# Aaron commercial microgrids

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Aside from places where microgrids have a track record—educational, industrial, and commercial campuses—commercial and community microgrids are still the domain of early adopters, but the number of people wanting to travel the trail they are blazing is increasing.

Despite those challenges, the dropping cost of renewable generation and energy storage technologies plus a growing awareness of the limitations on grid reliability has led to increased interest in microgrids.

Several IT-intensive facilities are adopting microgrids and even looking at the next level of efficiency, including using DC power from generation to point of use.

Another potential development from data centers is one of scale. Craig Harrison, founder of the Niobrara Data Center Energy Park in Colorado, predicted that the first “utility-scale microgrid” would come from a data center.

Kevin Lucas, division director of policy, planning, and analysis for the Maryland Energy Administration, talked about how his state is examining where it can remove policy barriers. Grid service, he said, isn’t 100% reliable, and even though today there is “no market price on reliable operation,” as more people start to experience disruptions, they will start to incorporate reliability into the cost accounting for microgrids.

In Laurel, Md., the Konterra Solar Microgrid couples a containerized battery and inverter with solar photovoltaic generation from parking lot canopies plus a couple of electric vehicle charging stations. Developed by Solar Grid Storage and Standard Solar for the headquarters of Konterra, described as a sustainable mixed-use real estate development, the project leverages both tangible and intangible features.

The financials for the Konterra project were “pretty neutral,” according to Richard McCoy, Konterra executive vice president, but the project had other benefits, including environmental and cutting-edge technology aspects that make the facility attractive to prospective tenants.

Dan Dobbs, CFO of Solar Grid Storage, talked about the added benefit of providing ancillary services (frequency regulation) to the independent system operator, PJM, which generates revenue for third-party investors. The financial importance of access to the ancillary services market was a loud refrain at the summit.

States that have experienced significant grid disruptions, such as those in the Northeast affected by Hurricane Sandy, are among those taking the lead in encouraging microgrid development by removing red tape and developing partnerships with those wishing to develop microgrids.

Eric R. Coffman, in the Office of Energy and Sustainability Department of General Services for Montgomery County, Maryland, noted that his county is a potential microgrid customer in light of four major reliability events experienced in the past few years. Its long-term goal is to be a generator with utilities to provide backup for more than 400 county facilities, including those serving emergency services.

Among the Connecticut projects is a combined heat and power project at Wesleyan University, which will serve as a FEMA rallying point during disasters. Another project, in Hartford, is run in partnership with the utility and the city and includes a gas station, senior center, and grocery. Because the state can’t by law finance generation, its projects are leveraging existing generation sources.

The value of an islanded “oasis” of power during emergencies caused by anything from fire to hurricane to human action is difficult to put a dollar value on, but the value becomes obvious as soon disaster hits.