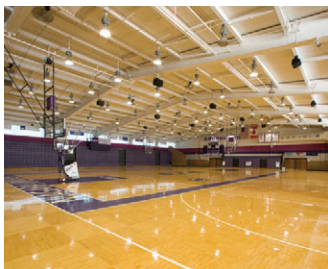


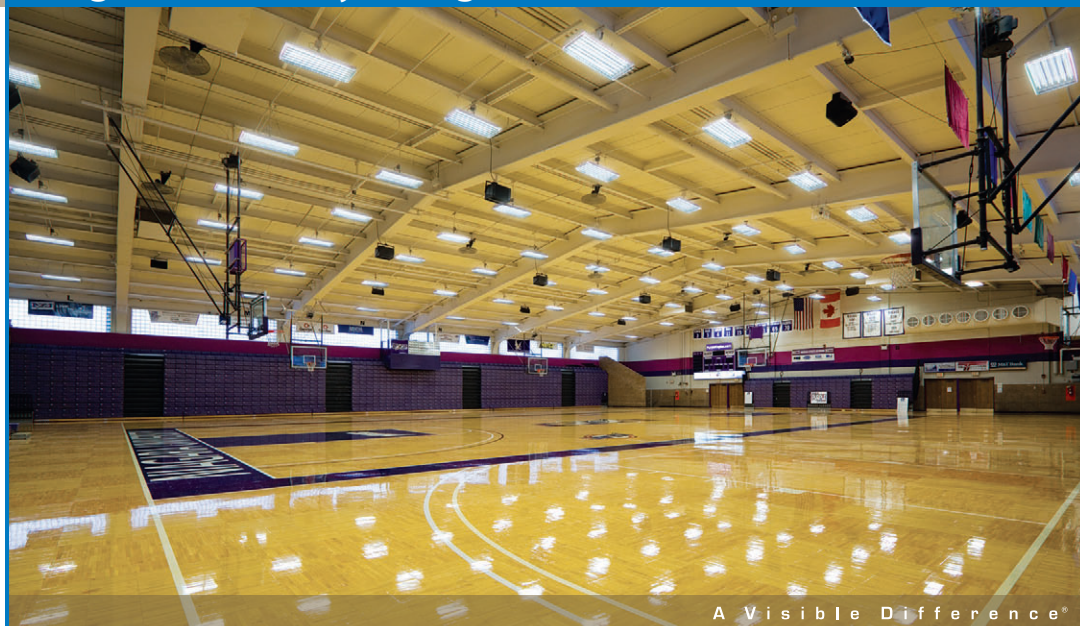
Case Study:

Niagara University – Niagara Falls, NY

Major University Teams Up with Williams Fluorescent to Score Big in Energy Efficiency and Savings



Taps Gallagher Center, Main Arena—Before



A Visible Difference®

Taps Gallagher Center, Main Arena—After

Job Specific Information:

Taps Gallagher Center

- Main Arena: 84 GL luminaires, each with six 32-watt T8 fluorescent lamps, mounted 30 feet above the floor. The new lighting produces 90 maintained footcandles on the arena floor, increasing the illumination provided by the old 400-watt metal halide lamps by more than 75 percent.

Return on Investment

- Energy Savings: First-year energy savings for the Dwyer Arena and Kiernan Center were projected at \$17,000.
- Payback: Average of 3.8 years
- Rebates: Project qualified for an additional \$10,000 in direct energy rebates paid to Niagara University by the New York State Energy Research and Development Authority (NYSERDA).



As a fast-growing private institution in upstate New York, Niagara University was faced with a tough balancing act. On one hand, the university's success drove the addition of 200,000 square feet of new academic facilities over a two-year period. However, the added space placed even more pressure on a tight utility budget.

"Like everyone else, we were faced with the rising cost of power," said Dan Guariglia, Niagara's director of facilities services. "Given our rapid growth, the issue wasn't just the increasing cost of the commodity. It was the fact that we were using more of it."

To get a better handle on its power usage—and opportunities for improvement—Niagara retained National Energy Services (NES) of Buffalo, NY to conduct a campus-wide energy audit. While the assessment presented a full range of ideas for university leaders, lighting upgrades quickly emerged as the option with the most substantial return on investment.

"In many of their facilities, they were using either 400-watt or 1,000-watt metal halide lamps, all of which were operating 24 hours a day, seven days a week," said Gregg Morgan, senior account representative at NES. "That accounted for a lot of unnecessary power use."

The GL Luminaire—Outshining the Competition

The energy audit revealed that three major campus facilities with metal halide fixtures were prime targets for an upgrade to high-efficiency fluorescent lighting. The argument was especially compelling for the university's Dwyer Arena and Taps Gallagher Center, where improved lighting would greatly enhance game-day excitement for home hockey and basketball games.

"One thing we learned during our early meetings with Niagara was that the head basketball coach had always wanted to turn off the main house lights just before tip-off and put a spotlight on players

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Niagara University – Niagara Falls, NY

Job Specific Information:

Kiernan Recreation Center

- Swimming Pool: 25 GL luminaires, each with six 32-watt T8 fluorescent lamps, mounted 20 feet above the water. This new lighting produces an average of 50 footcandles on the pool area, or an increase of nearly 100%.
- Front Gym: 8 GL luminaires, each with twelve 54-watt T5HO fluorescent lamps, mounted 30 feet above the floor. The 55 maintained footcandle light output is double that produced by the old lighting.
- Main Gym: 52 GL luminaires, each with six 32-watt T8 fluorescent lamps, mounted 25 feet above the floor. The new lighting produces 55 maintained footcandles on the playing floor, which doubles the illumination generated by the old metal halide lamps.



