

Powering the People: Smarter Energy, Smarter Future

By **LISA WOOD**

Powering the People, the Institute for Electric Innovation's (IEI's) annual celebration of innovation and change in the electric power sector, brings together about 200 industry thought leaders every March to discuss the key trends driving that change. Through a combination of debate, dialogue, and "TED-style" talks, this year's event underscored one important thing—smarter energy is a key driver to a smarter future.

Smarter Future

In her keynote, Kim Greene, executive vice president and chief operating officer at Southern Company, noted that what's key for Southern is understanding how best to provide the products and services customers want. For example, some customers are interested in distributed energy technologies; others have sustainability goals. Some new technology options will pose challenges to the traditional regulatory structure and industry business model. According to Greene, the industry, its regulators, and others will need to work collaboratively so that energy companies can continue to provide the services customers want: clean, safe, reliable, affordable, and sustainable energy.

Central to better serving customers and, perhaps, the single biggest area of disruption by far, according to GE Power President and CEO Steve Bolze, is in digital—data and analytics software. According to Bolze, last year's World Economic Forum report concluded that \$1.3 trillion



Southern Company Executive Vice President and Chief Operating Officer Kim Greene discusses customer solutions.



Steve Bolze, GE Power President and CEO, focuses on unlocking value through data and analytics.

of value can be unlocked in the next 10 years by digitizing *existing* assets. Data are fundamental to digitization. GE is laser-focused on digitization.

Digital starts from the top. If leaders are not completely on board, it doesn't get done, says Bolze. And, digital will

accelerate your pace of innovation. The electric power industry needs to jump in and commit to data and analytics in a meaningful way. Companies that use data and analytics operate more efficiently and with lower O&M costs, more renewables, and a high level of reliability.

Smart Cities

Cities nationwide are wrestling with how they can function better in the areas of transportation, power, water, and sustainability, and one thing surges through all smart city ideas—electricity. Connecting the energy grid with communications technologies can help communities achieve objectives such as increased building efficiency, enhanced public safety, reduced waste, and faster adoption of sustainable technologies.

According to the City of Kansas City's Chief Innovation Officer, Bob Bennett, you cannot build a smart community without data to transform decision-making. The Internet of Things (IoT) is the enabler. For the electric power industry or for a city, being smart fundamentally means the same thing—turning data into actionable intelligence for improved operations and predictive capabilities.

But, it takes partnerships, too. Kansas City would not be a smart, connected community without technology partners Cisco and Sprint and the local electric company, Kansas City Power & Light.

The City of Columbus won the Department of Transportation's Smart City Challenge, beating out 77 other cities, by rallying the whole community. American Electric Power (AEP) went "all in" for the project, according to Scott Osterholt, director of grid modernization for AEP Ohio, with plans to roll out 1,275 electric vehicle charging stations; 900,000 more smart meters to help respond to outages and restore service faster; voltage control to deliver energy over the grid more efficiently; smart lighting in Columbus and throughout its service territory; and 10 microgrids to boost resiliency around critical infrastructure.

Smart Regulation and Innovation

Today, U.S. electric companies are investing in the smarter energy infrastructure customers want—



Panelists discuss smart regulation and innovation at Powering the People.



AES President and CEO Andrés Gluski discusses global developments in energy storage.

a more resilient and secure energy grid that seamlessly integrates growing numbers of distributed energy resources and devices and provides customers with greater control and management of their energy use. With technology moving faster than ever before, many agree that electric power industry regulation also must change to encourage innovation and investments that benefit customers. At Powering the People, industry thought leaders engaged in robust discussion around these topics.

Future regulation must strike a balance between adopting a customer-driven model and developing a distribution grid that

can support customer choices by supporting investments in physical assets to allow more resources to connect to the grid.

Fundamentally, the pace of change in the electric power industry will be driven by how quickly rate design can incorporate technology and innovation. "Customers enjoy value from different pieces of our system. They enjoy value from the energy that's provided to them, but they also enjoy value from the assets that deliver that energy to them. It's going to become important that we're pricing the product that we provide in some way that relates to the value the customers receive," said Frank Prager, vice president of Policy at Xcel Energy.



TROVE Predictive Data Science CEO Ted Schultz talks about data analytics.



Hawaiian Electric Company President and CEO Alan Oshima discusses integrating renewable energy.

In the end, regulators, electric companies, and other stakeholders must work together to develop a new paradigm for pricing energy products and services. The central question guiding investments and regulatory decisions today and into the future should be: What's good for the customer?

CEO Power Talks

While the four CEO power talks focused on storage, data analytics, solar, and grid challenges,

a common message from all four speakers—Andrés Gluski (AES), Tom Werner (SunPower), Ted Schultz (TROVE Predictive Data Science), and Alan Oshima (Hawaiian Electric)—was that technology cost reductions, while helpful, are just one step toward our energy future. Equally important are technology integration and partnerships.

For electric companies, that means investing in the physical and digital energy grid platform that

will integrate new technologies and will continue to provide safe, reliable, affordable, and increasingly clean electricity to customers. For solar companies or battery storage companies, that means becoming part of the energy integration value chain and partnering with electric companies to merge solar energy with energy management, and with storage, for example, to do some amazing things.

At the beginning of the day, Bolze challenged the electric power industry to jump into data and analytics. At the end of the day, TROVE Predictive Data Science CEO Ted Schultz responded by providing some examples of how the industry is putting data analytics to work and changing the way electric companies do business. Hawaiian Electric's Alan Oshima concluded the talks by focusing on Hawaii as the postcard from the future. Hawaii is deeply engaged in integrating renewables. Oshima's advice: Engage early and often with all stakeholders, not just regulators. Customers want options.

Smarter energy is a key driver to a smarter future. New technologies, collaboration, progressive public policy, and appropriate regulatory policies remain the critical ingredients to a smarter energy future. **EP**



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

