Decarbonizing Massachusetts' grid with intelligent, long-term planning

CUSTOMER BRIEF: EVERSOURCE

Using data and advanced modeling to predict future DER adoption and distribution grid impacts

Challenge

As consumers and businesses accelerate their adoption of DERs — such as photovoltaics, electric vehicle charging infrastructure and battery storage systems — Eversource needed to plan grid investments and upgrades accordingly.

Eversource's Advanced Forecasting and Modeling Team sought to forecast local and system-wide load profiles and generate insight into DER adoption and the potential impact on the distribution grid.

Solution

Working with Clean Power Research, Eversource deployed PowerClerk® Analytics to model consumer adoption and DER installation propensity using historic interconnection application data, including system specifications, geographic, and demographic data. By leveraging advanced solar and DER analytical models, Eversource was able to predict PV generation impact on grid capacity. PowerClerk Analytics also helped improve model accuracy by filling gaps in installed PV device specification data.

Eversource deployed PowerClerk Analytics in conjunction with LoadSEER™, a leading utility load forecasting and system planning solution by Integral Analytics. By combining these analyses, Eversource generated a range of likely capacity and load scenarios, enabling them to plan well into the future with increased confidence.

Results

Eversource leverages the generated models to optimize their near-term grid infrastructure investments. The team gains a more complete picture of future local and state-wide load profiles along with additional insight into DER adoption and impact. The increased confidence in how DER adoption might affect their distribution grid infrastructure allows Eversource to maximize the impact of investments and help Massachusetts reach its decarbonization goals.

EVERSOURCE

Eversource's Advanced Forecasting and Modeling Team is helping to meet Massachusetts' decarbonization goals and facilitating the growth of distributed energy resource (DER) adoption. By modeling long-term demand and DER adoption, Eversource is optimizing grid investments to future-proof their distribution network.

"Eversource's Advanced Forecast and Modeling Team desired more insight into likely DER growth into the next three decades, to meet demand in real-time and plan for equipment upgrades and carbon goals. Clean Power Research's PowerClerk Analytics helped fill DER information gaps in combination with LoadSEER, which provided actionable insights into how electrification and DERs will drive future capacity and investment needs."

– Gerhard Walker, Manager, Advanced Forecasting and Modeling

Clean Power Research enables utilities to plan and optimize for the clean energy transformation.
To learn more about Clean Power Research products and utility solutions, including PowerClerk Analytics, contact us.

