

## LATEST GREEN BUILDING LEADERS IN PROFESSIONAL SPORTS

When designing or renovating their facilities, increasing numbers of sports venues are turning to the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) certification as a guide to help them improve their environmental performance and, concurrently, boost their bottom line. As of this printing, 15 major professional sports venues in the United States and Canada have received LEED certification for Existing Buildings or New Construction standards. Several others are currently pursuing certification.

The LEED building rating system is an internationally recognized standard for sustainable building design. The standards, which cater to a variety of building projects and types, incorporate a range of environmental and public health considerations, including energy efficiency, building site selection, indoor air quality, and water use. Materials and resources used to construct buildings and keep them running smoothly and comfortably all have environmental impacts. Green buildings and operations are designed to minimize these impacts by using environmentally preferable construction

materials and techniques, including reducing water and energy use, minimizing waste, and making better use of natural features like shade, daylight, and rainwater. By streamlining and improving design and construction, green buildings reduce their contribution to biodiversity loss, global warming, and many other environmental pressures.



As demonstrated in many of the case studies and snapshot features in this report, many facilities across the sports industry already incorporate green building strategies that deliver strong financial paybacks and provide new ways to boost their venue's visibility. Each year, more and more sports industry building owners and developers are following suit by deciding to build green, whether they choose to pursue one of the LEED certifications, ISO 14001 for green operations

or another standard. Industry-wide, sport professionals are increasingly drawn to green building practices because these practices make good financial sense, in addition to promoting brand enhancement, employee health and community welfare. The following venues are some of the most recent to either be awarded LEED certification or to announce that they are pursuing LEED certification.

## **JELD-WEN FIELD, HOME OF THE PORTLAND TIMBERS**

### **LEED Silver-Certified for Existing Buildings, September 1, 2011 and Oldest Stadium to Become LEED-Certified**

Jeld-Wen Field, home of the Portland Timbers Major League Soccer club, was awarded LEED Silver Certification for Existing Buildings on September 1, 2011.<sup>1</sup> The 86-year-old facility underwent extensive renovation to improve the efficiency and sustainability of its original 1926 design. "The challenge we face is taking an 85-year-old facility and transforming it into a leading example of efficient use of resources," says Ken Puckett, senior vice president of operations at Jeld-Wen Field. "We are proud to have achieved LEED Silver certification, and we will continue to identify ways to increase efficiency in all areas of our operations and make an even greater impact."<sup>2</sup>

The facility committed \$40 million to undertake the major restoration, and worked for more than a year with Green Building Services of Portland and the nonprofit Energy Trust of Oregon to achieve LEED certification.

As part of their upgrade, the operations team implemented more energy-efficient mechanical systems and sports lighting to improve electrical efficiency by more than 40 percent.<sup>3</sup> The team also installed low-flush fixtures to reduce water use and implemented a recycling program that now diverts 20 percent of all waste.<sup>4</sup> The field has initiated composting in all kitchens and will soon be distributing compost receptacles for fan use around the facility. "We are working to improve that [waste diversion] percentage by increasing recycling, composting, and other waste reducing habits in and around the stadium," says Puckett.<sup>5</sup>

The Timbers are also part of several local programs that encourage sustainability among fans and in the surrounding community. For example, they now partner with *TriMet*, a public transportation system, to make subway passes more widely available to ticket holders. The field has about 100 permanent bike racks and more than 250 temporary game-day racks, and approximately 350 people cycle to each Timbers game.<sup>6</sup>

## **MILLER PARK, HOME OF THE MILWAUKEE BREWERS**

### **LEED-Certified for Existing Buildings, March 26, 2012 and First LEED-Certified Stadium with a Retractable Roof**

Home of the Milwaukee Brewers since 2001, Miller Park achieved LEED Certification for Existing Buildings on March 26, 2012.<sup>7</sup> This is the first ballpark with a retractable roof to achieve LEED certification. Miller Park's retractable roof made meeting the LEED energy and ventilation thresholds more difficult. "We are thrilled with the news of the LEED certification and want to thank all of our partners who were involved in the process," says Milwaukee Brewers executive vice president of finance and administration, Bob Quinn. "It is a challenge to achieve the designation in an existing building of this size and type, but we have all been focused on the end goal. Earning this designation means that we have significantly improved our sustainability and energy efficiency, and the benefits extend to the organization, our fans, partners and the environment."<sup>8</sup>

