Title: Integration of Behind-the-Meter PV Fleet Forecasts into Utility Grid System Operations

Speakers: Adam Kankiewicz, Clean Power Research

Location: MGH 241, UW campus

Map: http://www.washington.edu/maps/?l=MGH

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Abstract:

The penetration of behind-the-meter (BTM) photovoltaic (PV) systems continues to grow as a result of reduced costs to the consumer, innovative business models such as third-party ownership and state-mandated renewable portfolio standards. Utilities and balancing authorities must begin to account for this new customer-sited variable generation resource. Customer-sited PV power generation will impact utility scheduling and real-time balancing operations by reducing the certainty which current state-of-the-art technologies forecast customer load and directly impact the balancing authority’s ability to manage and purchase reserve capacity. This presentation will present research that targets improving the accuracy of the CAISO’s electric load forecast by incorporating PV power forecasts of all of the BTM PV systems in the state of California. Key advancements have included generation of individual forecasts for all ~200,000 BTM systems in the state in an ongoing scheduling and balancing operation and aggregation of these forecasts into the five load zones defined by the CAISO. Aggregated forecasts have been integrated into the Automated Load Forecasting System (ALFS), which is operated by Itron.

Adam Kankiewicz is a lead research scientist at Clean Power Research.