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## KEMA sees opportunities to address end-use data gap for energy efficiency, grid reliability goals

### New understanding of consumer energy use needed, AMI can change the landscape

BURLINGTON, Mass., (November 10, 2009) – KEMA ([www.kema.com](http://www.kema.com)) has identified opportunities to address existing gaps in and problems with energy end-use data used to support utility energy efficiency programs, electric capacity markets, and environmental policy. The findings are part of KEMA's "End-Use Load Data Update Project" sponsored by the Northwest Power and Conservation Council's Regional Technical Forum ([RTF](#)) and the Northeast Energy Efficiency Partnership (NEEP) Evaluation Measurement and Verification ([EM&V](#)) Forum.

The KEMA project assessed and catalogued the more recently completed existing end-use and load shape data studies that may be useful for the Northeast and Northwest regions of the US. The resulting [study](#) found that in recent decades, efforts to gather end-use load data appear to be scattered and minimal across the Pacific Northwest and East regions. Although a significant amount of data was gathered in the Pacific Northwest in the mid-1980s through the early 1990s, confidence in the data has waned.

One motivation for this study is to help utility [energy efficiency program](#) administrators devise the most cost-effective plans for updating and acquiring end use load shape data to meet a variety of policy and program needs. The KEMA report includes recommendations for various strategies to meet immediate and short-term information needs—including establishing a protocol for ancillary [data collection](#) to facilitate data transferability and usability. The report also offers longer-term recommendations to leverage [advanced metering infrastructure](#) (AMI) as it evolves.

"Technologies change and consumer behavior evolves," said Curt Puckett, senior vice president of Sustainable Market Strategies, KEMA. "We need to understand the changing consumer energy use profile. If we want to move customers towards making more energy efficient decisions we need much greater detail about how, how much and when consumers use energy."

As the US makes the largest single investment in grid modernization in its history, how well equipped the nation is to further energy efficiency, reduce energy bills and strengthen system reliability depends, in part, on the quality of [consumer end-use](#) information.

#### **AMI can vastly improve load research cycle**

While not directly addressed in the load data report, it is important to note that the promise of more accurate load data has been used to strengthen the case for utility [smart grid](#) projects. Smart meters and advanced metering infrastructure (AMI) are needed to more accurately understand how and when energy is being consumed. AMI could dramatically change how end-use load research is conducted. Historically, end-use projects have been costly and time consuming—involving installation of monitoring devices on isolated circuits associated with the desired end-use application.

"AMI allows the load research cycle to be vastly improved, reducing the lead time and costs associated with installing and collecting data on vast quantities of customers at the whole facility level," said Puckett. "This will free-up resources allowing firms like KEMA to develop innovative ways of breaking down the load and examining its various end-use components."

Such detailed information is critical for Independent System Operators (ISOs) and grid operators in regions where energy efficiency has become an important resource to meet peak demand periods. ISOs and grid operators need reliable data about the size and duration of demand that can respond to peak demand events and resource changes. Advanced meters, if properly configured, can provide the information to make energy efficiency an even more valuable generation resource.



The KEMA End-Use Load Data Update Project final report is available for download at [www.kema.com/LoadData](http://www.kema.com/LoadData).

#### About KEMA

Founded in 1927, KEMA is a global provider of business and technical consulting, operational support, measurement and inspection, testing and certification for the energy and utility industry. With world headquarters in Arnhem, the Netherlands, KEMA employs more than 1,400 professionals globally and has offices in 20 countries. KEMA's US subsidiary, KEMA, Inc., is headquartered in Burlington, Massachusetts and serves energy clients throughout the Americas and Caribbean.

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