Finding a Financial Cure for Deferred Maintenance

After years of putting off maintenance, facility managers must establish a strategic facility maintenance approach.

By Tammy Fulop

The 2008 recession hit the nation's K–12 schools particularly hard, leaving many to grapple with increased enrollments, tax-weary voters, and debt caps. Now that the economy is bouncing back, schools are trying to catch up on maintenance projects large and small that had slipped off the priority list. At the same time, with enrollment projected to increase nationwide through 2019, many schools must plan for the future.

The lack of money, time, and expertise has caused many schools to put off critical infrastructure projects, creating an extensive deferred maintenance backlog that becomes more difficult to tackle with each passing fiscal year.

The True Cost of Deferred Maintenance

Building maintenance costs can far surpass initial construction expenses. For example, a $10 million building requires a $40 million budget to pay for the cost of maintenance and utilities over its life cycle. Consequently, facility managers must establish a strategic facility maintenance approach to make the most of their initial building investments and to create an environment where students can thrive for generations.

However, school facility managers are all too familiar with the vicious cycle of funding challenges that lead to cuts in facility operation and energy budgets. Tight budgets mean many districts don't have the financial

resources to address ongoing facility management. By delaying maintenance, districts are actually reducing the overall life of their buildings and increasing operating costs.

Delayed maintenance also creates unplanned budget spikes when a deferred maintenance item suddenly becomes an emergency, such as when a boiler blows. Even then, some schools are so financially strapped or indebted, they can't act. That's a risk that today's schools can't afford to take.

So how can schools dig out from under a mountain of deferred maintenance and establish a facility management plan? Many have discovered an alternative funding mechanism that opens up a whole new set of opportunities for them.

The Energy Savings Performance Contract

When it comes to funding infrastructure improvements, school business officials tend to think in the same general terms: capital funds or general obligation bonds. Many don't realize that they can use savings from energy conservation improvements along with other financing options to create a budget-neutral solution to fund infrastructure and maintenance projects. Known as an energy savings performance contract (ESPC), this option allows schools to make significant facility improvements without tapping into annual budgets.

What's more, these financing mechanisms don't cover just energy and infrastructure improvements. Some schools have used their ESPCs to fund safety and security improvements, technology and communication upgrades, building envelope repairs, and even public engagement initiatives. They also free up the school's tax-based borrowing capacity for other priorities, such as major construction projects.

Energy partnership projects also create economic benefits for their communities by saving millions of dollars while creating new jobs and bringing in additional state and local taxes. These projects also help protect the environment, with effects equivalent to taking thousands of cars off the road or planting thousands of acres of trees.

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Often, the key to addressing deferred maintenance successfully is partnering with an energy service company (ESCO) that has the expertise to navigate the complicated processes of securing financing and managing engineers, contractors, and subcontractors. ESCOs work with school districts to develop a diverse funding package that secures the most money for the energy improvement plan at the lowest cost possible.

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Transformation through Energy Efficiency

Located 10 miles east of Los Angeles, Hacienda La Puente Unified School District (HLPUSD) enrolls 22,000 K–12 students in 32 schools. HLPUSD knew interior and exterior lighting needed to be updated at all the district's schools—some of which were built in the 1950s and 1960s. Outdated heating, ventilating, and air-conditioning (HVAC), systems and controls also needed replacing because of problems with regulating classroom temperatures. Like many school districts, HLPUSD had deferred maintenance issues because of a lack of funds.

Luckily, California schools got a much-needed windfall in 2013 with Proposition 39, which made $550 million available annually to improve schools' energy efficiency and expand clean energy programs (www.energy.ca.gov/efficiency/proposition39). Among the more than 1,000 school districts in California, HLPUSD was one of the first large districts to receive an approved Prop 39 plan, which included approval of $5 million to pay for critical infrastructure improvements that will make a noticeable difference to the learning environment for students.

In conjunction with its Prop 39 funds, HLPUSD used its ESPC to address its most pressing energy-efficiency problems. The project featured a district-wide lighting retrofit with new interior T8 lighting at six sites, including the district's four high schools, the district office, and the adult education school, as well as new interior and exterior LED lighting at eight middle schools,

multiple gymnasiums, and the Dibble Adult Education campus. The lighting work will not only improve visibility and save energy, it will also streamline maintenance efforts because of long-life bulbs.

In addition, two of the district's comprehensive high schools received a new building automation system to better control their HVAC equipment, improve comfort levels, and ease maintenance issues. Moreover, the district will implement new power management software that shuts down the district's computers and networked devices when not in use.

Going forward, HLPUSD expects to save more than $800,000 annually in energy and maintenance costs resulting from the installation of the lighting retrofits and new building automation system. The district will realize a staggering 38% electricity savings at four of its sites, while stimulating the local job market through a project labor agreement with the International Brotherhood of Electrical Workers. The complete project will have a significant environmental impact on the community, providing energy-efficiency savings equal to removing 2,640 tons of carbon dioxide from the atmosphere.

Energy-Efficiency Overhaul

The Limestone County School District in Athens, Alabama, faced similar challenges. Its facilities were in dire need of improvements—some of which had been delayed for over a decade. Antiquated buildings were plagued with drafty windows, noisy air conditioners, inefficient lighting, and outdated technology, creating an uncomfortable and less-than-ideal learning environment for students.

The district partnered with an ESCO to modernize its entire school system by leveraging energy and operational savings to complete one of the largest school district renovations in the state. The project included automating control of more than 800 pieces of HVAC equipment, allowing the school to be more responsive to the needs of teachers and students.

The district standardized energy-efficient lightbulbs, installing 53,000 new fixtures that brighten the learning environment, while also saving money and time on maintenance. Additionally, upgraded faucets save 4.5 million gallons of water at each school per year, enough to fill over 270 swimming pools. What's more, upgraded communications systems, including phone and PA system updates, improve safety in an emergency for everyone across the district.

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As a result, the Limestone County School District has reduced its utility spending by 22%, saving $500,000 annually. More important, it has created a 21st-century school district where students can focus and learn for generations to come.

Sustainability Role Models

Communities across the nation can learn from the environmental and economic successes that HLPUSD and the Limestone County School District have achieved through their ability to think outside the box and leverage energy-efficiency projects and associated energy cost savings to fund improvements. In the end, ESPCs allow schools to tackle energy and infrastructure improvement projects that they would never have dreamed possible—and finally cure the plague of deferred maintenance.

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