



## Project Highlight

# Medical University of South Carolina, SC



## MUSC Reduces Annual CO<sub>2</sub> Emissions by 3,223 Tons with Energy Efficiency Measures

### Technology Type:

Comprehensive LED Lighting Retrofits | Energy Efficiency | Energy Savings Performance Contract | Guaranteed Energy Savings

### Facility Size

**3M** square feet  
(68 buildings)

### Energy Project Size

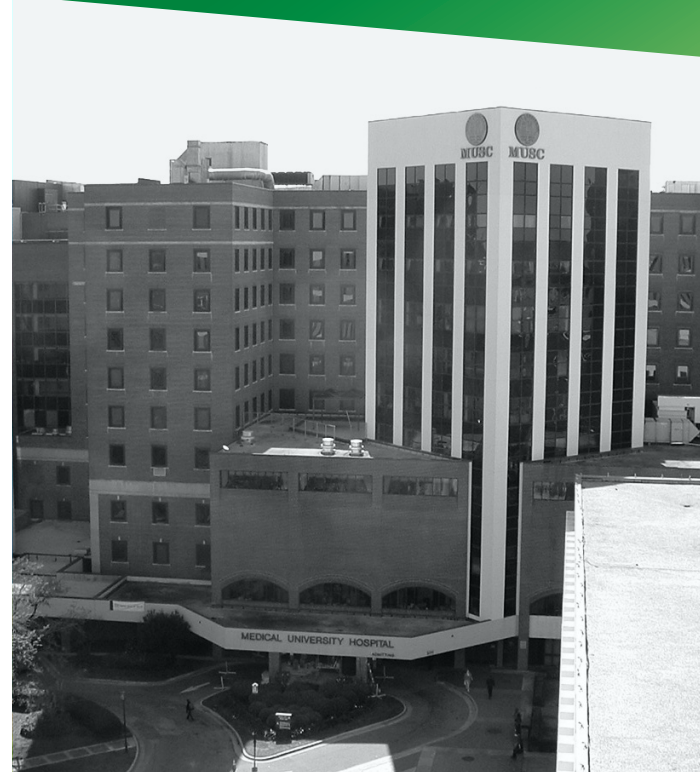
**\$43,000,000** Phase I: \$16 million  
Phase II: \$27 million

### Annual CO<sub>2</sub> Reduction

**3,223** tons

### Annual Energy Savings

**\$2,838,566** (Phase II)



### Summary

The Medical University of South Carolina (MUSC) partnered with Ameresco to provide much needed energy improvements and efficiency upgrades. Following a successful Phase I project, MUSC selected Ameresco to perform a second phase of upgrades. This multi-phase project allows the University to become an environmental leader with an eye toward sustainability.



## Solution

During Phase I Ameresco reviewed the major energy-consuming systems of the buildings to provide MUSC with a comprehensive project to enhance the campus' energy efficiency and improve the learning environment for students, faculty, and staff.

This included significant upgrades to the lighting system, which resulted in a high-quality visual solution for the energy project due to improved color rendering and consistency of lighting campus wide.

Building upon the financial and operational success of Phase I, the second phase of the project addresses capital deferred maintenance needs funded from guaranteed savings and further improve operational efficiency. Energy conservation measures installed throughout both project phases include:

### Phase I

- Replaced or retrofitted water fixtures
- Steam trap repair or replacement, replacement of old boiler controls and sensors
- Retrofitted existing fume hoods for efficiency
- Updated air handling units, distribution units, and chillers

### Phase II

- LED lighting upgrades
- Installation of building automation and control systems
- Chiller plant optimization with variable primary flow conversion



**This was MUSC's first performance contract experience, and we were concerned about the challenges we might face as the work progressed. I am pleased to report that Ameresco has done what they said they would do and more, and that the work has been accomplished on schedule and with minimal interruption to building occupants.**



John Malmrose  
Chief Facilities Officer, MUSC



## Benefits

Facing growing enrollment, diminished state budgets, and aging infrastructure, MUSC partnered with Ameresco on a multi-phase budget-neutral energy efficiency project that would improve the learning environment as well as both patient care and medical research facilities.

Through this Energy Savings Performance Contract (ESPC), Ameresco was able to increase the energy infrastructure capacity for the growing campus, improve reliability and control, improve air quality, and significantly cut energy and operational costs. Given the sensitivity of these facilities, Ameresco installed all the measures with little to no impact on day-to-day operations.

Phase II of the project improves facility operational efficiencies, preserves capital to address other campus improvement needs, and enhances the academic learning environment for its students and faculty.

- Annual reduction of 3,223 tons of CO<sub>2</sub>, equal to the planting of 59 acres of trees
- Upgrades to 68 buildings
- Building envelope improvements
- Decreased water consumption and energy costs

Ameresco's team of energy experts can assist you in identifying the solution that fits your needs.

For more information about Ameresco and our full-range of energy efficiency and renewable energy solutions, please call **1-866-AMERESCO** or visit **ameresco.com**.

