Case Study

Centersquare BOS1-A Data Center

Waltham, MA

UNISON ENERGY

Centersquare's 165,968 square-foot data center is projected to save over $360,000 in its first year with Unison's Distributed Generation Microgrid

The Centersquare BOS1-A data center in Waltham, Massachusetts, is a 165,968 square-foot facility with 107,570 square feet of raised floor space dedicated to colocation services. The facility serves a diverse clientele, including financial services firms, media companies, and cloud service providers. The BOS1-A data center is located in the heart of Boston's tech corridor, making it an ideal hub for businesses requiring reliable and secure data infrastructure. Its clients benefit from high security, energy efficiency, and extensive connectivity options, making it a key asset in the Boston data center market.

Centersquare was looking for a microgrid partner to help reduce their rising energy costs, as well as provide another source of redundancy for two of their data centers located in the Boston suburb of Waltham, Massachusetts. Unison Energy designed an onsite distributed generation microgrid that operates at total efficiency of 41%.

The microgrid was designed to provide cost savings as well as enhance energy reliability, meeting over 75% of the company's peak energy demand and offsetting 89% of its annual power consumption. Additionally, the system includes load-following and island mode capabilities, allowing it to adapt to fluctuations in energy demand and operate independently of the grid as needed.

Distributed generation microgrid offsets 89% of the data center's annual power consumption

Operates at 41% total efficiency

Load-following and island mode capabilities

*EPA non-baseload emissions data (eGRID 2016)

Due to the use of electric-only rooftop DX units, integrating micro-grid thermal waste heat into BOS1-A's chilled water system was determined to be unfeasible. The final microgrid proved to be a highly cost-effective solution, with first-year energy cost savings projected at $360,000 compared to the local utility.

Structured as a 20-year Energy Services Agreement, the BOS1-A microgrid was financed by Unison Energy, which also oversaw the design, construction, commissioning, and will continue to operate the asset over the life of the agreement. By outsourcing the operation and upkeep of the microgrid, Centersquare benefits from Unison's specialized expertise without the burden of managing the asset internally, while at the same time reducing financial risk and freeing up capital for core business activities. Furthermore, by entrusting the complexities of microgrid operation and maintenance to Unison, Centersquare can focus entirely on serving its clients, leveraging its data center expertise while enjoying the enhanced energy security and cost savings that the microgrid delivers.

"As capacity needs increase, microgrids can scale to meet the increasing power demands of data centers, ensuring that capacity keeps pace with expansion plans and technological advances."

The microgrid not only provides Centersquare with substantial long-term savings but also provides a resilient and flexible energy supply. This allows Centersquare to continue to position itself as a competitive and attractive partner for businesses seeking reliable and scalable data solutions. By staying at the forefront of energy efficiency and compliance, Centersquare ensures that it meets the evolving needs of its clients, securing its place as a trusted leader in the data center industry.

Unison Energy

Who We Are

We own and operate distributed generation systems that operate as microgrids.

We operate systems in CA, MD, NJ, and NY, with additional projects underway.

We finance projects on our balance sheet, with no outside capital required.

We design and implement our systems using internal engineering and project management teams.

We operate our sites using in-house field service technicians, engineers, and a 24/365 staffed monitoring center.