

KEY INSIGHTS FROM A SOLUTIONS FORUM ON DRIVING ENERGY EFFICIENCY WITH IT



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Energy efficiency is a critical component of the proposed Clean Power Plan. It offers states a least-cost pathway for reducing carbon dioxide emissions from the power sector. A C2ES Solutions Forum held May 18, 2015, brought together city, state, and business leaders to explore how intelligent efficiency can drive reduced energy usage and emissions under the rule.

For more information about the C2ES Solutions Forum, see: <http://www.c2es.org/initiatives/solutions-forum>

Among the questions C2ES discussed at this event:

What is intelligent efficiency?

Unlike traditional energy efficiency measures, intelligent efficiency is a systems-based approach to energy efficiency that is enabled through networked devices and sensors. Steve Harper, global director of energy and environmental policy at Intel Corporation, described intelligent efficiency as automation of a wide range of things that, collectively, can cut huge amounts of energy and carbon emissions. Recent studies have suggested that intelligent efficiency could reduce U.S. energy use 12 to 22 percent by 2020.

Can intelligent efficiency also help with reliability and resilience?

Utilities are deploying intelligent efficiency solutions across the power supply chain—in power generation, transmission, and distribution—to improve reliability and build resilience. Saving energy is “just icing on the cake,” said Alyssa Caddle, principle program manager with the Office of Sustainability at EMC Corporation. Automation and sensors are helping to build a smarter power grid, allowing utility managers to identify potential outages and improve the efficiency of the distribution system. Analyzing this data could also help states and utilities comply with the Clean Power Plan by helping them plan the best balance of investments.

What role will energy efficiency play in the Clean Power Plan?

Cities, states, and businesses agree that energy efficiency will play a significant role in reducing carbon emissions under the proposed Clean Power Plan. A new C2ES report examining six Clean Power Plan economic modeling studies found that energy efficiency is the least-cost implementation option and can play a key role in minimizing cost impacts to consumers and the power sector. Doug Scott, vice president for strategic initiatives at the Great Plains Institute, noted that no state has to use the building blocks identified under the proposed Clean Power Plan. But energy efficiency makes sense (even if it isn't explicitly mentioned in the finalized rule) and can help states meet targets for limiting carbon emissions from power plants, especially since programs can be started relatively quickly.

What actions are cities, states and businesses taking on energy efficiency?

Most states are already engaged on energy efficiency. Twenty-one states have mandatory, long-term energy savings targets through an energy efficiency resource standard, and five states have a non-mandatory energy savings goal. Minnesota has moved beyond traditional efficiency measures and now emphasizes collecting data to track what works best to better meet the needs of consumers.

Furthermore, city and state officials and companies have found that consumers are far more likely to take energy-saving steps if the messaging isn't exclusively about being efficient or saving money. Rick Counihan, head of energy regulatory and government affairs at Nest, said the big selling point for the company's thermostats, which can be accessed via a smart phone, is convenience. Katherine Gajewski, director of sustainability for the city of Philadelphia, said the message that struck home with residents was comfort. Most residential customers do not know how many kilowatts they use in a day or how much a kilowatt-hour costs, but do care about whether their home is too hot in the summer or too cold in the winter. Philadelphia attracted more participants to an energy efficiency program by marketing it on especially hot and cold days.

How can cities, states, and businesses collaborate on using energy efficiency to implement the Clean Power Plan?

Gajewski said cities are far more organized on climate and energy issues than in the past and have started conversations about the best approaches they could take on the Clean Power Plan. The relationship between cities and utilities has evolved quickly in a short amount of time. According to Jessica Burdette, conservation improvement program supervisor for the Minnesota Department of Commerce, utilities are paying attention to cities' climate and energy goals. Some utilities are partnering with cities to address their needs and are seeking to leverage the achievement of city goals into future compliance with the Clean Power Plan. Counihan noted that companies that develop energy-saving technologies for consumers should be cognizant of how their technologies fit into the bigger policy picture—such as state energy efficiency targets and the Clean Power Plan. With a little bit of adjustment, a number of products could provide significant energy savings or demand response capabilities to support policy goals.

What would help cities and states use energy efficiency under the Clean Power Plan?

No two states have the same energy efficiency programs, nor do they have identical measurement and evaluation protocols to verify the energy savings from these programs. It would be extremely helpful if states could share measurement and verification protocols. Energy efficiency groups, state officials, and businesses are developing new protocols to quantify the impacts of intelligent efficiency. Lars Kvale, head of business development for APX Environmental Markets, said states are also interested in creating an energy efficiency registry to better track and share what states are doing. This platform can be used for state programs as well as the Clean Power Plan.

Why would a utility want to sell less of its product – electricity?

Utilities are in the business of selling a service—electricity—that is accessible and reliable. As we move toward a smarter grid, there are new opportunities to provide customers “beyond the meter” services that can reduce their energy use and energy bills, according to Ralph Izzo, chairman and chief executive officer of Public Service Enterprise Group, Inc. (PSEG). He describes energy efficiency as a quadruple win for customers, the environment, the economy, and utility shareholders. By marketing energy efficiency services to customers, utilities can earn money—even if they sell less electricity. In addition, utilities will reduce their costs by running their power plants less.

C2ES will continue the conversation with cities, states, and businesses to share insights and innovative ideas that will help us get to a clean energy future. A Solutions Forum on June 25 will explore innovative ways to finance clean energy technology and infrastructure.

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The Center for Climate and Energy Solutions (C2ES) is an independent nonprofit organization working to promote practical, effective policies and actions to address the twin challenges of energy and climate change.