

Microgrid Solutions

True Energy Resilience with
On-Site Power

**Smarter Energy
for a Cleaner Future**

What is a Microgrid and How Does it Work?

A microgrid is a distribution network that incorporates a variety of distributed energy resources (DER) that can be optimized and aggregated into a single system. The integrated system can balance loads and generation with or without energy storage and is both capable of islanding and operating in parallel with a traditional utility power grid.

A microgrid incorporating Capstone combined heat and power (CHP), solar, and battery storage can help many facilities substantially reduce their energy costs for both base and peak load, especially when compared to using either CHP or solar PV and battery storage alone. Additionally, an on-site microgrid system can increase the value of your property assets and meet sustainability goals for your business or institution.

Microgrid Products At-a-Glance

CHP Systems:

On-site CHP systems, powered by highly reliable and low maintenance microturbines, are an excellent on-site power generation solution to offset a facility's baseload utility use. Additionally, the thermal energy created by CHP units can be efficiently recovered to heat water, or generate steam or chilled water, to provide added energy cost savings.

Solar Energy:

Installed in either roof or ground-mounted configurations, solar energy systems can provide a significant amount of energy year-round, often during a facility's highest demand periods. In the summer months, which often coincide with higher peak demand rates charged by utilities, solar energy can help reduce peak demand charges. The innovative solar panel design allows for higher power density, allowing up to 40% more energy.

Energy Storage Solution:

Energy storage is the cornerstone of a zero-carbon future as storage is the key balancing resource for microgrids or full-scale utility grids that must rely on renewables that vary over the day and season. Energy storage allows for higher amounts of renewable generation on-grid, and doubles as resilient protection for critical loads during times of grid outages or unavailable renewable resources.



Microgrid Features and Benefits

While either a standalone on-site CHP or solar system can each achieve notable savings in either baseline or peak usage demands respectively, combining these two systems on-site allows facility owners to achieve an immediate, significant utility cost savings by offsetting a substantial part of both their baseload and peak demand requirements.

Additionally, an on-site microgrid solution provides facility owners with long-term predictability and stability in facility energy costs, insulating facilities from utility rate hikes and peak demand charges, and keeping energy costs stable and predictable over the long service lifetimes of these installations. Capstone advantages include:

- + **Increased Energy Resiliency**, means your facility is protected from the costs and disruptions of utility power losses.
- + **Additional Energy Generation**, during summer daytime hours, supplement CHP output using free solar energy.
- + **Predictable and Reliable Energy**, shifting power generation on-site provides facility owners with long-term predictability and stability.
- + **Efficient, Low-Cost, Clean Energy**, microgrid owners and operators can lower their operating costs through the deployment of distributed energy resources.

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Which types of facilities **benefit** most from **Microgrid** solutions?

Any commercial and industrial customer with round-the-clock energy requirements will benefit most from a Capstone microgrid solution.

A Broad Suite of Applications



Capstone Green Energy Corporation is a leading provider of customized microgrid solutions and on-site energy technology systems focused on helping customers around the globe meet their carbon reduction, energy savings and resiliency goals.

Capstone Green Energy focuses on four key business segments. Through its Energy as a Service (EaaS) business, it offers rental solutions for its microturbine energy systems and battery storage systems as well as aftermarket parts and comprehensive service contracts through a comprehensive Factory Protection Plan (FPP) product. Energy Generation Technologies (EGT) are driven by the company's industry-leading, highly efficient, low-emission, resilient microturbine energy systems offering scalable solutions in addition to a broad range of customer-tailored solutions, including hybrid energy systems and larger frame industrial turbines Baker Hughes. The Energy Storage Solutions (ESS) segment designs and installs microgrid storage systems creating customized solutions using a combination of battery technologies and monitoring software. Through Hydrogen Energy Solutions (H&S), Capstone Green Energy offers customers a variety of hydrogen products, including the company's microturbine energy system.

Our vision is to become a leader in the battle against climate change. We will accomplish this by offering our proven, advanced green energy power solutions. We are committed to protecting the environment and the people who live in it, believing that the world we leave behind for our children and grandchildren should be better than the world in which we live today.

As an organization, we have a moral duty to behave ethically. We strive to be honest and forthright in all actions within our organization and externally relative to our environment, our society, our customers, and our shareholders.

For more information about Capstone Green Energy and its clean-and-green microturbine technology solutions, please visit www.capstonegreenenergy.com or call 1.818.734.5300.