To improve energy efficiency, the Brewers implemented a retro-commissioning project, which analyzed HVAC, plumbing, electrical lighting and power. As a result, they reduced scoreboard energy output by 49 percent and eliminated 1,153 tons of CO<sub>2</sub> emissions annually. A retrofit to water fixtures saves the stadium three million gallons of water annually. In terms of waste, Miller Park has an extensive recycling program—more than 140 recycling containers dot the facility, fostering a 35 percent diversion rate. On average, the park recycles ten tons of discards from each game and donates over 7,000 pounds of unused prepared food to local food banks each season as part of the Rock and Wrap it Up! program.<sup>9</sup> "While we are honored to have achieved this designation, our commitment will continue in 2012 and beyond," says Brewers chief operating officer, Rick Schlesinger. "We are committed to improving our efficiencies and programs and will look to keep Miller Park as an industry leader in these efforts."<sup>10</sup>

## MARLINS PARK, HOME OF THE FLORIDA MARLINS

### LEED Gold-Certified for New Construction, May 24, 2012 and First MLB LEED Gold New Ballpark

On May 24, 2012, after four years of construction, Marlins Park became the first ballpark in Major League Baseball to be awarded LEED Gold Certification for New Construction.<sup>11</sup> “It was our desire from the outset to not only build America’s greatest new ballpark,” says Jeffrey Loria, owner of the Marlins, “but also its most environmentally friendly.”<sup>12</sup> The Marlins chose to locate their new facility on the former Orange Bowl site, a location with numerous public transportation options, including seven bus lines and nearby train and trolley stations.<sup>13</sup> 319 bike racks were also installed.<sup>14</sup> The ballpark’s construction team was able to recycle or otherwise divert more than 75 percent of waste from landfills during construction, and 58 percent of materials used to erect the Park came from within a 500-mile radius.

Efficient plumbing innovations are designed to reduce water use at the park by 52 percent, saving six million gallons of water each year compared to the national average for similar stadiums. Changes in landscape design and maintenance will use 60 percent less potable water for irrigation. The facility implemented a comprehensive recycling program, which includes plastics, metals, paper, cardboard and glass.<sup>15</sup> Marlins Park earned LEED innovation points in some areas of the stadium by creating a new floor from recycled Nike shoes.

The Marlins’ stadium’s retractable roof design presented the greatest challenge in reducing energy use and achieving LEED certification.<sup>16</sup> However, the design team installed solar panels to optimize lighting, mechanical controls, and electrical aspects of the roofing, and was able to achieve a 22.4 percent reduction in energy use, when only 14 percent was required for certification.<sup>17</sup>

## SOLDIER FIELD, HOME OF THE CHICAGO BEARS

### LEED-Certified for Existing Buildings, May 31, 2012 and First NFL Stadium to Become LEED-Certified

On May 31, 2012, Soldier Field became the first NFL stadium to achieve LEED certification.<sup>18</sup> “Our goal in renovating Soldier Field, which reopened in 2003, was threefold,” says Ted Phillips, president and chief executive officer of the Bears. “It was to create the best fan game-day experience in the NFL. It was to enhance the tribute to our war veterans. And it was to enhance and continue the greening of Chicago’s magnificent lakefront.”<sup>19</sup> To achieve this, the Bears implemented several sustainability initiatives (as well as achieving LEED certification), including an extensive recycling program, the use of green cleaning products, and upgrades of building infrastructure to save energy and water.<sup>20</sup> For example, SMG, the stadium’s management company, replaced traditional lighting on stadium columns with LEDs to lower annual energy use and costs.<sup>21</sup> To promote energy-efficient vehicles, the stadium has three electric vehicle charging stations that fans can use at no cost.

