



# The Benefits of Utility-Provided Distributed Energy Resources

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

**T**oday's evolving power grid must meet three critical needs: integrating new energy resources; providing customer solutions; and optimizing the grid platform itself. (See Figure 1.)

Public policies are driving the grid toward a mix of central station power sources and distributed energy resources (DER). As a result, electric utilities nationwide continue to broaden the types of DER that they provide to their customers. Today, such services include energy efficiency (EE), demand response (DR), microgrids, rooftop solar, community solar, and energy storage.

It is well-known that electric utilities have provided EE services to their customers for more than a decade. Today, 32 states have some type of lost revenue recovery or decoupling mechanism that removes the disincentive for electric utilities to invest in EE. A decade ago, fewer than five states had this regulatory mechanism in place. As a result, electric utility EE budgets totaled almost \$7 billion in 2013—up from just \$3 billion in 2007.

In the past five years, the number of electric utilities offering DR and smart pricing programs in addition to the more traditional direct load control programs has increased significantly. For example, more than 100,000 residential customers have enrolled in Oklahoma Gas and Electric's voluntary SmartHours variable pricing program. Pepco has two DR programs with residential customers—the EnergyWise Rewards direct load control program (with approximately 250 megawatts of capacity) and its newer price-responsive Peak Energy Savings program to manage demand via price signals.

Consolidated Edison's coolNYC program uses a plug-level meter with load-control capabilities (the modlet) to control some of the more than 6 million room air conditioners in New York City. There are many other examples across the country.

## Supply-Side Distributed Resources

Demand-side distributed resources—both EE and DR—are an increasingly valuable asset to the modern grid. However, supply-side distributed resources are equally important. In the past few years, utilities have started to provide supply-side DER to their customers.

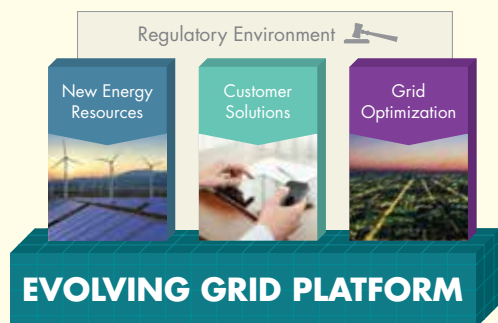
For example, Arizona's Tucson Electric Power provides all of its residential customers with the option to purchase solar energy through its Bright Tucson Community Solar Program and, in New Jersey, PSE&G provides solar to its residential customers through its Solar 4 All™ Program. Duke Energy's NC Solar Photovoltaic (PV) Distributed Generation Program offers rooftop solar PV to commercial customers and schools where Duke Energy installs, owns, and maintains the solar resource. Dominion's Solar Partnership Program is in the process of installing up to 30 megawatts of distributed rooftop solar PV by partnering with business customers and public/community buildings. These are just some of the options that utilities are providing to customers.

While we don't know how the future will unfold, we do expect DER to play a key role in the future power grid. The benefits of having utilities provide DER—both demand- and supply-side resources—range from affordability and availability for all customers, to facilitating and prioritizing long-term asset planning, meeting environmental goals, and increasing the reliability and stability of the nation's evolving power grid.

In today's busy world, customers are looking for comprehensive solutions to address their energy needs, and they expect an integrated offering of electricity and DER from their electricity provider or utility.

Using both supply- and demand-side DER effectively allows electric utilities to provide the most appropriate services to customers at the most affordable cost. As distributed resources continue to grow nationwide, having electric utilities provide this important resource makes business sense and delivers broad-based benefits to all customers. **EP**

**FIGURE 1**  
EVOLVING POWER GRID HAS MULTIPLE ROLES



Source: Institute for Electric Innovation

*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.*



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