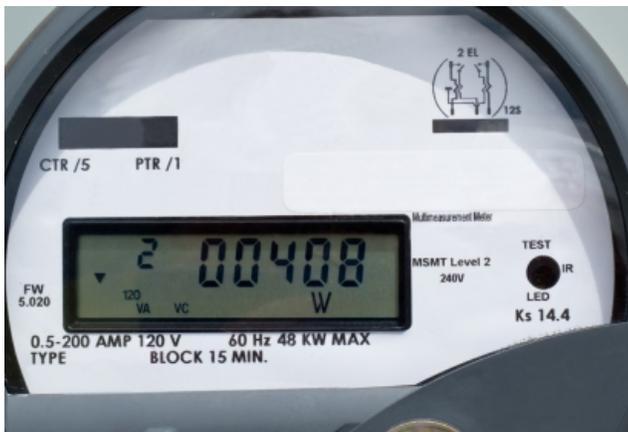


UTILITIES

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5 Emerging Trends That Drove the Utility Industry in 2016



Utilities beyond California make plans to embrace assets at the grid edge.

by Katherine Tweed

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The power sector is similar to geology in the sense that change must often be measured over long periods of time in order to see significant patterns.

Increasingly, however, the timescale of change in the power sector is accelerating. As we look back at 2016, we see an industry grappling with seismic upheaval, and trying to adapt faster than it ever has before.

Here are five trends that pushed the utility industry in 2016.

Resource planning moves to the grid edge. “Across the board, integrated resource planning has gone on to include distributed energy resources,” said Matt Mooren, an energy and utilities expert at PA Consulting Group. “And not just traditional resources like energy efficiency and demand response, but in many areas, such as solar, storage and electric vehicles and their impact on electric sales and demand.”

While California and New York are the prime examples of regulatory and market changes that are pushing utilities to consider resources at the grid edge, it is also increasingly happening in the independent system operators (ISOs) and in other states, particularly in the West, said

Mooren.

This was not the first year that including DERs in integrated resource planning emerged as a talking point, but rather, it was the year where utilities, beyond a few early movers, began seriously considering what they need to get there.

“The realization of the need for granular information and looking beyond coincident peak demand is happening now,” said Zach Pollock, an energy and utilities expert at PA Consulting.

Of course, it will take years to put in place the technical capability for the sort of location-specific data that will be required to truly integrate DERs into distribution system forecasting and capital investment planning on a wide scale. But 2016 is the year that many utilities began articulating what that approach could look like and examining the investments they need to make resource planning at the grid edge a reality.

Beyond NEM. It seems like a lifetime ago, but it was just in January that California’s Public Utilities Commission voted on its [net energy metering successor tariff](https://www.greentechmedia.com/articles/read/Californias-Net-Metering-2.0-Decision-Rooftop-Solar-to-Keep-Retail-Payme) (https://www.greentechmedia.com/articles/read/Californias-Net-Metering-2.0-Decision-Rooftop-Solar-to-Keep-Retail-Payme). Just before the year began, Nevada’s regulators voted unanimously to institute a [new solar rate](https://www.greentechmedia.com/articles/read/Nevada-Regulators-Eliminate-Retail-Rate-Net-Metering-for-New-and-Existing-S) (https://www.greentechmedia.com/articles/read/Nevada-Regulators-Eliminate-Retail-Rate-Net-Metering-for-New-and-Existing-S) that did not grandfather in existing customers. After months of battles, the regulators [restored](https://www.greentechmedia.com/articles/read/nevada-regulators-restore-net-metering-for-existing-solar-customers) (https://www.greentechmedia.com/articles/read/nevada-regulators-restore-net-metering-for-existing-solar-customers) net metering for existing customers, and [some new ones](https://www.greentechmedia.com/articles/read/nevada-regulators-retore-retail-rate-net-metering-in-sierra-pacific-territo) (https://www.greentechmedia.com/articles/read/nevada-regulators-retore-retail-rate-net-metering-in-sierra-pacific-territo).

For many states, however, the conversation is moving beyond retail-rate net metering to designing rates that offer a more complete valuation of not just solar, but also other distributed resources, like storage.

“More broadly, we’ll see shifts toward new customer classes and distribution system locational pricing considerations,” said Mooren, although there is still a lot of work that needs to be done on the technical side before these rates can be put in place.

Regulation innovation. The regulation and oversight of electric utilities and independent power producers continued to evolve in 2016, and not just in terms of how utilities treat renewables and resources at the grid edge.

In New York, regulators passed new rules on energy retailers, requiring them to offer better prices than the incumbent utility. In both New York and Illinois, the states set zero emission credits to keep nuclear plants open, a trend that could expand further in 2017, said Mooren, as certain states look to diversify their low-carbon energy mix through targeted subsidies.

ISO expansion. The past year brought a renewed focus on the expansion of California's grid operator. California already has an energy imbalance market (EIM), which was recently expanded to include PacifiCorp and NV Energy, and more utilities outside of California are slated to join.

Beyond the EIM, there was a focus on wider regionalization (<https://www.greentechmedia.com/articles/read/california-grapples-with-joining-a-regional-western-grid>) this year in the West. Some fear it could bolster coal plants, but Mooren said it could also create a richer environment for the growth of corporate procurement of renewables by expanding the market into more solar and wind-rich regions.

AMI, take two. Tens of millions of digital advanced meters were installed with the help of federal stimulus funds during the recession. After that, however, there was a lull in the smart meter market.

The sluggish North American smart meter market picked up the pace in 2016, starting with Consolidated Edison's plan for about 5 million meters (<https://www.greentechmedia.com/articles/read/aclara-wins-con-edison-metering-contract>). This year, smart meters surpassed older technology, including analog and AMR to become the most dominant type of electric meter (<https://www.greentechmedia.com/articles/read/US-Smart-Meter-Deployments-to-Hit-70M-in-2016-90M-in-2020>) in the U.S.

As utilities big and small make the case for smart meters, "it [becomes] a more collaborative roadmap between vendors and utilities," said Pollock. Utilities are looking to deliver real time data and operationalize the streams of data that the meters produce. Regulators are also getting savvier about meter deployments, notes Pollock, and these large capital investments are coming with more scrutiny than ever before.

As with most utility trends, these issues will not fade away when the calendar page turns to 2017, and will likely only accelerate as utilities and regulators explore new ways of doing business.



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