The Bears also pursue environmental initiatives in collaboration with other organizations in the wider community. “Knowing the impact that the voice of an NFL team can have on the community, the Bears continue to show our support by encouraging our fans and the public at large to engage in environmentally friendly practices, and to adopt proactive ways to reduce, reuse and recycle their environmental footprint,” says Phillips.<sup>22</sup> During the 2011-2012 season, the Bears teamed up with Constellation Energy (CE) to host Soldier Field’s first “green game.” CE provided RECs to offset expected energy use, helping the stadium to avoid 42 metric tons of carbon emissions. To engage fans, several Bears players also taped public service announcements about environmental awareness and participated in tree-planting events within the Chicago community.<sup>23</sup>

## BBVA COMPASS STADIUM, HOME OF THE HOUSTON DYNAMO

### LEED-Registered for New Construction, May 12, 2012

On May 12, 2012, before opening, the BBVA Compass Stadium—home of the Houston Dynamo soccer club—demonstrated its commitment to sustainability by registering its intention to achieve LEED Certification for New Construction. The stadium expects to become one of only two LEED-certified sports facilities in Texas (the other being the Houston Rockets' Toyota Center).<sup>24</sup> Noteworthy LEED qualifying features during stadium construction include high diversion of demolition debris to recycling or reuse, use of materials recovered or manufactured within 500 miles of the project site, use of low-VOC products to improve the indoor air quality and the use of post-consumer and pre-consumer recycled products to reduce extraction of virgin materials.<sup>25</sup> The new stadium also introduced water-efficient plumbing fixtures to save water and reduce the burden on the municipal water supply.<sup>26</sup>

BBVA Compass Stadium has partnered with GreenStar Recycling to develop their “Building a Better Planet” campaign to encourage recycling during games and throughout the community.<sup>27</sup> In this program, “GreenDrop” recycling stations replace typical garbage cans. “Partnering with GreenStar allows BBVA Compass Stadium to incorporate a convenient waste diversion system that patrons can easily utilize without increasing operational costs,” says Doug Hall, general manager of BBVA Compass Stadium.<sup>28</sup> The stations provide fans with clearly marked and convenient recycling receptacles and the program has been very successful since the facility’s opening in May.<sup>29</sup> “I would like to thank BBVA Compass for sharing our vision for the future and our commitment to the community,” says Chris Canetti, president of business operations for the Dynamo. “Together we will use the stadium as a driving force toward making a positive impact on the city.”<sup>30</sup>

## BARCLAYS CENTER, HOME OF THE BROOKLYN NETS

### Pursuing LEED Silver Certification, Fall 2012 and Arena With The Best Connection To Public Transit

The new home of the Brooklyn Nets, the Barclays Center, is pursuing LEED Silver Certification for New Construction. Set to open in September 2012, the stadium has undertaken a variety of construction initiatives to build a more sustainable facility in the heart of Brooklyn. For example, the Barclays Center will have the most extensive public transportation options of any sports venue in the country. An existing subway station, one of the most well-connected in all of New York City, is being expanded directly beneath the Barclays Center so that fans won’t even have to cross the street to enter the arena from the subway. The station services nine New York City subway lines as well as the Long Island Rail Road.<sup>31</sup> The Barclays Center is an 18,200-seat arena that will host over 220 events annually.<sup>32</sup> “When Barclays Center opens its doors, it will be one of the most extraordinary venues for architecture, technology, customer service, and programming,” says Brett Yormark, Barclays Center and Brooklyn Nets chief executive officer. “The reception we’ve received from Brooklyn has exceeded my expectations. I couldn’t be happier for the borough.”<sup>33</sup>

As an AEG-run facility, the Barclays Center will also be part of AEG’s 1EARTH commitment to environmental stewardship. In 2009, AEG, the largest owner of sports teams and events in the world, committed to measuring the environmental performance of all of its owned and managed venues (totaling more than 100 worldwide). AEG’s Ecometrics tracking system collects resource use and waste generation data from all AEG-owned facilities, including measurements for electricity, water, natural gas, carbon, sustainable paper products, green cleaning and other environmental products.

---

## ENDNOTES

1 “JELD-WEN Field Awarded Prestigious LEED Green Building Certification.” *Portland Timbers*. MLS Network, (August 31, 2011). Accessed July 31, 2012. <http://www.portlandtimbers.com/news/2011/09/jeld-wen-field-awarded-prestigious-leed-green-building-certification>.

