

AMERICAN AIRLINES ARENA, HOME OF THE MIAMI HEAT



ARENA STATS

Location: Miami, Florida

Began Construction: February 6, 1998

Opened: December 31, 1999

Seating Capacity: 19,600

Owner: Miami-Dade County

Operator: Basketball Properties Ltd.

Venue Uses: NBA games, WWE wrestling matches, family shows and concerts

Construction Cost: \$297 million (in 2012 dollars)

LEED Certification: Certified LEED for Existing Buildings:

Operations and Maintenance in April 2009

THE HEAT'S GREENING STORY: MOTIVATIONS, CHALLENGES AND LESSONS FROM THE FIELD

The Miami HEAT have been sports industry leaders in green building initiatives and comprehensive tracking of facility-wide resource use since AmericanAirlines Arena became LEED-certified for existing buildings: operations and maintenance (EBOM) in the spring of 2009. For the better part of a year the HEAT worked on enhancing their operations in a race against the Atlanta Hawks to win the first LEED Certification for an arena in the National Basketball Association. The showdown culminated in a dead heat when the Green Building Certification Institute, a subset of the U.S. Green Building Council, awarded AmericanAirlines Arena and Philips Arena, the home of the Hawks, LEED certification on the same day, April 7, 2009.

With a LEED certification under their belt, and many cost benefits and positive press mentions to boot, the HEAT are now working toward LEED recertification in 2014, which requires improving on all of their 2009 efficiency achievements.

WHY GO GREEN?

According to Jackie Ventura, operations coordinator for the HEAT Group, the direct benefits of greening and LEED certification include financial savings, attracting green-based sponsorships, brand enhancement, competitive advantage, raised community profile and improved company culture. "Sustainability equals savings. In one year, thanks to our greening and responsible energy consumption measures, we saved \$1.6 million," says Ventura. "We also attracted about \$1 million in new corporate sponsors, which include Home Depot and Waste Management, who aligned with our greening efforts as sponsors of our LEED initiative. Being environmentally conscious improves our brand's image so that we now talk with companies that never would have approached us before, such as Johnson & Johnson and Georgia Pacific."

The HEAT also include their green accolades in their pitch to attract performing artists to their arena. When the team first announced its LEED certification and ongoing commitment to greening in 2009, Eric Woolworth, president of the HEAT Group's business operations, said, "It's a point of differentiation for us from a business perspective. It

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STANDOUT GREENING ACCOMPLISHMENTS

- ★ The HEAT's energy efficiency initiatives have enabled the AmericanAirlines Arena to consume 53 percent less energy than the average facility of similar size and use, according to EnergyStar's Portfolio Manager.
- ★ The organization replaced 240 lamps in the arena's concession stands and merchandise locations with compact fluorescent lights (14-watt bulbs replaced 60-watt bulbs). This move saves \$976 annually and recouped the capital investment in two years.
- ★ The team implemented a building automation system (provided by Johnson Control) to monitor and control heating, cooling and ventilation.
- ★ The HEAT reduced the heat island effect and saved energy by using a more reflective "white" roofing and underground parking.
- ★ The team also added 9,161 square feet of canopies to reduce the heat island effect.
- ★ In 2009, the HEAT achieved a 16.7 percent reduction in potable water use and saved more than \$5,000 in water costs through low-flow faucet and toilet upgrades and by increasing plumbing efficiency.
- ★ The HEAT save almost \$11,000 annually due to greater irrigation efficiency. All irrigation of planters and landscaped areas is done by a drip system or a soak system that applies water directly to the roots, and all lines have low-flow nozzles. Also, timers are used so that irrigation takes place in the middle of the night in order to minimize evaporation.
- ★ The HEAT permanently installed water meters to measure the consumption of potable water and water used in irrigating all landscaped areas. The meters are monitored on a weekly basis.
- ★ The HEAT established an environmentally preferable purchasing policy and a solid waste management purchasing policy (43 percent of purchases are sustainable).

provides a platform for us to attract acts and entertainment that want to play in green venues.”

Woolworth explained that the HEAT pursued greening because they understood the influence their organization has in the community and marketplace. “Achieving LEED certification is a great affirmation of the AmericanAirlines Arena’s commitment to energy conservation and environmentally responsible operations,” said Woolworth at the announcement of the LEED certification. “Being among the first arenas in the U.S. to be LEED-certified, we hope to inspire businesses of all kinds to think green and make a positive impact on our earth.”¹

The HEAT became devoted to greening not only to show community leadership, improve the efficiency of their operations and benefit the environment, but also because the team wanted to seize the opportunity to be a trailblazer for professional sports. “The HEAT Group, the business operations behind the Miami HEAT team, prides itself on being an innovative organization,” says Lorrie-Ann Diaz, director of marketing communications. “As a professional sports franchise, being competitive is part of who we are and what we do, and we’re proud to be one of the first major professional sports facilities to achieve the incredibly important LEED certification.”

