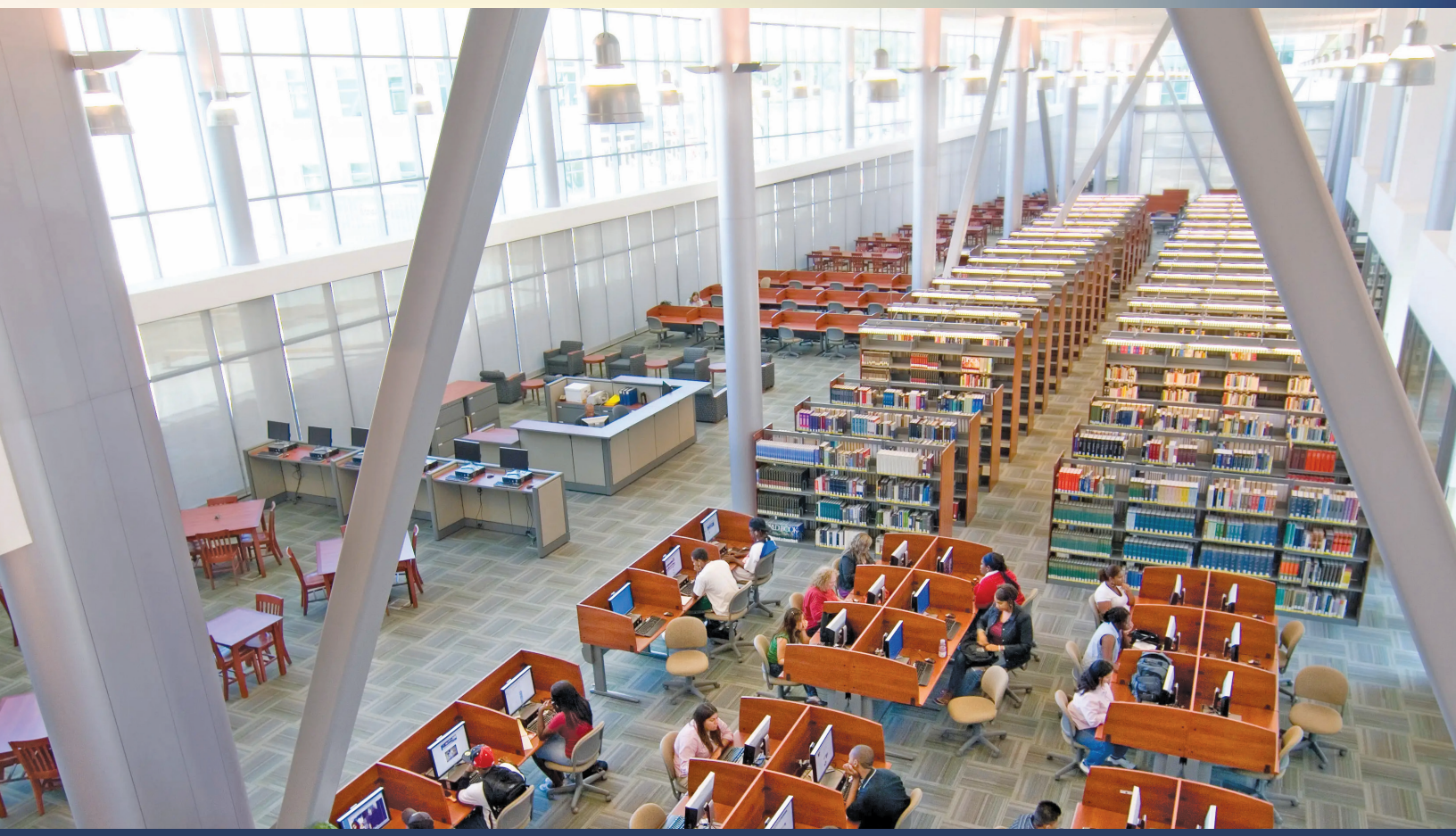
OPTERRA
ENERGY SERVICES



Practical Energy Strategies for Public-Serving Higher Education

A leadership guide to stabilizing costs, modernizing facilities, and protecting instruction.