Kiernan Recreation Center, Swimming Pool—Before



Kiernan Recreation Center, Swimming Pool—After

during introductions,” said Tom Meidenbauer, a sales representative for VBC Lighting in Buffalo. “But the existing metal halide lighting didn’t allow for that.”

To solve the problem, Meidenbauer recommended the Williams GL fluorescent luminaire. This rugged, proven fixture would not only deliver instant on/off capabilities, but also reduce energy use by up to 50 percent while producing visibly brighter illumination. While Guariglia became comfortable with the GL’s tough construction and technical advantages

after a hands-on review, he also visited nearby institutions to see first-hand how it performed as a replacement for old metal halide lamps.

“We’re a very conservative institution and we have some high technical and aesthetic requirements for changes like this,” said Guariglia. “But when I personally checked out those sites, the retrofits looked good and the customers appeared to get the light levels they expected.”

Collaborating to Meet Tough Challenges

In late spring 2008, Guariglia authorized a GL re-lamping project for the Dwyer Arena and Kiernan Recreation Center. The latter facility, which was part of the trio of buildings singled out in the audit for heavy energy use, was another popular sports venue with two gymnasiums and a 25-yard pool used for varsity swimming and diving competitions.

The first hurdle the project needed to clear was tight timing. While the majority of Niagara’s 2,600 undergraduates were gone for summer break, hundreds of other area students were frequently rotating through academic and sports camps. To ensure minimal downtime, Guariglia gave the lighting crews a 19-day window to install 134 new fixtures. “That was a really aggressive schedule for the size of the job,” said Scott Harvey, project manager for NES.

The second—and perhaps more critical—issue concerned the initial shipment of fixtures. While the GL luminaires were custom-built to Niagara’s specifications, a handful of fixtures did not arrive for the job’s planned start date. When that happened, H.E. Williams, Inc. immediately expedited production and shipment of the missing luminaires to the job site, helping the NES team to stay on schedule.

Williams’ fast action and can-do attitude did not go unnoticed by Guariglia. “When I first learned we had a short shipment issue, I frankly thought it would turn into weeks of negotiations and delays,” he said. “But in just a couple of days, we received the materials we were missing, with no added cost passed on to us. I was very impressed with that.”

Making a Visible Difference

The initial phase of the Niagara University re-lamping project, which was completed in July 2008, is already delivering impressive results. For example, the switch from metal halides to Williams GL high bay fluorescents qualifies the campus for an immediate \$10,000 New York state energy rebate. While the overall payback for the lighting investment is slightly more than 3-1/2 years, Meidenbauer said that estimate will drop dramatically if Niagara’s building managers take full advantage of the GL’s instant restrike capabilities.

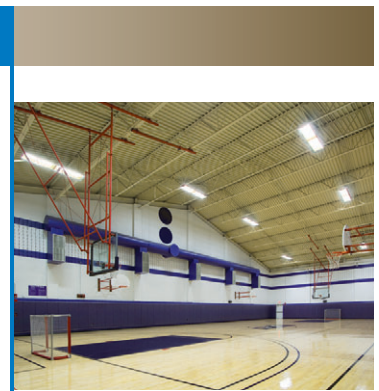
“Our return on investment estimate assumed current practices, where those lights had been on all the time,” he said. “If the university can successfully retrain people to switch off the new lights in the overnight hours and when the facilities aren’t in use, the payback will be much faster.”

The decision to move ahead on these re-lamping projects has been validated on a number of fronts. For example, shortly after the Buffalo Sabres professional hockey team conducted some off-season workouts in Dwyer Arena, team officials heaped considerable praise on the venue’s brighter, whiter light. Closer to home, Niagara coaches and players that came in for fall drills also made positive comments about improved light quality in those facilities.

Lights, Camera, Television

Buoyed by the success of the Dwyer and Kiernan lighting projects, the university chose to go ahead with a complete re-lamping project in the university’s Taps Gallagher Center. The 2,400-seat venue is home to Niagara’s Division I basketball team, whose winning ways have led to higher fan interest throughout upstate New York. With more games being televised, it quickly became clear that the old metal halide lamps did not put the program in its best light.

“While the main goal with the new lighting was to increase the footcandle output, we also needed to group the GLs in places where TV cameras were going to be,” said Guariglia. “So while we replaced the metal halide fixtures one-for-one, we chose to be a little top-heavy with lighting over the court and a little less so over the seating.”



Kiernan Recreation Center, Front Gym—After



Kiernan Recreation Center, Front Gym—Before



Dwyer Arena, Main Ice Arena—After



Dwyer Arena, Main Ice Arena—Before



Case Study:

Niagara University – Niagara Falls, NY

Job Specific Information:

Dwyer Arena

- Main Ice Arena: 21 GL luminaires, each with 12 54-watt T5HO fluorescent lamps, mounted 35 feet above the ice surface. The new lighting produces an average of 55 maintained footcandles on the rink, which is a 46 percent improvement over the old lamps.
- Auxiliary Ice Arena: 28 GL luminaires, each with six 32-watt T8 fluorescent lamps, mounted 20 feet above the ice surface. The lighting generates an average of 40 maintained footcandles, or an improvement of 77 percent.



Dwyer Arena, Auxiliary Ice Arena—After



Dwyer Arena, Auxiliary Ice Arena—Before

The results, like the Purple Eagles basketball team, were impressive. The new GL luminaires increased light output on the playing floor by 75 percent, while reducing energy use by one-half. Those improvements, combined with timely installation of a well-made product, have turned Guariglia into a satisfied H.E. Williams customer.

“Everybody talks about great customer service. But when you have an experience where it actually happens, you really remember it,” he said. “When I look at future projects, I know I can buy cheaper lighting. But if I can expect this level of service and quality from H.E. Williams, saving a little bit of money just isn’t worth it.”