



# MICROGRIDS: A SOLUTION FOR DATA CENTER DEMAND

The increasing demand for data center developments is putting significant pressure on existing power infrastructure, making it difficult to keep pace with the growing energy requirements. To address this challenge, the concept of microgrids presents a promising solution. These localized energy grids can operate independently from traditional utility grids, providing sustainable and reliable power. The appeal of microgrid design lies in its potential for sustainability, cost savings, and enhanced reliability. RTM brings unique experience in microgrid design, working closely with our clients to deliver the most effective energy solutions.

## MOTIVATION FOR MICROGRID DESIGN

### Sustainability

Microgrids play a crucial role in advancing sustainability by providing localized, resilient energy solutions that reduce reliance on traditional power grids. These systems can integrate various renewable energy sources like solar or wind, as well as non-renewable sources like natural gas, allowing for the efficient generation and distribution of energy within a specific area. By optimizing energy use, reducing transmission losses, and enabling the integration of energy storage, microgrids contribute to lower carbon emissions, making them a vital component in the transition to a more sustainable and resilient energy future.

### Cost Savings

Utilizing microgrids can lead to significant cost savings by optimizing energy efficiency and reducing operational expenses. They can reduce reliance on expensive peak-hour energy from the main grid and provide more stable energy pricing. The ability to operate independently from the main grid during outages also reduces downtime costs for businesses and communities. Over time, these factors make microgrids a cost-effective alternative to traditional energy systems.

### Reliability

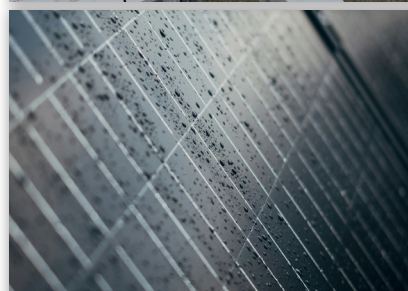
In the event of grid failures or natural disasters, microgrids can operate independently from the main grid, maintaining power for critical infrastructure and communities, minimizing disruptions. Their ability to integrate diverse energy sources, including renewable energy and battery storage, ensures a stable and continuous power supply. This decentralized approach reduces the vulnerability associated with centralized grids, making microgrids a reliable solution for ensuring energy security in various scenarios.



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## MEET ONE OF OUR EXPERTS IN MICROGRID DESIGN

RTM has extensive experience in microgrid design, delivering tailored solutions to our clients. Recent projects include:

- The Ensign Group, Inc. | Skilled Nursing Facilities | 5 Sites in Northern California
- Cambridge | Skilled Nursing Facilities | 32 Sites in California
- Scripps Hillcrest Hospital | San Diego, California
- Kaiser Permanente Richmond Medical Center | Richmond, California



William "Rocky" Tanner, P.E.  
Principal

*36+ years of experience in electrical engineering and power distribution.*

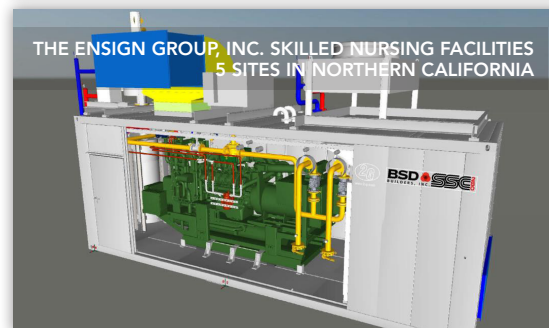
Rocky Tanner, Principal at RTM, is an expert electrical engineer specializing in advanced microgrid design and implementation. He develops innovative, sustainable energy solutions for sectors like data centers, healthcare, and urban infrastructure. Known for integrating renewables and optimizing energy efficiency, Rocky ensures reliable power distribution and energy resilience through a collaborative, technically skilled approach.



LECONTE BATTERY ENERGY STORAGE SYSTEM (BESS)  
CALEXICO, CA



CAMBRIDGE SKILLED NURSING FACILITIES  
32 SITES IN CALIFORNIA



THE ENSIGN GROUP, INC. SKILLED NURSING FACILITIES  
5 SITES IN NORTHERN CALIFORNIA

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