

# LEVINE/SLAUGHTER BOYS & GIRLS CLUB

7201 Kimberly Blvd., North Lauderdale, Florida 33068

## ENERGY & WATER EFFICIENCY PROGRAM OVERVIEW

September 2015



### Project Overview

Broward County Florida's Levine-Slaughter Club has new outdoor lighting that reduces light pollution and energy use by as much as 75%. Building-mounted and pole lighting was converted to bi-level LED, with integral photocells and occupancy sensors that increase lighting levels when someone is nearby, and turn off outdoor lighting automatically during the daytime.

Interior lighting was also converted to LED, reducing peak lighting power by more than 50 percent while improving lighting quality and reliability. Occupancy-based lighting controls were installed throughout the facility in a *vacancy* mode, where fixtures are turned on manually if needed, and then turn off if inadvertently left on when areas are unoccupied.

Other improvements include new thermostats and vending machine controls to reduce plug loads.

### Site Details

- Average daily attendance of 261
- 23,000 square feet
- Constructed in 1981

### Energy Benchmarks

- \$49,448 in baseline utilities cost
- 4 million Btu of energy per member per year

### Improvements

- Invested \$75,000, or \$3.26 per sq. ft.
- Predicted return on investment (ROI) of 10%
- Actual savings – after 7 months – 5% energy savings

Projects Implemented	Predicted Annual Savings				Project Cost	Projected Return on Investment
	Cost	Million Btu (Site)	Million Btu (Source)	CO <sub>2</sub> Emissions (tonnes)		
Interior & exterior LED lighting & controls and vending machine controls	\$4,638	139	435	19.7	\$59,339	8%
Install smart thermostats	\$4,638	139	435	19.7	\$15,661	29%
<b>Projected Total Savings, Cost, &amp; ROI</b>	<b>15%</b>	<b>22%</b>	<b>22%</b>	<b>22%</b>	<b>\$75,000</b>	<b>10%</b>



**About the Boys & Girls Clubs of America Energy & Water Efficiency Grant Program (BGCA EWEP):** The Southeast Region of BGCA was been selected to participate in an important pilot program to demonstrate the economic and environmental benefits of high-impact energy and water efficiency improvements in club facilities. Funded by The JPB Foundation, the program's ultimate goals were to reduce club utility expenses by 20 percent annually and to improve conditions in existing facilities, so they may be better used in support of BGCA's mission.

## Project Highlights

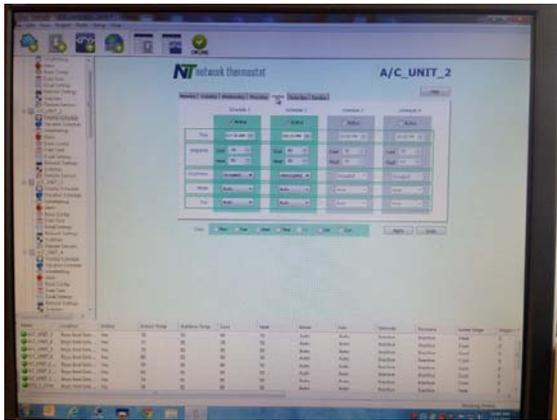


Figure 1: Energy Management System Display

Existing thermostats were replaced with a small-scale energy management system to facilitate scheduling and setpoints of HVAC systems. The picture above shows one of the control pages for setting system schedules.



Figure 2: Vending Machines Load Controls

Vending machine controls were installed to reduce plug loads during unoccupied periods.



Figure 3: EWEP Thank-You Card from Club Members



Figure 4: Old Gymnasium Lighting

Existing 400W metal halide gymnasium lighting (above) was replaced with new 240W LED fixtures with dimming controls, and fluorescent lighting was also replaced with LED. Occupancy controls were installed throughout the facility in a vacancy mode, where fixtures are turned on manually if needed, and then turn off if inadvertently left on when areas are unoccupied.

The new lighting in the gym (below) turns on instantly, whereas the old metal halide lighting took several minutes to warm up to full brightness. Thus the club can turn off lighting in the gym when it's not in use without having to worry about the long warm-up period.

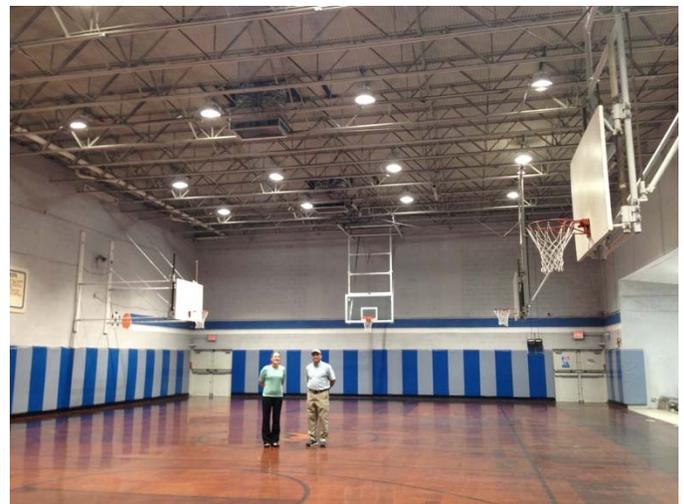


Figure 5: New Gymnasium Lighting