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## ENERGY STAR Success Story: Busch Stadium, St. Louis Cardinals



With hundreds of thousands of visitors each year, entertainment facilities like Busch Stadium are uniquely positioned to help spread the word about energy efficiency. The Cardinals team has taken this commitment to heart.

On April 10, 2006, the Cardinals opened their new 46,000-seat retro-style ballpark, Busch Stadium, in downtown St. Louis, Missouri. That year, the Cardinals became the first team in almost 100 years to win a World Series Championship in the inaugural season of a new ballpark. As the baseball team was winning the championship, the ballpark energy management team was fine-tuning the operations at the new ballpark, and even with a brand new stadium, they were able to optimize the stadium's systems, achieving energy savings of more than 20 percent in the first two years after its inaugural season.

The Cardinals' energy management program is part of a larger effort at Busch Stadium called **4 a Greener Game** which puts a winning team on the field and creates a safe, fun, family-friendly entertainment experience for guests, while minimizing the impact on the environment.

### Energy Management with ENERGY STAR

The St. Louis Cardinals joined ENERGY STAR in the fall of 2007 and was one of the first professional sports teams to partner with the program. Committed to measuring, tracking, and improving their energy performance, the Cardinals have developed an energy management plan consistent with the ENERGY STAR [Guidelines for Energy Management](#) to achieve savings. The team also is a participant in the [ENERGY STAR Challenge](#), a national call-to-action to help improve the energy efficiency of America's commercial and industrial buildings, with a goal of a 10 percent reduction in energy usage in the first year of participation.

The Cardinals began to mark progress toward their energy goals by using [Portfolio Manager](#), the U.S. Environmental Protection Agency's online energy tool to track whole building energy intensity and greenhouse gas emissions. Joe Abernathy, the ballpark's Vice President for Stadium Operations, explains: "I had been tracking my energy use outside of Portfolio Manager, but did not have a way to normalize the data for weather. Portfolio Manager can do that and showed that the energy reduction was real – and not just the result of mild weather." In fact, after normalizing for weather, the ballpark demonstrates an energy reduction of 23 percent and more than \$300,000 in energy costs savings since 2007. This translates to an energy intensity reduction from 211.8 to 161.2 kbtu per square-foot, putting the ballpark at an energy performance level that is 39 percent better than the national average for entertainment buildings.<sup>1</sup>

Busch Stadium has instituted several low-cost and no-cost measures including:

- Using compact fluorescent lights throughout the stadium
- Installing occupancy sensors in several rooms
- Fine-tuning existing operating systems, such as pumps and blowers in the HVAC system
- Utilizing a lighting control system
- Repairing and improving building insulation

<sup>1</sup> 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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The building energy management team at Busch Stadium continues to deepen their understanding of how the ballpark uses energy, and how it compares to other ballparks, allowing them to optimize operations and reduce energy consumption. The Cardinals plan to use energy savings and utility rebates to offset the cost of any new energy projects.

Organizations that demonstrate superior energy management are also environmental leaders, which is definitely the case with Busch Stadium. Joe Abernathy is leading an initiative among Major League Baseball stadium managers to track energy performance and share data in order to identify industry average energy use intensity. Earlier in the year, Mr. Abernathy and ENERGY STAR sponsored a benchmarking training attended by one-third of the professional baseball stadiums. Many of these stadiums are now benchmarking their buildings using Portfolio Manager and are sharing data in a master account.

### Other Green Initiatives and Accomplishments

The Cardinals work with the ENERGY STAR, EPA's WasteWise Program, their local utility AmerenUE, and the Downtown St. Louis Partnership to become a sustainable and green ballpark.

Through partnering with EPA's WasteWise program, the Cardinals have set up a recycling program that helped to divert nearly 300 tons of waste from local landfills in 2008. Volunteers collect plastic bottles and cups from fans, and concessionaires collect and recycle all aluminum cans within the stadium. To engage all members of the Cardinals' organization, employees are encouraged to participate in the stadium's greening efforts and participate in the ENERGY STAR [Bring Your Green to Work](#) campaign, encouraging all employees to make greener choices at work as they do at home.

The Cardinals in partnership with Major League Baseball and the Natural Resources Defense Council sponsored another highly visible effort to promote green choices to the thousands of fans attending the 80<sup>th</sup> Annual All-Star Game and All-Star Week 2009. To reduce the event's carbon footprint several measures were taken:

- All Busch Stadium events were powered by Green-e Certified wind energy supplied by AmerenUE Pure Power
- Green Team Volunteers collected recyclables during all events and diverted over 12 tons of material from local landfills
- The Red Carpet was made of 100-percent recycled fiber content and 100 percent of the electricity used to produce it came from solar and wind energy
- Chevy Flex Fuel and Hybrid vehicles were used to transport VIPs.

### Employee and Fan Engagement

On Earth Day 2009, the Cardinals celebrated with fans by sponsoring a trade show on green products and purchasing renewable energy credits (RECs) to offset the game's carbon *cleat* print by purchasing enough RECs to offset emissions equivalent to powering 35 homes in the St. Louis area for a month. The team is also making a similar REC purchase for one game each month, equivalent to powering more than 200 St. Louis-area homes for a month.

To keep staff, fans, and the public up to date on these efforts, the Cardinals have a dedicated page on their Web site, [4 a Greener Game](#). It features information about the ballpark's energy efficiency and recycling plans, as well as a short video of the team's mascot, Fredbird, reminding fans to recycle.