2 Ibid.

3 “Jeld-Wen Field Achieves LEED Silver EBOM Certification.” *Turner*. Turner, (1 November 2011). Accessed July 31, 2012. <http://www.turnerconstruction.com/news/item/2bfe/Jeld-Wen-Field-achieves-LEED-Silver-EBOM-Certification>.

4 Overman, Jennifer, and Christa Thoeresz. “Earth Week: The Timbers Integrate Sustainability Into JELD-WEN Field Through LEED Certification and Strategic Partnerships.” *Portland Timbers*. MLS Network, (April 17, 2012). Accessed July 31, 2012. <http://www.portlandtimbers.com/news/2012/04/earth-week-timbers-integrate-sustainability-jeld-wen-field-through-leed-certification-a>.

5 Ibid.

6 Ibid.

- 7 "Miller Park Achieves LEED Certification." *Milwaukee Brewers*. MLB, (26 March 2012). Accessed July 31, 2012. [http://milwaukee.brewers.mlb.com/news/article.jsp?ymd=20120326&content\\_id=27619978&vkey=pr\\_mil&c\\_id=mil](http://milwaukee.brewers.mlb.com/news/article.jsp?ymd=20120326&content_id=27619978&vkey=pr_mil&c_id=mil).
- 8 *ibid.*
- 9 John and Cait. "Green Roof, Green Seats, Green Grass: Miller Park Is Now One of Wisconsin's Largest Green Buildings." Weblog post. *John & Cait...Plus Nine*. MLBlogs Network, (19 June 2012). Accessed July 31, 2012. <http://brewers.mlblogs.com/tag/leed/>.
- 10 "Miller Park Achieves LEED Certification." *Milwaukee Brewers*. MLB, (26 March 2012). Accessed July 31, 2012. [http://milwaukee.brewers.mlb.com/news/article.jsp?ymd=20120326&content\\_id=27619978&vkey=pr\\_mil&c\\_id=mil](http://milwaukee.brewers.mlb.com/news/article.jsp?ymd=20120326&content_id=27619978&vkey=pr_mil&c_id=mil).
- 11 Green, Tom. "Marlins Park Earns LEED Gold Certification." *Miami Marlins*. MLB, (May 25, 2012). accessed July 31,2012. [http://miami.marlins.mlb.com/news/article.jsp?ymd=20120525&content\\_id=32216798&vkey=news\\_mia&c\\_id=mia](http://miami.marlins.mlb.com/news/article.jsp?ymd=20120525&content_id=32216798&vkey=news_mia&c_id=mia).
- 12 *Ibid.*
- 13 "Marlins Park's Environmental Commitment | Marlins.com: Ballpark." *Miami Marlins*. MLB, accessed July 31, 2012. [http://miami.marlins.mlb.com/mia/ballpark/environmental\\_commitment.jsp](http://miami.marlins.mlb.com/mia/ballpark/environmental_commitment.jsp).
- 14 Miami Marlins Media Relations Department. *Marlins Park Is The First Retractable Roof Building In The World To Receive Gold Level Environmental Certification*. Marlins News Release. MLB, (May 17, 2012). Accessed 31 July 2012.
- 15 Green, Tom. "Marlins Park Earns LEED Gold Certification." *Miami Marlins*. MLB, (May 25, 2012). Accessed July 31, 2012. [http://miami.marlins.mlb.com/news/article.jsp?ymd=20120525&content\\_id=32216798&vkey=news\\_mia&c\\_id=mia](http://miami.marlins.mlb.com/news/article.jsp?ymd=20120525&content_id=32216798&vkey=news_mia&c_id=mia).
- 16 Mayer, Larry. "Soldier Field Earns Top Building Honor." *ChicagoBears.com*. NFL, (May 31, 2012). Accessed July 31, 2012. [http://www.chicagobears.com/news/NewsStory.asp?story\\_id=8842](http://www.chicagobears.com/news/NewsStory.asp?story_id=8842).
- 17 *Ibid.*
- 18 Hinch-Ownby, Melissa. "Soldier Field Earns LEED Certification." Web blog post. *Mother Nature Network*. MNN, (April 27, 2012). Accessed July 31, 2012. <http://www.mnn.com/money/sustainable-business-practices/blogs/soldier-field-earns-leed-certification>.
