

UNITED STATES

New University Partnerships for Energy and Water – “Earning Some Green” by Going Green



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Excerpted with permission from the Forbes article “As Ohio Goes, So Goes The Nation – From Ohio to Iowa to Idaho, New University Partnerships Bolster Finances and Sustainability”. The full article may be found [here](#).

Colleges and universities are turning to public-private partnerships (P3s) to upgrade campus energy systems, bolstering schools’ financial and environmental resilience. Higher education institutions face pressures to stabilize budgets, boost endowments, and optimize facilities usage. Many public universities also face shrinking state financial support, aging infrastructure, and projected declines in enrollment due to changing demographics. The COVID-19 pandemic has exacerbated these challenges. In response, some universities are trying creative ways to unlock the value embedded in their existing utility systems and enlisting private partners to make their physical operations and energy use more sustainable and efficient.

THE “BIG TEN” MODEL

The latest public university to embrace this emerging P3 trend is the University of Idaho, which on November 2, 2020 announced a 50-year concession with a private company to take over the university’s centralized district energy system. The new concession shows how budget-strapped universities and colleges can optimize critical utility systems and access significant funds for endowments and other purposes without incurring new debt or losing control of capital improvement programs.



Idaho is adopting the P3 model successfully implemented by two other Big Ten schools: the University of Iowa, which transferred its utility plant to a private concessionaire on March 11, 2020, and The Ohio State University, which created the P3 template and launched its concession on July 6, 2017, having previously used a P3 for its parking operations. In each of these cases, the concession contract was awarded after a transparent competitive bid process, and the jobs of existing university employees working on the utility plant were protected.

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UNLOCKING ECONOMIC VALUE, INVESTING IN SUSTAINABILITY

Even before the COVID-19 pandemic, rising costs and declining levels of state support have pinched the budgets of major public universities. Raising funds for top faculty, innovative research centers, student programs, and financial aid has become more critical than ever. It is harder to find donors wanting to carve their name on a new power plant or steam tunnel. This situation makes it challenging for colleges and universities to fund capital improvements to campus systems that are essential to academic operations, medical centers and laboratories. The first driver for schools like Idaho, Iowa and Ohio State is economic. Through these P3 concessions, the universities have been able to monetize existing non-core assets, creating new funds for endowments and special programs, while shifting operating risks to private partners who bring expertise and access to long-term capital to fund needed improvements.

In effect, the universities have converted illiquid, depreciating physical assets into pools of investable capital that should appreciate in value, creating an income stream for decades. In exchange, the universities agree to make regular payments, consisting of a minimum fixed fee plus variable cost recovery, to the concessionaire providing the energy

services and upgrading the facilities. The capital improvement plans are reviewed regularly by all parties to ensure alignment with evolving university needs, system capacity and efficiency, and affordability.

RISK TRANSFER & PERFORMANCE INCENTIVES

Risk transfer is another goal of these P3 arrangements. The universities retain ownership of the physical assets but, through a long-term lease, transfer rights and responsibilities for maintaining and operating the systems to the private concession company. The concession contracts create accountability by requiring the private concessionaire to meet stringent performance standards for reliability, efficiency and sustainability. The performance standards require the concessionaire to operate and maintain the utility system to at least the same standards as the university previously achieved. In addition, the concessionaire must meet key performance indicators (KPIs), which are negotiated as part of the concession, covering specific quantitative metrics, such as unplanned outages, emergency response times, energy use intensity, and smart meter deployment.

PROSPECTS FOR INNOVATION

In long-term concessions, the parties have to balance predictability of cash flows with the need for flexibility. Experimental technology may be discouraged if the question is “*does the system work?*”. But innovative solutions should be encouraged under P3 concessions to address “*how well does the system work?*”

By incentivizing the concessionaire economically to innovate, to adapt and adopt new ideas learned from other projects, and to experiment with possibly better solutions, P3 concession agreements can spur improvements in efficiency, operational flexibility and cost reduction that can be shared between the schools and the private operators. Both partners gain from improvements that might not be tried under a more conservative contractual risk allocation framework like those implemented so far.

Technical innovation is less welcome to the extent that continuity of service is placed at risk. Universities, especially those with hospitals or sensitive laboratory experiments, demand reliable utility services so that their academic buildings and medical centers can operate without interruption. Indeed, increased resilience and reliability are key goals of public infrastructure projects, beyond efficiency, life-cycle cost optimization, and sustainability.

Likewise, private sector partners depend on their projects operating without unplanned interruptions in service or technical surprises. These P3 projects can obtain long-term debt financing at a low cost – boosting equity investors’ returns through leverage while keeping costs to the university host low – only because the risks of penalties, default or termination under the concession agreements are extremely low.

THE ONLY CONSTANT IS CHANGE

The future creates opportunities for innovation in contracting models, technology and energy management systems as schools adapt to changing circumstances. It remains to be seen how economic cycles, state and national politics, the COVID-19 pandemic and its aftermath, and demographic trends will affect university utility systems and patterns of energy usage.

P3 structures may be an important part of the solution. More schools will likely copy the utility-style, cost-recovery models used to date by the Big Ten schools. Other schools, including well-endowed private colleges and universities, may experiment with alternative contractual structures that transfer more flexibility to P3 concessionaires in lieu of upfront payments, incentivizing innovation and risk sharing to improve utility systems’ performance and to reduce energy usage more aggressively.

In the short term, restrictions limiting classes and other on-campus activities during the 2020 pandemic have enabled schools to reduce operating costs and cut energy usage. Enrollments and funding may be jeopardized, however, by a longer

economic recovery. Over time, it is possible that schools will reconfigure space on campus to accommodate different activity patterns, whether in classrooms, laboratories, dining and residence halls, or athletic and arts facilities. Increased physical distance in classrooms and improved HVAC and air filtration systems may require greater capital expenditures, further stressing school budgets.

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Demands for power, cooling and connectivity may increase with the additional digital infrastructure needed for online education, cloud computing, wireless networks and advanced telecommunications. Shifting climate patterns may increase demands for heating and cooling or tools to deal with extreme weather. Technological improvements (including adaptive building systems, thermal design, energy storage, microgrids, and smart energy management systems and software) may facilitate operational efficiencies and cost reductions and may make intermittent renewable energy sources like wind and solar power more available at times of peak demand and more affordable.

There are ample opportunities to reimagine how P3 collaboration between universities and private partners can make schools more robust and stimulate research and development, with schools serving as both research centers and test beds for innovation by engineers, designers, financial investors and commercial parties alike. The key is to align interests around shared goals with a clear and fair allocation of risks and rewards.