



Energy Efficiency PROGRAM

Illinois School District Rockets to Energy Savings



In 2012, when the West Washington County School District opened its new K-12 school in Okawville, Illinois, it did so with a nod to the past: a lovingly restored 1950s-era gymnasium, where generations of “Rockets” athletes have chased victory.

“It has a beautiful wooden ceiling and trellises — it’s just gorgeous. They don’t build them like that anymore,” says Keith Senior, District Superintendent. “We’re kind of a unique story because we built our building around this historic gym. Outside of the gym, the building is very modern and very efficient. We have LED lights everywhere.”

And LEDs are just the start. Working with the school board, Senior is continuously seeking energy savings throughout the 37,000-square-foot building.

“We try to be as efficient as we can,” he affirms. “We are always asking, ‘How can we save taxpayer dollars?’”

An easy answer to that question can be found in the Ameren Illinois Energy Efficiency Program.

“Our Program offers resources and financial incentives to help customers conserve energy, manage costs and improve comfort,” explains Larry Erwin, Energy Advisor. “With public-sector incentives that cover up to 80% of project costs, our Program makes it economically viable to pursue projects that would otherwise be beyond reach.”

A Green Light for LEDs

That was the case with the school’s first energy efficiency project in 2018: updating outdated lighting with LEDs. But first, the board required some convincing.

“Initially, it was a hard sell because the building was only about 10 years old. But things get outdated faster than they used to,” Senior notes. “Once I did the math for them, they could see the huge difference it would make to reduce electricity use from 120 watts to 30 watts per fixture.”

From the classrooms to the parking lot to that historic gymnasium, the school district went on to replace hundreds of fluorescent bulbs with high-efficiency LED lighting — at a fraction of the cost. In some cases, the district paid just \$1 for bulbs normally priced \$5 to \$9, thanks to deep discounts from the Ameren Illinois Energy Efficiency Program. The Program also provided a \$30,000 grant to help cover the cost of replacing outdated T5 lighting in two of the school’s gyms.

LED lights can reduce energy use by up to 44% compared to traditional lighting options.* And their long life translates to far less maintenance.

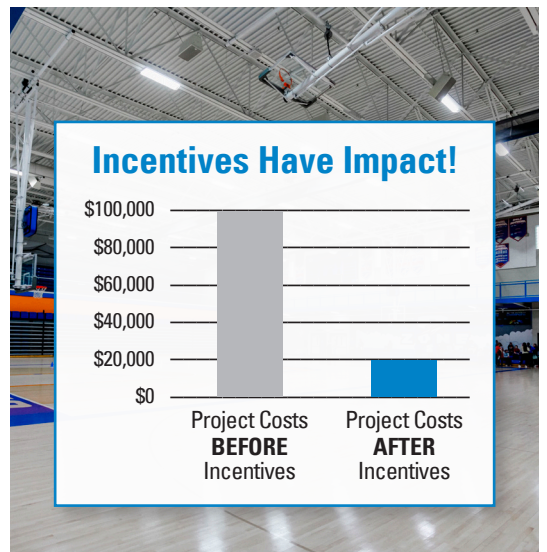
“Our maintenance staff spent a lot of time replacing burned-out lights — outdoors and in the classrooms,” recalls Senior. “Our new LED lights have a 10-year warranty. It’s awesome to know we won’t have to touch them for 10 more years.”

To take energy savings to the next level, the school district then installed a networked lighting control (NLC) system. An NLC system can cut an organization’s lighting energy costs in half — and funds from the Ameren Illinois Energy Efficiency Program covered 80% of their project costs.