- 19 "Soldier Field Becomes First North American NFL Stadium to Attain LEED Certification | CPD." *Chicago Park District*. (April 16,2012). Accessed July 31, 2012. <http://www.chicagoparkdistrict.com/soldier-field-becomes-first-north-american-nfl-stadium-to-attain-leed-certification/>.
- 20 Mayer, Larry. "Soldier Field Earns Top Building Honor." *ChicagoBears.com*. NFL, (31 May 2012). Accessed July 31, 2012. [http://www.chicagobears.com/news/NewsStory.asp?story\\_id=8842](http://www.chicagobears.com/news/NewsStory.asp?story_id=8842).
- 21 *Ibid.*
- 22 "Houston Dynamo, BBVA Compass Reach Multi-year, Naming Rights Agreement for Downtown Stadium." *Houston Dynamo*. MLS, (12 May 2012). Accessed July 31, 2012. <http://www.houstondynamo.com/news/2011/12/houston-dynamo-bbva-compass-reach-multi-year-naming-rights-agreement-downtown-stadium>.
- 23 Woosley, Zach. "New Dynamo Stadium Rendering Released." *Dynamo Theory*. SB Nation, (October 12, 2011). Accessed August 1, 2012. <http://www.dynamotheory.com/section/dynamo-stadium-porn?page=4>.
- 24 "This Week in MLS - Houston's BBVA Compass Stadium Opens Saturday." *OurSports Central*. OSC, (8 May 2012). Accessed August 1, 2012. <http://www.oursportscentral.com/services/releases/?id=4398607>.
- 25 Pacific Cascade Corporation. *GreenDrop Recycling Stations Score Big in Houston*. *Yahoo! Finance*. PR Newswire, (May 10, 2012). Accessed August 1, 2012. <http://finance.yahoo.com/news/greendrop-recycling-stations-score-big-130200590.html>.
- 26 *Ibid.*
- 27 "Houston Dynamo, Greenstar Recycling, BBVA Compass Conduct Recycling Drive for "Building a Better Planet" Campaign." *Houston Dynamo*. MLS Network, (April 23, 2012). Accessed 1 August 2012. <http://www.houstondynamo.com/news/2012/04/houston-dynamo-greenstar-recycling-bbva-compass-conduct-recycling-drive-%E2%80%9Cbuilding-bette>.
- 28 "Houston Dynamo, BBVA Compass Reach Multi-year, Naming Rights Agreement for Downtown Stadium." *Houston Dynamo*. MLS, (May 12, 2012). Accessed July 312012. <http://www.houstondynamo.com/news/2011/12/houston-dynamo-bbva-compass-reach-multi-year-naming-rights-agreement-downtown-stadium>.
- 29 Nets Basketball. *Barclays Center Tops Out, FCRC Celebrates*. Brooklyn Nets. NBA.com, (January 12, 2012). Accessed August 1, 2012. [http://www.nba.com/nets/news/Barclays\\_Topout\\_Release\\_120112.html](http://www.nba.com/nets/news/Barclays_Topout_Release_120112.html).
- 30 Nets Basketball. *Barclays Center Tops Out, FCRC Celebrates*. Brooklyn Nets. NBA.com, (January 12, 2012). Accessed August 1, 2012. [http://www.nba.com/nets/news/Barclays\\_Topout\\_Release\\_120112.html](http://www.nba.com/nets/news/Barclays_Topout_Release_120112.html).
- 31 *Ibid.*
- 32 "Ceremonial Groundbreaking for Barclays Center at Atlantic Yards in Brooklyn." *Hunt Construction Group*. Hunt Construction Group, (2012). Accessed August 1, 2012. <http://www.huntconstructiongroup.com/barclaysgroundbreaking.html>.
- 33 "100 Days until the Opening of Barclays Center." *Barclays Center*. Brooklyn Nets, (2012). Accessed August 1, 2012. <http://www.barclayscenter.com/press/100-days-until-the-opening-of-barclays-center/>.