PowerSecure

CASE STUDY

Beyond the Microgrid: Updating Aging Health Infrastructure with Premium Service

Veterans Integrated Service Network 7 Case Study

Project Background

VETERANS INTEGRATED SERVICE NETWORK 7 CASE STUDY SUCCESSES

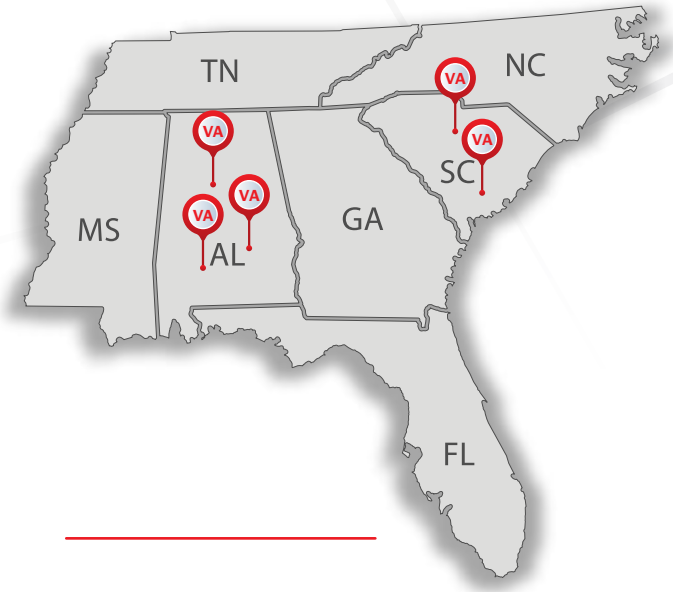
- Increasing the reliability of electrical systems
- Reducing maintenance costs
- Creating healthier environments for employees and patients.

SUPPORTING THE WORK OF THE VETERAN'S AFFAIRS

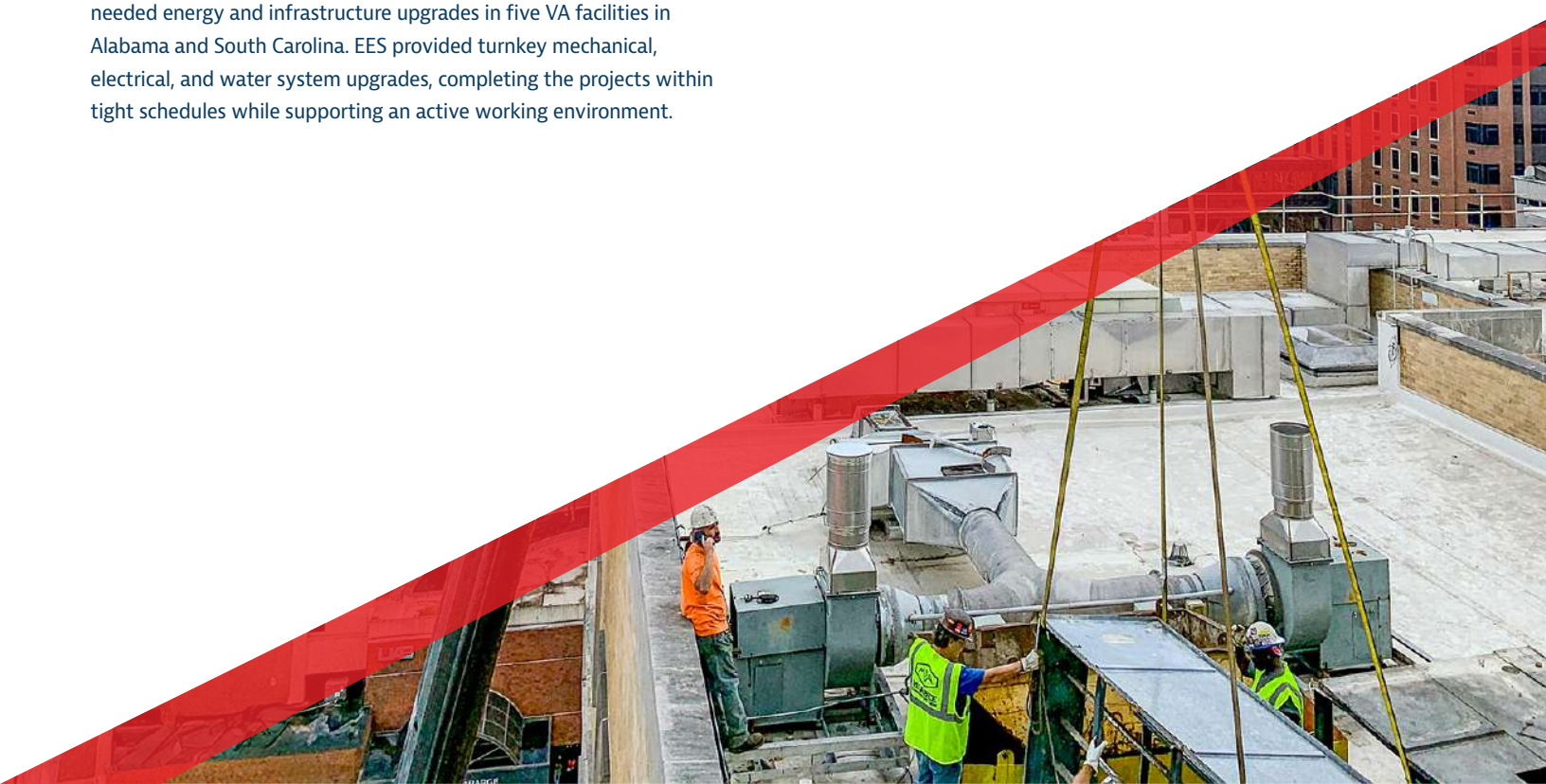
From primary care to mental health, The Veterans Integrated Service Network 7 (VISN 7) is part of America's most extensive integrated healthcare delivery system. These facilities ensure veterans receive comprehensive, specialized care tailored to their needs. These centers play a crucial role in offering a wide range of medical services and improving the overall health and well-being of veterans. Some VA network facilities have supported their community for over 80 years.