Greening enabled the HEAT to attract positive press and create new community-based opportunities. “We knew that being the first NBA arena to be LEED-certified would attract great publicity,” says Ventura, “but as we discovered that it was an exciting way to engage with the city and with the community, we realized how important it was to make greening a big part of our game. Our green work is a great avenue to introduce these concepts to people who don’t have access to or don’t yet care about these issues. It’s a domino effect.”

Ventura stresses the importance of magnifying the green message by leveraging the HEAT’s brand. “We have so much power in this business. We have incredible access to so many people on a daily basis,” she says. “We had over 1.5 million visitors to sporting and entertainment events last year alone. If you impact half of those people and they share it with a couple of other people, the impact adds up. Pretty soon we’ll be doing a lot of good.”

Manny Diaz, the mayor of Miami at the time of the HEAT Group’s LEED certification, promoted the HEAT’s greening work as a positive model for local businesses. “The AmericanAirlines Arena is a catalyst for all Miami businesses to invest in a greener future,” he said. “The arena’s commitment to the earth and our community paves the way for other companies in downtown Miami to follow that path and make a lasting difference.”²

WHERE TO START?

The HEAT Group first learned about greening opportunities from the NBA head office. In 2007 the NBA established a partnership with the Natural Resources Defense Council (NRDC) to enhance their environmental profile. As part of this program, during the summer of 2008 the NBA worked with NRDC to establish the Commissioner’s Initiative on Sustainable Arena Operations and Team Practices. The league also circulated the NRDC Greening Advisor to help all NBA teams learn how to become greener.

The NBA’s environmental commitment and NRDC’s resources motivated the HEAT Group to find out whether they could achieve LEED certification. “When NRDC got together with the NBA and made some league-wide environmental recommendations, it really kick-started our interest in greening,” says Ventura. “We began by looking into LEED to see if we could get certification. Lo and behold, just by doing the checklist on the U.S. Green Building Council website, we were pretty confident that we could pursue

THE HEAT'S LEED CERTIFICATION COST-SAVING ANALYSIS BREAKDOWN

- ★ Total LEED Project Cost: \$73,384
 - ★ Registration: \$600
 - ★ Certification: \$15,000
 - ★ Expedited evaluation (optional): \$10,000
 - ★ 550 internal staff hours: approx. \$47,592
 - ★ Various manuals: \$192
- ★ Total LEED Project Annual Savings: \$1,616,480
 - ★ Energy savings: approx. \$1.6 million
 - ★ Lighting annual savings: \$976
 - ★ Efficient plumbing fixtures: \$5,440
 - ★ Responsible landscaping: \$10,822

COST SUMMARY

- ★ Total Expense: -\$73,384 (\$25,792 out-of-pocket)
- ★ Annual Savings: +\$1,616,480
- ★ Green Sponsorship: +\$1,000,000
- ★ **Full return on investment within one year, plus millions in ongoing annual savings.**

“IT WAS GREAT TO SEE THAT BY BEING FISCALLY RESPONSIBLE WE WERE BEING SUSTAINABLE AS WELL,”
says Jackie Ventura, operations coordinator for the HEAT Group.

certification.”

To work on the LEED application, the HEAT Group put together a “green team” made up of internal staff members and Laura Crave, a LEED Accredited Professional and director of marketing for Dade Paper, one of the HEAT’s major vendors. “As LEED certification is such an important element of our green mission, we decided to complete the project in-house, and luckily, most of the staff in our operations department have been part of the HEAT Group for a long time,” says Ventura. “Everyone had a solid foundation in the operation of the building, so we knew this was something we could pursue without third-party involvement.”

According to Ventura, the HEAT recognized the value of training their staff in efficient building practices while pursuing certification. “Our team of facility managers, engineers and maintenance staff took ownership of the project and made the commitment to become LEED experts

themselves,” she says. “We were able to complete the process in record time, and the accomplishment was more meaningful because our own team of dedicated professionals made it happen.”

Thanks to strong support from the executive staff, particularly Eric Woolworth and general manager Kim Stone, the HEAT Group was able to register the AmericanAirlines Arena for LEED certification on November 18, 2008, just a few months after learning about the LEED opportunity. “Everyone was really on board with getting the initiative done. Our goal was to unveil our certification during the NBA’s Green Week in April 2009, and our president and business operators said, ‘Make this happen’ and ‘You have my support,’ ” says Ventura. “This required that the internal green team’s regular duties be delegated to other staff members in the interim. The staff all supported being more sustainable and were happy to contribute to the project wherever they were needed.”