Every higher education leader faces the same question:

How do we modernize aging infrastructure when every dollar is already committed?

Today, colleges and universities across the country are confronting a growing gap between the condition of their facilities and the capital available to maintain them. Aging systems, rising energy costs, and deferred maintenance are placing increasing pressure on operating budgets, often forcing difficult trade-offs between infrastructure needs and academic priorities.

This guide introduces a proven five-step framework institutions can use to regain control of energy and facilities spending.

By capturing operational savings, improving asset performance, and strategically funding modernization, institutions can reduce risk, stabilize costs, and reinvest recurring savings back into their core mission, without relying on new capital.

01

Targeted Efficiency: Capture Fast Savings

The most effective energy strategies begin with actions that deliver immediate relief. Lighting upgrades, controls, and targeted efficiency measures reduce utility costs quickly while improving safety, comfort, and visibility across campus.

These projects are typically fast to deploy and can often be completed after hours or during academic breaks, minimizing disruption to instruction.

Beyond near-term savings, early efficiency projects help establish momentum. They demonstrate fiscal responsibility, generate measurable results, and build confidence among stakeholders who may be wary of larger capital initiatives. In many cases, these early wins create the operating margin that enables more comprehensive modernization later.

Leadership Takeaway:
Quick, low-disruption efficiency projects deliver immediate savings and create momentum for broader modernization. When implemented within a clear long-term plan, leaders can prove value early while laying the foundation for more transformative infrastructure investments.

01

CASE IN POINT: GEORGETOWN UNIVERSITY

Located in Washington, D.C., Georgetown University implemented a series of lighting audits and energy efficiency upgrades across campus facilities, deliberately coordinated around academic calendars to avoid disruption to classes, research, and campus operations. The work was executed as part of a broader, long-term infrastructure partnership focused on improving system performance, reliability, and energy outcomes across a complex, historic campus environment.

↓ 35%
reduction across campus utility systems in energy use intensity expected by 2031

123+ million
kWh of electricity supported annually by upgraded utility systems

02

Re-commissioning: Get More Value

Before replacing major systems, many institutions can unlock significant value by restoring existing equipment to optimal performance. Re-commissioning HVAC systems, optimizing controls, and correcting long-standing inefficiencies often yield meaningful savings with relatively modest investment.

For campuses operating with lean facilities teams, these improvements reduce emergency repairs, improve occupant comfort, and extend the useful life of aging assets. Re-commissioning also provides critical insight into which systems can continue operating reliably and which require replacement planning.

With optimization at the outset, institutions can make more informed capital decisions and avoid premature or oversized investments.

Leadership Takeaway:

Optimizing existing systems stabilizes operations, reduces risk, and buys time for thoughtful replacement planning. Leaders can direct capital toward the highest-value investments, rather than reacting to failures or replacing assets prematurely.

02

WORKFORCE SUPPORT & STEM CURRICULUM: HARTNELL COLLEGE

At Hartnell College, campus energy upgrades were intentionally aligned with workforce and STEM programs. Across four phases of improvements totaling $26 million in expected savings, students gained hands-on experience through internships, job shadowing, and applied learning tied directly to real infrastructure projects.

The Result:

Renewable energy production and efficient energy management became living laboratories that support both campus operations and student career pathways.

03

Data: Prevent Failures Before They Happen

Without visibility, facilities teams are forced into reactive maintenance. Energy and asset monitoring platforms provide early warning of system degradation, reveal hidden inefficiencies, and support data-driven planning.

This shift from reactive to proactive management reduces downtime, avoids costly emergency repairs, and improves budgeting accuracy.

Data also plays a critical governance role. Clear performance metrics help align facilities, finance, and leadership teams around shared priorities, enabling confident decision-making and transparent reporting to boards and stakeholders.

