

## JOHNSTON COMMUNITY COLLEGE

One College. Endless Opportunities.



### THE CHALLENGE

Several campus buildings at Johnston Community College had aging control systems and mechanical equipment that had become difficult to maintain and control for campus staff. High existing energy usage intensity (81 kBtu per square foot) versus the national average for similar type facilities (59 kBtu per square foot) provides opportunity to reduce waste within the existing utility budget to fund these much needed capital improvements.

### THE SOLUTION

Piedmont Service Group completed an investment grade audit of Johnston Community College's facilities in 2017. The audit included analysis of existing utility consumption and cost, existing building condition surveys, and key parameter measurements used in energy models to evaluate potential savings.

Existing pneumatic controls were upgraded to DDC controls with capability for remote monitoring, fault detection and diagnostics through Piedmont Service Group's Building Sentinel analytics platform, and advanced sequences to reduce energy consumption. Chillers, boilers, and split systems for three buildings each have been replaced with new, higher efficiency equipment. Older air handling units in three buildings have been refurbished for more efficient operation and greater maintenance reliability. Variable frequency drives have been installed on multiple fan and pump motors to vary flow rates with demand to better control comfort and reduce energy consumption. Outside air duct work was also added to one air handling unit to provide economizer cooling when outdoor air conditions are favorable.

### COLLEGE FACTS

Founded 1964  
Approximately 2,000 students  
enrolled per semester

### BUILDING

12 campus buildings in project  
364,568 total square feet  
Buildings constructed between  
1976 and 2008

### CASE STUDY HIGHLIGHTS

Project Size: \$3.3 million  
Construction Period: 1 year  
Project Term: 16 years  
\$317,964 guaranteed savings Y1

Across the campus additional upgrades included the upgrading of existing campus lighting to LED as well as installing lighting occupancy controls. PSG implemented a time of use rate schedule for more favorable energy costs, recommissioned and upgraded water fixtures, installed vending misers and installed energy efficient transformers.

The partnership between Johnston Community College and Piedmont Service Group has the college on its path for energy efficiency and sustainability.



## ABOUT THE CLIENT

Johnston Community College (JCC) has awarded certificates, diplomas, and degrees since 1969 and is a member of the North Carolina community college system. JCC serves in excess of 13,000 students annually in its credit and non-credit programs. These programs include college transfer, occupational, technical and continuing education opportunities. JCC has several off site campuses in addition to the primary Smithfield campus. These sites include the Cleveland Center, which also received upgrades from the performance contract.

## HOW CAN WE HELP YOUR BUSINESS GROW?

Piedmont Service Group makes buildings more efficient. For 50 years and counting, Piedmont has been providing proven facility solutions to our customers. A leader in energy services Piedmont has expanded its core HVAC business to address the growing market demand for energy efficiency and sustainability services. The company is headquartered in Raleigh, NC and employs 300+ people across seven locations in North Carolina, South Carolina and Virginia. Piedmont was founded in 1971.

**Piedmont Service Group**  
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