Grade-A Savings

Ameren Illinois can help educational facilities — including universities, community colleges and K-12 schools — cut energy costs and improve learning environments. Financial incentives are available for a variety of energy efficiency projects, including:

- No-cost/low-cost energy efficiency improvements
- Lighting upgrades
- Heating and cooling system improvements
- Commercial kitchen equipment upgrades
- LED exit signs and vending controls
- Motor upgrades
- Steam system improvements
- Custom projects



*Source: Center for Sustainable Systems, University of Michigan, 2023

NLC systems use a combination of sensors, network interfaces and controllers to control lighting in specific areas. For example: motion and occupancy sensors automatically turn lights on or off when someone enters or leaves a room; timers turn off lights at pre-set times, and photo sensors prevent outdoor lights from operating during daylight hours.

“Just the other day, I was out of town on a holiday and couldn’t get to the school to turn the lights off,” notes Senior. “Now I can control all of our lighting from my phone.”

Sealing in Savings

Following these successful lighting projects, the school district set its sights on further building improvements. Students, staff and visitors were no strangers to spotty heating, and gaps in the building envelope were impacting their comfort — and energy costs as well.

As part of a pilot program in fall 2023, the Ameren Illinois Energy Efficiency Program provided weatherization assistance to seal the gaps around doors and windows, keeping warm air in the building during winter — and unwanted pests outside.

Prior to the weatherization project, “you could actually see light under the doors and feel cold air coming in, so this was a huge project for us,” explains Senior. “With the work they did, we began seeing benefits immediately.”

Weatherization measures such as caulking, sealant and insulation deliver a big bang for relatively few bucks. Still, the school remained in dire need of a new HVAC control system — a much more costly prospect.

Gaining Greater Control

At a cost of roughly \$228,000, the prospect of replacing the school’s inefficient HVAC control system was daunting. But in the end — thanks to utility incentives and other funding — the school district only paid \$35,000 out of pocket on the massive project.

Today, students and staff enjoy far greater comfort, thanks to a state-of-the-art HVAC control system. Staff can now precisely control and program temperatures in different areas throughout the building based on the school day and event calendar.

“Our new system ensures that HVAC is running only when it needs to be, so our electricity and natural gas use is going down. And the weatherization program helped out tremendously. If we hadn’t taken these steps, our power bill might be double what it is,” says Senior. “It was very clear to the board that our money was very well spent on this project.”

The school district also took advantage of a Custom incentive from the Ameren Illinois Energy Efficiency Program that covered 50% of the cost to replace its pulse boilers, which were beginning to break down. Compact and fuel-efficient, the new system operates three small boilers in rotation to minimize wear and tear. Unlike conventional boiler systems that operate at full speed regardless of need, the school’s new, on-demand boiler system operates only when needed. And that translates to significant energy savings.



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— Keith Senior, Superintendent,
West Washington County School District

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“In an era of budget cuts, we’re proud to help educational institutions get the most bang for their energy buck.”

— Nicholas Crowder, Manager,
Ameren Illinois Energy Efficiency Program

Beyond the Bottom Line

Energy-efficient equipment plays a key role in containing energy costs, which helps to conserve operations and maintenance funds. That savings can then be re-invested in other building improvement projects.

But the benefits of energy efficiency go well beyond the bottom line.

Okawville’s bright, well-lit parking lots feel safer these days. Those flickering fluorescent lights are a thing of the past, and the new LED lights are virtually maintenance-free. The convenience of network-based systems allow maintenance personnel to precisely control lighting, heating and cooling based on occupancy. And with no more drafty classrooms, students and teachers are better able to focus on the task at hand: learning.

An “A” for Efficiency

It pays to become a student of energy efficiency, as the West Washington County School District has learned — and the Ameren Illinois Energy Efficiency Program can help.

“What the West Washington County School District has accomplished in just a few years is remarkable,” says Nicholas Crowder, Manager, Ameren Illinois Energy Efficiency Program. “In an era of budget cuts, we’re proud to help educational institutions get the most bang for their energy buck.”

“Most of the school’s energy efficiency projects would not have been possible without incentives from the Ameren Illinois Energy Efficiency Program. If school administrators are not working with Ameren Illinois to become more efficient, they’re throwing money away,” says Senior. “Every time they come and touch something, we save money.”