

IMPROVING THE LEARNING CURVE IT'S IN THE AIR

A Michigan-based public school enlists Honeywell to transform school district infrastructure so that both students and faculty can breathe easier with improved energy efficiencies and cost savings

Case Study

Shelby High School

**TIM REEVES,
SUPERINTENDENT OF
SHELBY PUBLIC SCHOOLS:**

“In the end, these upgrades will create better educational environments for our students and teachers. With these upgrades, our classrooms and learning spaces are better suited for teaching and learning.”

Honeywell

Located in Western Michigan, Shelby Public Schools serves 1,400+ students. When the district sought to improve aging infrastructure systems, cut energy costs and improve air flow across its four buildings, it was faced with increased pressure on capital expenditures and overall lack of funding. To make these necessary changes without shouldering the full expense of upgrades, the district pursued an Energy Savings Performance Contract (ESPC). In the end, Honeywell devised a plan to save the school district millions in utility costs – and help them breathe easier – for years to come.

THE NEEDS

After conducting its own audit of building and infrastructure needs, Shelby Public Schools determined that millions of dollars' worth of energy-efficient infrastructure upgrades would be necessary to not only help their district address their immediate needs across facilities, but to also help sell a critical future bond issue to tax payers.

Necessary infrastructure improvements that the school district identified included upgrades to HVAC systems, boilers, chillers, lighting, building controls and more.

Shelby Public School superintendent Tim Reeves began looking for creative financial solutions to help solve these problems with a long-term partner he could trust. This was when the district turned to Honeywell as their Energy Service Company (ESCO) of choice in order to help carry out these upgrades across their facilities, meet energy conservation demands, and improve the overall environment for students and faculty with occupant comfort front of mind.

THE SOLUTION

Honeywell conducted an investment-grade audit of the districts' facilities and determined that intelligent building management technologies, including LED lighting, smart occupancy sensors, advanced building controls and more, could help Shelby Public Schools revamp its aging infrastructure systems – all while driving greater energy and operational efficiencies.

Honeywell devised a plan under the ESPC to implement smart occupancy sensors to control lighting and heating, ventilation and energy-efficient air conditioning equipment. Most importantly, boilers and chillers will be replaced throughout the district's school buildings in order to better regulate temperature. These upgrades also include CO2 sensors, which are expected to improve building air quality across the district and foster a more comfortable and productive atmosphere for students and faculty. Honeywell will lead other projects under the contract, including upgrading water conservation technologies and replacing the Middle School gymnasium roof before painting the interior.

THE BENEFITS

- Honeywell's upgrade plan will help the district reduce its utility costs by approximately 50% and generate over \$2.75 million in savings over the course of 15 years.
- The district will also receive over \$100,000 in utility company rebates.
- Under the ESPC, all projects are funded by the resulting annual energy and operational savings, which are also guaranteed by Honeywell – eliminating the need for any upfront investment by Shelby Public Schools.
- Upgraded boilers and chillers with CO2 sensors will help better regulate temperature and improve overall air quality and flow throughout the buildings. In turn, this creates a more comfortable and productive learning environment for both students and faculty.
- Updated Energy Management System (EMS) will collect data from newly installed IoT sensors on connected devices around the building, in order to more accurately control systems for comfort and efficiency.
- Installed LED Lighting solutions will drive greater energy savings and will help keep occupied rooms well-lit and comfortable.
- Domestic Hot Water Heater Replacement will provide improved efficiency and help with the district's water conservation efforts.

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