



Thought Leaders Speak Out: The Evolving Electric Power Industry

By Lisa V. Wood, executive director of the Institute for Electric Innovation and vice president of The Edison Foundation.

The electric grid is evolving into a distributed network with multiple sources of generation and multi-directional power and information flows. Among electric utilities, technology companies, policymakers, consumer advocates, environmentalists, and customers, there are intense debates about how the electric power industry’s transition should evolve.

IEI’s new book, “Thought Leaders Speak Out: The Evolving Electric Power Industry,” is a collection of essays by influential stakeholders focused on three areas driving this transition: evolving grid, evolving customer, and evolving regulation.

Evolving Grid

The distribution grid is evolving into a network of power and information flows and a platform for integrating a diverse set of energy resources—from traditional generating plants and large-scale wind and solar farms to smaller distributed resources, such as rooftop solar, microgrids, electric vehicles, storage, demand response, and energy efficiency. The grid is connecting more and more devices—becoming a Grid of Things™. And, the grid edge—which lies between the distribution utility and the customer—holds both opportunities and challenges.

Managing the integrated grid platform will require utilities to collaborate more with three key groups: technology companies (whose innovative products and services plug into the grid); regulators (who define appropriate business models for the grid platform and determine “just and reasonable rates” for customers); and customers (who have their own specific needs and desires).



Evolving Customer

For customers, the beginning of a new era of choice and control over their energy supply and use is emerging. Although safe, reliable, affordable, and increasingly clean electricity remains the entry-level service, our most engaged customers are interested in exercising choices about both energy consumption and production. These customers are increasingly managing their energy using sophisticated devices.

Customers are excited about the prospect of renewable generation providing a major share of tomorrow’s energy—and they want to produce some of that energy themselves. Specifically, customers are very interested in solar energy, and, as a result, are becoming more engaged in electricity issues overall. The key issue is whether utilities, technology companies, and regulators can collaborate to help customers unlock the value of these new service offerings.

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Evolving Regulation

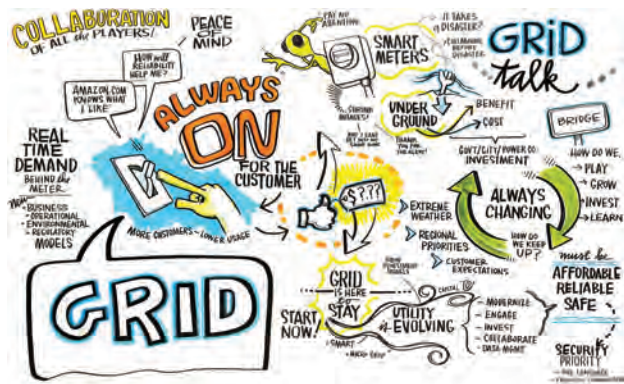
Regulators today are asked to make important decisions about an essential industry that is quickly transitioning. Here are some key considerations:

- ▶ What will technology enable utilities to do?
- ▶ What will federal and state policies require and allow utilities to do?
- ▶ Will the financial sector support what utilities are doing?
- ▶ What function do customers want utilities to serve?

There is a growing view that regulation should move away from accounting-based, contested-case approaches and toward forward-looking, planning-based approaches that are more collaborative. Utilities should have greater flexibility to meet diverse customer needs, with compensation based on success in achieving agreed-upon outcomes.

The key question for policymakers is whether the regulatory paradigm can be redesigned to facilitate and support the electric power industry transition that’s underway.

The electric grid is among our most important and essential infrastructures. Understanding the connections among technology, policy, and finance, while meeting societal goals and customer expectations, requires a balanced perspective and a vision for the future. **EP**



The Institute for Electric Innovation focuses on advancing the adoption and application of new technologies that will strengthen and transform the power grid. The Institute’s members are investor-owned electric utilities that represent about 70 percent of the U.S. electric power industry and are committed to an affordable, reliable, secure, and clean energy future.

The logo for the Electrical Engineering Institute (EEI), consisting of the letters 'EEI' in a stylized white font on a dark blue background.

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