CUSTOMER BRIEF: ATLANTIC CITY ELECTRIC, DELMARVA POWER AND PEPCO

PV Generation Insights with FleetView®

FleetView calculates behind-the-meter PV generation to inform gross load calculations and distribution planning

Challenge

Three Exelon companies (Atlantic City Electric, Delmarva Power and Pepco), experienced accelerated growth of residential solar installations in their service territories. In order to provide safe and reliable service while supporting solar adoption, the company needed the ability to accurately and cost-effectively estimate customer gross load that is obscured by behind-the-meter PV systems. In particular, they wanted to refine two critical areas: power flow analyses to screen PV interconnection requests; and load forecasts that support distribution system planning.

Solution

To address these challenges, the companies chose to incorporate solar intelligence into their power flow modeling and distribution planning using FleetView®, a web-based solar data service from Clean Power Research®. FleetView combines PV system specifications and SolarAnywhere® irradiance data to create time-series simulations of historical, real-time and forecasted PV generation of utility, C&I and residential PV systems.

FleetView helps the companies unmask gross customer loads from net-meter load data available from AMI and SCADA. This is accomplished without production metering infrastructure, and without relying on generic PV load profiles that fail to capture the spatial and temporal variability of PV production. This data-supported approach enables them to accurately and precisely predict gross load, whether at the premise, circuit or substation level.

The Distribution Planning team members are responsible for power modeling, load forecasting and distribution planning. As customer adoption of solar systems grows, variable PV production at the grid edge is limiting the effectiveness of a conventional planning approach. The companies adopted FleetView as a critical interconnection and distribution planning tool to account for existing and future PV production in their power modeling and planning processes.

"FleetView provides us with accurate and site-specific solar production simulations of historical and real-time production for every PV system in our territory. This helps us unmask gross load, plan for the future and bolster continued reliability of the distribution system."

Scott Placide
Manager, DER Engineering

Results

By incorporating FleetView, grid planning processes for the companies now benefit from state-of-the-art PV generation modeling to produce reliable gross load estimates. FleetView not only helps them plan for future solar adoption within their network, it also helps ensure they are building toward the systems and analytic frameworks needed to support future customer PV adoption.

Clean Power Research enables utilities to plan and optimize for the clean energy transformation.

Contact us to learn more about Clean Power Research products and utility solutions, including PowerClerk®, WattPlan® and FleetView®.