and potentially other resources into wholesale markets.

The third panel will explore the opportunities and challenges of developing and integrating new technologies and services in the grid edge space. The discussions will consider grid visibility, contributions to grid reliability and resilience, provision of ancillary services, jurisdictional overlap, potential new vulnerabilities, grid analytics, and aspects of customer engagement.

- Brewster McCracken, President and Chief Executive Officer, Pecan Street Inc.
- Deborah Kimberly, Vice President, Customer Energy Solutions, Austin Energy
- Doug Lewin, Vice President, Regulatory Affairs and Market Development, CLEARResult
- Jim Steffes, Executive Vice President, Corporate Affairs, Direct Energy
- Matthew Lynch, Co-Founder and Chief Product Officer, Bractlet

2:15 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.