

DER Integrations: A Five-Part Framework

Virtual Peaker 

 UTILITY **DIVE**

Custom content for Virtual Peaker by studioID
EXCERPT PUBLISHED WITH PERMISSION

In response to the global decarbonization efforts meant to curtail the existential threat of climate change, electric utilities face increasing political and regulatory pressures to help reduce carbon emissions. Simultaneously, the structure and operation of power grids are becoming increasingly complex. When customer demand peaks in the afternoon, for example, the solution is more complex than relying on a fossil fuel-powered peaker plant.

Increasing amounts of renewable energy are coming online to meet the demand for clean energy. But keeping the grid balanced with intermittent renewables requires both energy storage and demand response. Excess energy production needs to be stored for later use, and demand needs to be spread evenly throughout the day to avoid peaks that are difficult to satisfy with renewable energy.



“As we become more dependent on renewables and less dependent on thermal plants, the supply of energy is more variable, so we need ways to manage that,” said Adam Light, a senior solution manager with Portland General Electric. “When supply is temporarily out of balance with the demand, we need to be able to control loads — things like water heaters and thermostats — or sources of storage, like batteries.”

“Control” is the operative word. All the necessary technologies exist to shift customer demand and

store renewable energy. Controlling and managing distributed energy resources poses a surmountable challenge to utility providers. For one thing, customer enrollment and participation are required. But even after customers agree to give access to their appliances and equipment for the sake of overall grid health, there’s still the challenge of integrating all those devices into monitoring and control systems.

“As we become more dependent on renewables and less dependent on thermal plants, the supply of energy is more variable, so we need ways to manage that.”

ADAM LIGHT

senior solution manager with Portland General Electric

Virtual Peaker works closely with device manufacturers to stay on top of all the technical details required to maintain device integrations within a utility's service area. In addition, the company partners with specialized third-party aggregators to expand the reach and expertise of the demand-side programs they manage.

One such partner is Fermata Energy, a vehicle-to-everything (V2X) company that's working to enable EV batteries to help balance the grid when they aren't powering a vehicle. "Utilities understand power electronics and communications, but the breadth of the complexity required to integrate safely and effectively with batteries or water heaters or solar is enormous," said David Slutzky, founder, and CEO of Fermata Energy. "From a big picture, it makes sense for them to hand that baton to an integrator to run their programs. And from our experience, Virtual Peaker is the easiest program operator to integrate with because of their competence and professionalism."





Virtual Peaker

Virtual Peaker is a cloud-based distributed energy platform that empowers modern utilities to build the grid of the future and meet global decarbonization goals. The SaaS company's platform suites unify all aspects of DER management from DERMS to customer engagement and load forecasting. Virtual Peaker is a remote-first company based in the United States.

[LEARN MORE](#)