



## Lighting and controls upgrades fund K-12 district goal to create more comfortable learning environments

When the school year kicks off each year in late summer, it's not unusual for temperatures in many parts of the country to soar into the 90s, which can make it difficult for students to concentrate and be productive.

"We knew a comfortable learning environment would support the success of our faculty and students," said Donna Whitley-Smith, Superintendent of Page County Public Schools. "We needed a solution at a time when funds were limited."

For decades, some second- and third-floor classrooms within the district, which sits in the shadow of Shenandoah National Park, went un-conditioned. And like many educational institutions whose budgets are stretched, Page County Public Schools struggled to fund the much-needed upgrades.

That changed in June of 2016, with the completion of a project made possible through an innovative financing strategy designed by Johnson Controls.

### No Capital Required: The Energy Savings Performance Contract Option

The local Johnson Controls team developed a plan to fund the improvements through an energy savings performance contract. Under the contract, Johnson Controls guaranteed that, by making a series of upgrades to lighting and building controls across the district, Page County Public Schools would generate enough operational and utility savings to pay for upgrades and offset the cost of air conditioning the un-cooled classrooms.

### Project AT-A-GLANCE:

Location:  
Page County Schools  
Luray, Virginia

Enrollment:  
3,377 Students

Project Cost:  
\$7.5M

Guaranteed Savings:  
\$10.2M over 15 years



"The guaranteed savings is a great way to fund facility improvements, especially when budgets are tight," said Whit Blake, Johnson Controls account executive. "In many cases, it's the only way these kinds of projects can get done."

### Bottom Line Savings: \$10.2 million

The \$7.5M project is guaranteed to save Page County Public Schools \$10.2 million over 15 years, and included:

- A full LED lighting retrofit across eight district schools, guaranteed to save the district \$193,000 annually
- *Metasys*® Building Automation Systems installed to control and monitor critical energy systems, saving the district \$149,585 annually
- New HVAC systems to condition the air in previously un-cooled classrooms
- Replacement of outdated boiler and rooftop units



With *Metasys* installed across the district, the facilities staff now has 24/7 access to schedules, trending data and alarms to help them identify issues and prioritize responses. The system also makes it easier for the team to measure the impact of their actions and provide reports to ensure that goals are being met and results are delivered.

The addition of *Metasys* also gives Page County Public Schools its first opportunity to take advantage of demand response energy management programs to generate even greater savings.

"When you participate in a demand response energy management program, the local utility will pay you for curtailing energy use during time of peak demand or high electricity prices," said Blake. "*Metasys* has built-in programming that allows facility managers to do that with the push of a button."

So far, the combined improvements are delivering energy and operational savings beyond what was guaranteed.

"Our performance contract with Johnson Controls has been a 'win-win,'" said Whitley-Smith. "We upgraded our facilities and protected our future budget through long-term energy savings."



### Beyond the Measurable Benefits

In addition to helping Page County Public Schools stretch taxpayer dollars and create more comfortable learning environments, the project itself has created a new learning opportunity.

Through a web-based energy dashboard, students, teachers and Luray residents can access real-time information about the energy use and energy savings across the district, and the environmental impact on their community.

Contact us to learn more: 877-976-9593  
[www.johnsoncontrols.com](http://www.johnsoncontrols.com)