Climate Adaptations and Futures Webinar Series:

Energy Resiliency through Microgrids

Panelists:
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Matt Arsenault - DHSEM, Mitigation Projects Team Supervisor

Modern/Advanced Case Study Examples

Pacific Missile Range Facility - Navy (Kauai Island HI)

The U.S. Department of the Navy (DON) leased land on Pacific Missile Range Facility—Barking Sands (PMRF) on Kauai Island, Hawaii for the development of a microgrid that will supply local area power and support mission-critical base activities in the event of a power outage. The project will provide energy security and resiliency that is critical to the base and to Kauai, especially the west side.

Find more information about the project here.

Buffalo Niagara Medical Center - Electric Power Research Institute (Buffalo NY)

The Buffalo Niagara Medical Campus is a vital resource for the local community and includes world-class hospitals, healthcare facilities, educational institutions and innovative biomedical research labs. The microgrid will provide resilient, clean energy for the 120-acre campus, long-term cost-savings and potential monetization opportunities for member institutions. A new microgrid would enable the campus to continue

providing critical services during a potential power outage. Microgrid benefits would also include improved performance of the electric grid by better power consumption management during peak demand, increasing energy efficiency and reliability.

Find more information from the feasibility study report here**.**

Joint Base Cape Cod - Air National Guard (Cape Cod MA)

Located at Otis Air National Guard Base on Cape Cod, Massachusetts, this is the U.S. Department of Defense's (DoD) first wind-powered microgrid. The "grid-connected microgrid" will serve as a model for similar Air National Guard and Department of Defense (DoD) projects. The Otis Microgrid will allow the intelligence mission to continue in the event of a power outage

Watch a video about this project here.

Marine Corps Air Station (Miramar CA)

NREL has partnered with the Marine Corps Air Station (MCAS) on an installation-wide microgrid that will ensure that the MCAS flight-line and other critical supporting facilities always have power, even during a blackout. The new, advanced microgrid will feature an intelligent controller for tapping into diverse energy sources—such as solar photovoltaics (PV), landfill gas, natural gas, energy storage, and diesel fuel—while maximizing use of existing renewable energy. The microgrid will enhance energy resiliency by allowing the installation to operate even when the utility is down, using redundant/on-site fuel sources.

Find more information about the NREL/MCAS project here.

Bronzeville Microgrid (Bronzeville IL)

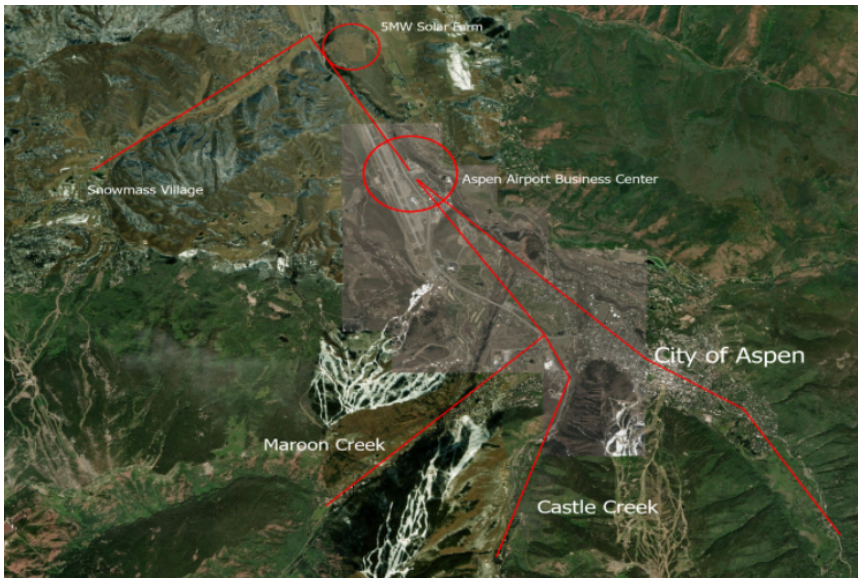
Designed to serve 10 critical facilities, the Bronzeville microgrid will connect to a nearby microgrid at the Illinois Institute of Technology. Working in coordination, the microgrids will demonstrate how the whole-is-greater-than-the-sum of its parts when microgrids 'talk' to each other. The project will likely be the most advanced clustered urban microgrid in the United States.

Find more information about the project here.

Pitkin County Microgrid Feasibility Study

Goals of DOLA-funded Feasibility Study

- Assess conservation measures and the electrification of public facilities
- Investigate and plan the implementation of a Micro-Grid and Heating District linking the facilities
- Create an administrative framework for operation of the system and analyze the cost of implementation and maintenance



Key Questions for Micro-Grid & Administrative Framework:

- Who has rights to a produced electron?
- How do we ensure continuity of operations in the event of an outage?
- Where can battery storage be located?

- What new utility infrastructure is needed?
- How is the maintenance of the system managed and the costs distributed?
- What is the process for distributing electricity outside of the micro-grid?

See Full Presentation here.

Microgrid Funding

Funding Caps

The funding caps (federal share) for the BRIC program are as follows:

- **State/Territory Maximum Allocation and Activity Caps**: $600,000
  - Up to $300,000 may be used for mitigation planning and planning-related activities per applicant
- **Tribal Set-Aside Activity Caps**: The combined cost of the applicant's capability- and- capacity building activities under the Tribal Set-Aside must not exceed $600,000 per applicant.
- **National Competition Cap**: $50 million per subapplication

Generally, the cost share for this program is 75% federal / 25% non-federal.
For additional information on Funding Caps, https://www.fema.gov/.

FY2020 BRIC:
DHSEM received 3 Microgrid Notice of Intent (NOI)
C&C of Denver, Pitkin County and Energy Field Services
Total funding: $35,600,000.00