

Cambria County War Memorial Arena Scores With Major Efficiency Upgrades

Arena substantially enhances facility lighting and becomes more energy efficient—with no upfront capital expenditure



Photo courtesy of Everything Ice, Inc.



Customer Profile

For one night during the 2015-2016 National Hockey League (NHL®) season, Johnstown, Pennsylvania became known as 'Kraft Hockeyville™ USA.' As the home of the Johnstown Tomahawks of the North American Hockey League (NAHL), Cambria County War Memorial Arena had never been used for an NHL game, although it had earned recognition in the hockey world as the setting for the original motion picture "Slap Shot."

Originally open to only Canadian rinks, the Kraft Hockeyville™ competition solicits bids from communities demonstrating their commitment to the sport of ice hockey. Featured as the location for a preseason NHL game, winners receive \$150,000 in arena upgrades and refurbishments with support from Kraft, the NHL and the National Hockey League Players' Association (NHLPA).

The Challenge

The Johnstown location was selected in May 2015 to feature in a September 2015 nationally-broadcast preseason NHL game, and required major upgrades to its lighting in order to be able to telecast the game. Under significant time constraints, as well as financial constraints due to the scope of upgrades needed at the facility and the limited capital dollars allocated as part

of the Kraft Hockeyville™ program, the War Memorial Arena needed to find an energy services provider to manage the lighting design and project implementation required to host NHL clubs and fans alike.

The Solution

Constellation's efficiency experts performed an energy efficiency analysis on the arena, and identified opportunities to implement upgrades to both the sports and general lighting within the facility. Following the comprehensive energy analysis, Constellation's team worked in tandem with the NHL and other partners, including local channel partner SYLVANIA Lighting Solutions, to update the arena's lighting fixtures. Moreover, Cambria County agreed to a new cost effective, five-year power contract with Constellation that provided, through Constellation's Efficiency Made Easy® (EME) program, the necessary upfront capital to complete a switch to energy efficient game and facility lighting. No upfront capital dollars were needed for these upgrades as the EME project funded the cost of the lighting improvements, preserving capital dollars for other improvements at the facility.

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With less than four months to make the necessary improvements to meet rigorous NHL facility and television broadcast standards and energy consumption principles, Constellation worked swiftly with Cambria County War Memorial Arena's local operations and engineering teams to implement efficiency upgrades in compliance with existing policies and procedures.

The Results

The Cambria County War Memorial Arena upgrades were completed on time and in accordance with NHL facility and sustainability standards and objectives. On September 29—now lit by 48 new LED fixtures providing 110 foot-candles of light—the War Memorial Arena made its NHL debut, where the Pittsburgh Penguins® faced off against the Tampa Bay Lightning®. The new energy efficient LED game lights reduce glare, improve game presentation and visibility for players, and eliminate the warm-up time required with the old metal halide system. While not required to televise the game, Constellation also converted approximately 700 other fixtures throughout the facility to LED lighting, further improving the efficiency of the War Memorial Arena.

The upgrades and efficiency improvements overseen and facilitated by Constellation will serve Johnstown and Cambria County communities for many years to come, providing the potential for hosting additional televised and collegiate games as the arena's lighting now meets NCAA standards. This project showcases Constellation's commitment to work with community ice arenas to improve environmental and financial sustainability within the sport of hockey.

Highlights

- Estimated annual energy savings of over \$30,000
- Now meets NCAA standards for televised games, encouraging increased facility use; also meets Illuminating Engineers Society recommendations for recreational, amateur and college hockey
- Energy savings expected to avoid creation of 336,838 pounds of carbon dioxide annually
- Energy usage reduction of up to 25 percent expected due to reduced cooling demand in rink area due to reduced wattage of new fixtures
- Five-year electricity price certainty lower than previous three-year rates, providing budget predictability and savings based on total facility usage at new lower fixed rates

Technical Highlights

- Replaced interior 1,000-watt metal halide fixtures with 48 600-watt LED Sportlighter fixtures providing up to 110-foot candles for more consistent and even lighting on playing surface
- Upgraded nearly all 700+ interior lighting fixtures to long life LED fixture and conversion retrofits
- New wiring grid providing light level specification and ability to control entire system
- Improved switching options for functions including emergency lighting, set-up/cleaning, amateur and high school leagues, and collegiate and televised events
- Monthly EME payments will be offset by significant energy and maintenance savings and reduced kWh rate from new commodity contract

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