St george load shifting

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Earlier this month I attended the Midcontinent Independent System Operator"s (MISO) Board meeting "hot topic" discussion on resource adequacy representing the Environmental/Other Sector.

My comment on the topic was quoted by RTO Insider in their coverage of the meeting, where I discussed how distributed energy sources can unlock value for the system by "shaving loads, shifting loads, and shimmying loads." This quote, which pertains specifically to demand response (DR) as a form of distributed energy resource, generated questions about what these terms mean and why they matter for the region. It is worth spending some time talking about these values and how they can help MISO and its members.

In an effort to inform this conversation and present a forward-looking perspective, I raised the point that much of the DR operating in MISO are legacy programs focused only on reducing load in response to a reliability need. But now, with innovative control and communication technologies, many devices in our homes and businesses can be modulated and controlled with more precision than ever before. And, it is this technological advancement that enables these devices to provide "shifting" and "shimmying" grid services.

The terms in my quote represent load management strategies that can be deployed using DR, which I first came across in California"s 2025 California Demand Response Potential Study by Lawrence Berkeley National Lab.

A key finding of this work was that in California, where solar penetration has increased system-wide ramping needs, the role of traditional DR (peak shaving) is declining, while the need for fast-ramping, flexible loads that can provide both time- and location-specific services is growing (see FERC DR Assessment, 2017). While the needs of each region"s grid are unique, this may be a useful lesson for the Midcontinent region as penetrations of both wind and solar generation continue to grow.

Such principles will help maximize benefits by avoiding additional load during existing peak periods and by enabling these new load resources to provide grid services, both established and emerging.

To learn more about the state of demand response in the Midcontinent region and potential benefits of increased regional deployment of DR, check out our resources including:

Utilities are constantly trying to balance loads on the grid to reduce the need for additional expensive, and typically high emitting, power generation from peaker plants and supporting more efficient energy use overall.

One strategy energy providers use to encourage customers to use more electricity during less popular times is

implementing time-of-use (TOU) rates. Energy prices change by time of day, day of the week, and season based on fluctuating electricity demand. During peak hours (when demand is highest) electricity prices are increased, while during off-peak hours (when demand is lower) prices are reduced.

EV fueling stations, fleets and other charge point operators can benefit when they strategically use grid energy considering TOU rates to reduce and manage electricity expenses. Installing an on-site battery energy storage system (BESS) allows the most flexibility in shifting loads while reducing operational costs and ensuring your EV chargers remain up and running.

Learn how Sparkion"s energy management can enhance load shifting and optimize your EV charging sites. Download our white paper for detailed insightsDownload the brochureWhat is load shifting in EV charging?Load shifting is a strategy that EV charge point operators can use to reduce their operating costs. By changing the time when you charge your EVs, you can take advantage of periods when electricity demand and prices are lower for a more cost-effective charging schedule.

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