Leadership Takeaway:
Data transforms facilities from a recurring risk into a managed, predictable asset. With clear visibility into system performance, leaders can anticipate issues earlier, prioritize investments with confidence, and shift from crisis response to disciplined, long-term planning.

03

CASE IN POINT: EASTERN MICHIGAN UNIVERSITY

Eastern Michigan University leveraged continuous energy monitoring and targeted cogeneration upgrades to improve central plant performance, reduce unplanned maintenance, and drive measurable operating savings across campus infrastructure.

↑15%
improvement in central plant efficiency

$2.8 million
in annual energy cost savings

Cogeneration modernization
supporting local job creation and hands-on student training

04

Modernize & Replace: Right-Size Systems

The challenge is not whether to replace aging equipment, but how to do so responsibly. Planned modernization allows institutions to right-size systems, improve efficiency, and sequence work to minimize disruption.

When approached strategically, replacement becomes an opportunity to improve reliability, reduce long-term operating costs, and regain control over campus infrastructure. A phased, performance-based approach enables campuses to address the most critical needs first while maintaining flexibility for future improvements.

Where appropriate, solar and energy storage can complement equipment modernization by reducing system loads, improving resilience for critical facilities, and stabilizing utility costs, strengthening the overall business case without displacing core infrastructure priorities.

Leadership Takeaway:

Proactive equipment replacement protects instruction, improves reliability, and stabilizes long-term operating costs. When aligned with a phased, performance-based plan, modernization decisions shift from reactive spending to deliberate investments that support long-term campus resilience.

04

CASE IN POINT: LOS ANGELES COMMUNITY COLLEGE DISTRICT

OPTERRA's long-standing partnership with the Los Angeles Community College District began with a $158 million renewable and energy modernization strategy delivered through a coordinated, district-wide rollout involving multiple implementation providers across campuses. Years later, OPTERRA remains the trusted partner, helping the district navigate a growing industry reality: aging solar systems, fragmented installation histories, and assets that require renewed support as original providers are no longer actively servicing long-term operations.

The Result:

A district-wide energy strategy that continues delivering savings, resilience, and operational continuity, backed by long-term lifecycle stewardship as systems age and service needs evolve.

05

Finance Improvements Strategically

Whether institutions are planning for efficiency, reliability, or long-term modernization, upgrading infrastructure doesn't have to compete with academic priorities or strain limited capital budgets.

Performance contracting enables colleges and universities to implement critical energy and facilities improvements without issuing new bonds or reallocating scarce capital. Project costs are repaid through guaranteed energy savings, aligning financial responsibility directly with operational performance.

This structure shifts risk away from the institution. Savings are contractually guaranteed, providing predictable outcomes and long-term accountability while simplifying approvals and stakeholder alignment. Rather than focusing on upfront costs, leadership teams can evaluate projects based on lifecycle value, reliability, and financial impact, creating a clearer path forward for essential upgrades.

Leadership Takeaway:
Guaranteed savings shift infrastructure investment from a capital burden to a managed financial strategy, enabling institutions to modernize facilities while protecting academic priorities.

05

A Practical Path Forward

With a phased, performance-based approach, institutions can fund infrastructure modernization through guaranteed savings, protecting academic priorities while building long-term resilience.

Schedule a short conversation with an OPTERRA advisor to identify immediate savings opportunities, explore flexible funding strategies, and build the practical path forward for your institution.

go.opterraenergy.com/highereducation

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ABOUT OPTERRA

For more than 50 years, OPTERRA Energy Services has partnered with public-serving higher education institutions to modernize complex facilities, control operating costs, and reduce institutional risk. As one of the nation's longest-standing NAESCO-accredited energy services providers, OPTERRA delivers turnkey performance contracting solutions that provide guaranteed savings, operational reliability, and measurable outcomes. From campus-wide efficiency and central plant modernization to solar, storage, and resilient energy solutions, OPTERRA's integrated design-build and long-term O&M teams deliver projects with minimal disruption while strengthening institutional resilience, leadership credibility, and long-term financial stewardship.

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