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ENERGY STAR Success Story: Great American Ball Park, Cincinnati Reds



Located on the winding banks of the Ohio River in downtown Cincinnati, the Great American Ball Park is home to the Cincinnati Reds, baseball's first professional franchise. The ballpark, built next door to the Reds' former home, Riverfront Stadium, officially opened for the 2003 season. Equally as enthusiastic as their hometown fans, the ballpark's management team continues to improve the ballpark's energy performance and is a leader among stadiums nationwide.

Energy Management with ENERGY STAR

The Cincinnati Reds were one of the first Major League Baseball teams to join ENERGY STAR as a partner in 2008 and use ENERGY STAR resources to track energy usage, improve energy performance, and communicate their efforts to staff and the public.

Improving energy performance is an important environmental strategy for the Reds and they have received kudos from local officials and enhanced loyalty from fans for leading by example. The ballpark operations management team benchmarks the ballpark's energy performance using the U.S. Environmental Protection Agency's (EPA) [Portfolio Manager](#), an online energy tool to track whole-building energy intensity and greenhouse gas emissions. By inputting historical energy data going back to 2007, and ongoing monthly energy consumption and cost information, the Reds are able to measure progress and quantify improvements. To date, the ballpark's energy intensity is 27 percent better than the national average for entertainment buildings¹, even with an off-season construction project during the winter of 2009.

As part of their energy management plan, the ballpark's building operations management team implemented several energy conservation measures and integrated energy efficient technologies into the ballpark's infrastructure. These include:

- Installing new variable speed drives
- Utilizing economizers and free cooling more often than previous years
- Incorporating demand response controls into building automation systems
- Programming lighting on a computer controlled schedule
- Retrofitting incandescent exit signs with LED technology throughout the ballpark
- Conducting an annual infrared thermographic survey of mechanical rooms, offices, restaurants, and clubs to identify hot and cold spots, and rebalance the HVAC as necessary

The building operations management team also uses the ENERGY STAR [Building Upgrade Manual](#) to help prioritize efficiency measures. During the past year, the Reds focused on lighting retrofits, the second stage of the five stage approach outlined in the manual, and upgraded the main scoreboards and video board to higher resolution, energy efficient, and longer lasting LED technology, resulting in:

- Electricity savings of approximately \$22,000 per season
- 53% reduction in electricity demand, with savings of approximately \$73,000 per year
- Reduced maintenance costs in the range of \$25,000 due to LEDs being easier to maintain and having longer life than incandescent bulbs
- A more enjoyable experience for visitors, who can now watch replays on the bright, high-definition video board.

¹ The Energy Information Administration's Commercial Building Energy Consumption Survey (CBECS) indicates that the average energy intensity of an entertainment facility is 265 kbtu/sf/year.



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In comparing the post-construction period to the same period of the previous year, the complex achieved a five-percent reduction in electricity consumption and a 60-percent drop in natural gas usage.



Other Green Initiatives and Accomplishments

The Reds are implementing other green initiatives at the ballpark, including recycling and waste reduction. As a partner in EPA's *WasteWise* program, the Reds are committed to waste prevention, recyclable collection, purchase of recycled products, and use and purchase of environmentally friendly products. They are expanding their recycling program to include plastic and paper generated from game day crowds and front office business, as well as recycling waste cooking oils generated in the kitchens and concession areas to be used as biodiesel fuel. The Reds were recently recognized for innovation in recycling and outstanding results by the Hamilton County Solid Waste Management District.

Employee and Fan Engagement

A critical part of the Reds energy management strategy is to engage staff so that they too can do their part. Recently, all Reds employees received an e-mail from management with a link to the ENERGY STAR [Bring Your Green to Work](#) tips for easy, small actions that employees can take that make a big difference in helping to green the ballpark.

Through monthly *Green Nights* events, the Reds educate visitors to the ballpark about their energy and green efforts. Partnering with local utility Duke Energy, the Reds provide information on energy conservation in the FanZone area of the ballpark concourse. Energy awareness campaigns have included giving away LED nightlights and encouraging local fans to sign up for free energy audits with Duke Energy. Each *Green Night* is carbon neutral, with the Reds purchasing certified renewable energy credits (RECs) to offset the game's carbon emissions.

Continuous Improvement

The Reds continue to look for new ways to improve their energy performance and promote green and sustainable programs, and are now exploring renewable energy and other strategies to further advance their energy management efforts.

Already a leader in green activities among Major League Baseball facilities, the Reds' Vice President of Ballpark Operations, Declan Mullin, points out, "we find great value in working with ENERGY STAR and other ballparks and stadiums to share best practices and experiences in implementing different energy efficient practices." Committed to careful planning and management as well as opportunities to learn and share experiences with peers, the Reds and the Great American Ball Park will continue to meet their goal of lowering energy costs, reducing carbon emissions, and demonstrating leadership in the fight against global warming.