The HEAT started with the LEED checklists of prerequisites and credits required to achieve EBOM certification. “We began with the prerequisites because obviously without those you can’t follow through with certification,” explains Ventura. “We were surprised that we already qualified for all of the LEED prerequisites because, honestly, most of our prior decisions were fiscally motivated.”

CHALLENGES: OVERCOME AND ONGOING

Pursuing LEED certification requires investment, including significant up-front capital and staff time. However, the costs associated with green upgrades and LEED certification are minimal relative to the significant utilities savings available for a major facility like the AmericanAirlines Arena. “We spent \$1,594,309 during the 2008 calendar year. If we ran the AmericanAirlines Arena at the current national average, we could potentially be spending approximately \$3,010,000 annually on energy consumption each year,” explains Ventura. “So thanks to our greening work and responsible energy consumption, which is 53 percent more efficient than the average arena, we now save approximately \$1.6 million on energy costs annually.”

Ventura credits the HEAT’s efficient and straightforward LEED application process to consistent and knowledgeable staff, impeccable recordkeeping, responsible utility consumption and easy-to-use electronic blueprints. “We found that most of our practices were already LEED compliant,” she says. “We have always been very vigilant about tracking our consumption with electricity, water, gas, et cetera. I have spreadsheets and electronic records of all facility-wide consumption from the opening of the building in 1999, so we were confident that we would meet all of the LEED baselines.”

The greatest challenge the HEAT faced was accurately and efficiently completing all of the LEED application paperwork. “We found filling out all of the paperwork in-house was more of a challenge than any other,” says Ventura. “Many of the LEED credits required us to put our typical (and some new) practices, like buying recycled content and EPA-recommended efficient products, down on paper as

“WHILE LEED WASN’T NECESSARILY THE IMPETUS FOR A LOT OF OUR EFFICIENCY PROJECTS, IN THE LONG RUN IT HAS SERVED AS THE REASON WHY WE KEEP ADHERING TO AND IMPROVING UPON THE GREENER PRACTICES WE HAD IN PLACE BEFORE,” says Ventura.

formal policies. None of our prior standard operating procedures addressed these types of practices, so LEED served the dual purpose of allowing us to update our SOPs.” The LEED process motivated the HEAT Group to advance environmentally friendly purchasing across more product categories, including cleaning supplies, all paper products, lighting and electronics.

Ventura attributes the ease of implementing green purchasing programs at AmericanAirlines Arena to the HEAT’s longstanding vendor relationships and loyalty. “We are very loyal to our vendors. They are also loyal to us and make sure we are the best we can be,” she says. “For example, one of our suppliers, Dade Paper, has been in the building since day one. They were really great about going through all of our requirements and communicating about upcoming products. They assisted us in a seamless transition to new products, such as 100 percent recycled paper towels and EPA-recommended foam soap.”

Thanks to these strong relationships, the HEAT Group was also able to rely on partners for sponsorship of its LEED-based green initiatives. “We’ve had an account with Home Depot for about 10 years and they sponsored our first year of LEED certification,” says Ventura. “Waste Management has also been in the building since day one. They were very supportive of our LEED application process as well and continue to partner with us to significantly expand our recycling programs. They provide all of the balers, totes, garbage cans and signage for branding. They have also sponsored community outreach programs like our e-Recycling drive in April 2012. The recycling proceeds from all of the electronics went directly to Miami-Dade County Public Schools to aid in their efforts to upgrade technology in classrooms across our county.”

The HEAT’s vendors have played a key role in watching the market for new technologies as well. “We make most of the building products purchasing decisions internally for things like lightbulbs and office supplies,” explains Ventura. “In terms of our cleaning supplies and larger pieces of equipment, we rely on our vendors to bring us new technologies as they come out. We are very lucky that we have a good relationship with our major vendors, and they are very vigilant about bringing these new products to us. They are very aware that we have high standards and are working on recertification.”

The HEAT Group has already started working toward LEED EBOM recertification in 2014, which requires improving on all 2009 green initiatives. This time the organization is aiming for LEED Silver certification. “For recertification, 2009 is our baseline. Our consumption must stay even or below our 2009 figures and we need to implement new green initiatives,” Ventura explains. “For example, we’ve completed installation of virtual frequency drives on the air handlers and have begun adding them to our chilled water pumps as well. We upgraded our hot water gas boiler to a high-efficiency model, which has effectively reduced our gas consumption to a third of what it was in fiscal year 2009—49,907 therms versus 15,574 therms.” The HEAT Group has also been upgrading more of its arena’s lights to LEDs and purchasing office products with a higher percentage of post-consumer recycled content. “Switching up to LED lightbulbs, which are now more readily available, is logical because although they cost more initially, the extended life expectancy will reduce replacement and long-term spending and will help us earn recertification,” says Ventura. “We are very conscious of the decisions we make to ensure they are in line with the recertification process. Thanks to our comprehensive data collection and green building success to date, we can also easily justify new greening projects by showing our executive staff a cost-benefit analysis of why an up-front investment is a good idea in the long term.”