After decades of use, many hospitals and healthcare facilities need significant infrastructure investments. The Energy Savings Performance Contract (ESPC) approach allowed the VA to use energy and cost savings to fund the facility systems upgrades.

PowerSecure Energy Efficiency Services (EES) implemented the needed energy and infrastructure upgrades in five VA facilities in Alabama and South Carolina. EES provided turnkey mechanical, electrical, and water system upgrades, completing the projects within tight schedules while supporting an active working environment.



- Birmingham VA Medical Center, Birmingham, AL
- Central AL Veterans Health Care System – West Campus, Montgomery, AL
- Central AL Veterans Health Care System – East Campus, Tuskegee, AL
- Ralph H. Johnson VA Medical Center, Charleston, SC
- Wm. Jennings Bryan Dorn VA Medical Center, Columbia, SC



The Challenge of Aging

The VA facilities included in the ESPC program suffered from aging infrastructure, failed equipment, and high operating costs. Occupant comfort was becoming an issue in some non-patient areas, but the equipment required replacements and a significant investment of financial resources.

To minimize disruption in operations, PowerSecure needed to follow a tight installation schedule while coordinating with the operations requirements of the facilities.

HVAC and Mechanical System Upgrades

Each of these facilities presented unique challenges. PowerSecure crafted customized efficiency plans that met each facility's unique needs.

For Alabama facilities, The HVAC and mechanical systems received a variety of efficiency solutions, including:

- New, more efficient nozzle cups and variable-speed drives for fans to the renovated cooling tower.
- Upgraded controls system to provide full chilled water plant optimization, including temperature and pressure resets, and sequences to optimize equipment operation based on building load.
- Repaired chillers that used retired refrigerants with new high-efficiency models.
- Renovated piping and pumping systems for long-term performance improvements.
- New 1,000-ton variable-speed chiller and variable frequency drives for controlling primary and secondary pumping at the Birmingham site.
- Replacement of air handling systems, including four AHUs in Birmingham, two in Montgomery, and one in Tuskegee.
- Temporary heating and cooling equipment to protect patient care installed during the upgrade process.
- Replacement of ancillary equipment (exhaust fans, pumps, ductwork) for fully renovated systems.

New Electrical Transformers

- Existing transformers were replaced with new transformers to reduce energy losses by more than 75 percent compared to standard transformers. The new transformers improved the reliability of the hospitals' electrical systems.

Water Conservation

- Water conservation upgrades were also implemented across all five sites. These measures included replacing toilets, faucet aerators and showerheads with reduced flow fixtures.

Minimize Disruptions, Maximize Results

- PowerSecure executed the projects with remarkable efficiency, adhering to all schedule commitments. Critical replacements, like electrical transformers, were meticulously planned to minimize downtime and disruptions.

Patient Care For The Future

Most importantly, the reliability of the facilities and improved patient comfort allow for optimal care 24/7. PowerSecure's execution of comprehensive upgrades to the aging infrastructure of these VA facilities significantly enhanced the reliability of electrical systems, reduced maintenance costs, and created healthier environments for both employees and patients. By implementing energy-efficient HVAC and mechanical systems, new electrical transformers, and water conservation measures, PowerSecure ensured these facilities could continue to provide top-tier care to veterans. The meticulous planning and execution of these projects minimized disruptions, allowing for uninterrupted operations and improved patient comfort. This case study highlights the critical role of modernizing healthcare infrastructure to support the vital work of the Veterans Integrated Service Network 7 (VISN 7) and underscores PowerSecure's commitment to delivering premium service and reliable solutions.

To read more case studies and learn more about how PowerSecure can help your facility secure energy independence and maximize efficiency, visit us at:

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