

Problem/Opportunity Statement

Residential and Small Commercial Customer Measurement and Verification for Demand Response

Problem/Opportunity Statement

Despite the proliferation of advanced metering infrastructure during the last decade, data access issues remain a barrier to residential and small commercial customer participation in the wholesale market through curtailment service providers (CSPs). Unfortunately, CSPs face challenges accessing residential and small commercial customers' smart meter data from the Electric Distribution Companies (EDCs) at the scale required to participate in the PJM market.

Today the data required for every residential customer with a smart meter participating in the Emergency Load Response Program as an annual resource includes not only usage data for settlements and compliance during events or tests, but substantial historic data from two prior delivery years in order to establish a Winter Peak Load and Peak Load Contribution needed to establish baselines. Although EDCs may have the data, if there are smart meters present, retrieving that data and making it accessible and available for thousands of customers upon request by a CSP to facilitate participation in the wholesale market presents costly and time-consuming administrative challenges to both CSPs and EDCs.

PJM requires CSPs to use interval metering equipment to measure kWh values for demand response participation for all customers if customers have interval meters. Manual 19, Attachment C, permits CSPs to use interval meter data from a representative sample of the population at a 90 percent confidence level to calculate the load reductions for non-interval metered residential customers. Attachment C also outlines the qualifications for a registration to use statistical sampling, which notes locations must not have meters capable of recording load data at the specified intervals for each market. The statistical sampling method is not available where residential customers have smart meters.

While CSPs have metering solutions to obtain EDC data today for larger C&I customers, the sheer number of residential and small commercial customers interested in participating in the PJM programs and the relatively limited contribution per customer makes this requirement cost prohibitive as applied to small loads. On the other hand, ensuring accuracy and verifiable compliance must be a paramount objective. Accuracy was one of the reasons stakeholders developed changes to statistical protocols for non-interval residential customers in 2015 (Docket No. ER15-1849). This rule change did not address statistical sampling methods where customers have interval meters, effectively foreclosing the ability to use statistical sampling for residential and small commercial customers when EDCs are unable to provide hourly interval or historical usage load data due to number of requests.

For more information, please contact Chandra Colaresi, Chandra.Colaresi@CPowerEnergyManagement.com, or Ken Schisler, Kenneth.Schisler@CPowerEnergyManagement.com.