LESSONS FROM THE FIELD

GREENING AND LEED CERTIFICATION HAVE MULTIPLE DIVIDENDS; YOU WILL LIKELY RECOUP YOUR INVESTMENT:

According to Ventura, the direct benefits of greening and LEED certification include financial savings, green-based sponsorships, brand enhancement, competitive advantage, raised community profile and improved company culture. Despite devoting more than \$70,000 to their LEED application, the HEAT’s return on investment for all of the green projects included in their LEED process was less than one year, with millions in resource savings since then. “Sustainability equals savings. In one year, thanks to our greening and responsible energy consumption measures, we saved \$1.6 million,” Ventura notes. “We also attracted about \$1 million in new corporate sponsors, which include Home Depot and Waste Management, who aligned with our greening efforts as sponsors of our LEED initiative.”

USE THE READILY AVAILABLE ONLINE RESOURCES TO BREAK DOWN THE GREENING PROCESS:

“The most important takeaway is not to be overwhelmed by the process, particularly for LEED,” says Ventura. “When you begin it can seem very overwhelming, but NRDC, the U.S. Green Building Council, and the EPA have a ton of resources for people trying to be greener and/or achieve LEED certification. It is not as overwhelming or daunting as it seems if you have your information in order and use these resources as a guide.”

“WE TREND OUR EVENTS TO SEE WHEN CONSUMPTION PEAKS FOR CHILLED WATER AND ELECTRICITY SO THAT WE CAN ADAPT AND BECOME MORE EFFICIENT,”

says Ventura. **“IF YOU DON'T HAVE THAT INFORMATION AVAILABLE TO YOU, THE BASIC DATA, THERE IS NO WAY TO GET A HANDLE ON WHAT YOU'RE USING AND HOW TO IMPROVE.”**

TRACK YOUR RESOURCE USE FACILITY-WIDE AND KEEP COMPREHENSIVE RECORDS:

“We’ve been keeping records since day one. We know how much we’ve consumed and spent since the day we opened,” says Ventura. “It has been so helpful to create those baselines for LEED certification. We have numbers, graphs, consumption trends and demand analysis for all of our utilities that can be used as a quick reference guide as needed. We also use the data to help us gauge our budget projections and monitor our peak consumptions.”

USE ELECTRONIC BLUEPRINTS OF YOUR FACILITY: “We recommend having accurate final blueprints for your facility. We use computer-aided design. The blueprints are extremely helpful for calculating square footage and dividing building space by type,” explains Ventura. “Some LEED credits require you to upload blueprints, so having electronic versions—and someone who can manipulate the documents to showcase only the areas requested for LEED—is very beneficial.”

THERE ARE PLENTY OF GREEN ALTERNATIVES TO LEED CERTIFICATION: LEED isn’t the only way to be greener and save money. “Form an eco-committee, join EPA’s EnergyStar program, increase recycling, reduce water and paper use, adopt LEED’s green cleaning requirements, green your supply chain, promote carpools, use renewable energy and raise public awareness,” suggests Ventura.

ENGAGE FANS WITH GREEN ACTIVITIES ON THE CONCOURSE: “We had Pepsi’s Dream Machine on the concourse. Fans and employees could deposit plastic bottles and turn them into points, which could be redeemed for coupons at local establishments and prizes including mini HEAT souvenirs,” says Ventura. “We installed the Dream Machine recycling attraction in partnership with PepsiCo, and the revenue from recycling the plastic bottles and aluminum cans was donated to funds that lend support to U.S. veterans with disabilities, which was another added incentive for fans to participate.”

ATTRACT ADDITIONAL PRESS BY HAVING MULTIPLE UNVEILINGS AT ONCE: “We were able to extend our ‘green limelight’ to about three months by coordinating multiple unveilings at once,” says Lorrie-Ann Diaz. “We unveiled our LEED certification three weeks after our 3,400-square-foot, low-energy-consumption LED screen was installed and continue to promote our certification on the front fascia of the building.”

ENDNOTES

1 “AmericanAirlines Arena Awarded Prestigious LEED® Green Building Certification.” Heat News, NBA.com (April 15, 2009). www.nba.com/heat/news/aaarena_awarded_LEED.html (accessed June 19, 2012).

2 Ibid.