

PROGRESSIVE FIELD, HOME OF THE CLEVELAND INDIANS



BALLPARK STATS

Location: Cleveland, Ohio

Began Construction: January 13, 1992

Opened: April 4, 1994

Seating Capacity: 43,429

Owner: Gateway Economic Development Corporation

Operator: Cleveland Indians

Venue Uses: MLB games, collegiate hockey games, the "Snow Days" attraction with ice rinks and tubing slides and concerts.

Construction Cost: \$274 million (in 2012 dollars)

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

The Cleveland Indians are among the sports industry vanguard in the installation of onsite renewable energy, among many other greening accomplishments. Their stadium, Progressive Field, was among the first major sports venues in North America to install onsite solar, during the summer of 2007, and the Indians were the first American League baseball team to do so. In 2012 Progressive Field also became the first Major League Baseball stadium to install a wind turbine.

While the Indians' greening work was kick-started by impressive cost savings from their expanded recycling program, it quickly spread to onsite renewables and environmentally preferable purchasing. The Indians also have several green projects on the horizon, with plans in the works for a 4,000-square-foot green roof and solar thermal technology.

WHY GO GREEN?

The Indians see their green work, and their onsite renewable investments in particular, as an opportunity to be a role model for their local community and for Cleveland businesses by investing in local clean-tech jobs. "With our turbine project we hope to not only benefit the environment by increasing our use of renewable energy, but also help promote an impressive new technology that generates local jobs by taking advantage of Cleveland's great manufacturing workforce and factories," explains Brad Mohr, assistant director of ballpark operations for the Indians.

With green projects like their wind turbine, the Indians hope to stimulate the local economy and help grow Ohio's clean-tech manufacturing industry. Mohr notes that apart from the blades, which were made in Michigan, each component of the turbine was manufactured in Ohio. "The real point is that our turbine was a Cleveland project. Close to our entire turbine was made in Ohio, and we need this kind of

"THE CLEVELAND INDIANS ARE COMMITTED TO EXPLORING THE OPPORTUNITIES TO HELP PRESERVE THE ENVIRONMENT THROUGH THE USE OF ADVANCED ENERGY," says Jim Folk, vice president of ballpark operations. **"USING THE LATEST SUSTAINABLE TECHNOLOGIES IS NOT ONLY GOOD FOR THE COMMUNITY, BUT GOOD FOR BASEBALL."**

growth industry here," he says. "We have a huge skilled-labor force here in Cleveland that used to be employed by the steel industry and the auto industry. We have the labor and the infrastructure to build these turbines." The Indians' turbine was designed so that all the parts and labor needed to mass-produce the turbine system are available in northeast Ohio.

The Indians also see their highly visible onsite renewable projects, alongside their recycling programs, as another great way to connect with their fans and community. "The Cleveland Indians are committed to exploring the opportunities to help preserve the environment through the use of advanced energy," says Jim Folk, vice president of ballpark operations. "Using the latest sustainable technologies is not only good for the community, but good for baseball."

WHERE TO START?

The Indians' first major greening projects revolved around the team's interest in alternative energy. "We first looked at putting some vertical-axis wind turbines on the ballpark because we get a lot of turbulent wind in downtown Cleveland," says Mohr. "The technology wasn't there, so we decided to go with a solar pavilion, particularly as it

dovetailed nicely with the American Solar Energy Society's convention, which was held in Cleveland in 2007."

In June 2007 the Indians installed a 42-panel solar electric system—visible to the thousands of fans who pass through the ballpark each game day—that generates enough power to run all 400 televisions throughout Progressive Field with 8.4 kilowatts of clean renewable energy (approximately 10,000 kilowatt-hours per year).

The entire solar project cost \$180,000, with the Indians investing \$100,000, \$50,000 provided by the Cleveland Foundation via Green Energy Ohio, and \$30,000 from the Ohio Department of Development. "We got grants for our solar panels, which took \$80,000 off the project cost," says Mohr, "though the Indians still contributed \$100,000 and we realized it would entail about a 15- to 20-year payback. But the payback was not the point. Our solar project is an educational piece that demonstrates our commitment to clean energy."

That fan education piece is also incorporated into the Indians' recycling program. Since its inaugural year in 1994, Progressive Field has boasted recycling receptacles for plastic, cardboard and aluminum. However, it wasn't until late 2007, when the ballpark's waste hauling contract expired, that the Indians began to significantly expand their recycling facilities and establish the ballpark as an industry leader in waste management.

Towards the end of 2007, Mohr began researching smarter waste management systems for Progressive Field. The former waste contract required commingling of all recyclables—paper, cardboard, plastic, aluminum, scrap metal, electronics—which often resulted in the materials' becoming contaminated. These lower-value materials yielded no recycling rebate for the ballclub.

Mohr became determined to find a "better way to do this" and consulted with NRDC as well as a number of local recyclers. He established new partnerships with local waste companies and ultimately arranged for the separation of the ballpark's recyclables on site, instead of commingling. "This was the best solution for ensuring that we don't have contamination," says Mohr. "Now I know exactly what we're sending out and that it is in the proper state so that our partners can get the maximum rate for it."

CHALLENGES: OVERCOME AND ONGOING

The Indians were losing money by sending often-contaminated commingled recyclables to off-site sorting stations. So in early 2008 they decided to sort onsite by investing in two balers that create 1,200-pound cubes of cardboard and 500-pound ready-for-sale cubes of plastic or aluminum. Mohr points out that because the Indians are now doing the extra sorting onsite, the club gets a better price for the higher-quality source-separated commodities. In fact, it quickly became apparent that the financial payback for the recycling program would be swift. "Combining the money we saved from canceled trash hauls—paying to have waste picked up from the ballpark and sorted—with the money we

STANDOUT GREENING ACCOMPLISHMENTS

- ★ In 2012, the Indians became the first Major League Baseball team to install a wind turbine atop their ballpark.
- ★ In 2007, the Indians became the first American League baseball team to install a solar system.
- ★ From 2007 to 2009, the Indians cut their trash in half from 1,262 tons to 613 tons. This reduced the number of trash compactor pickups—which cost an average of \$500 each—by 64 percent, from 254 pickups in 2007 to 92 in 2010, saving \$50,000.
- ★ All new Progressive Field signs use LED lighting, which offers energy cost savings, low-voltage operation and reduced carbon emissions.
- ★ Energy efficiency initiatives across the ballpark have cut the Indians' energy use from 23 million kilowatt-hours to 17 million kilowatt-hours annually and reduced the ballpark's carbon footprint by 42,000 pounds of CO₂ emissions yearly.
- ★ Green Seal-certified and 100 percent recycled content paper towels, toilet tissue, and facial tissue are used in the ballpark and front office.
- ★ 100 percent Green Seal-certified cleaning products are used throughout the ballpark.
- ★ As the second Major League Baseball ballpark to install onsite solar, Progressive Field generates enough electricity to power all 400 television sets around the ballpark.
- ★ More than 18,400 pounds of food was donated to the Cleveland Foodbank after home games during the 2009 season, which translates to 14,300-plus meals used to feed those in need.

made from selling the sorted recycled commodities, we paid off the total \$30,000 cost of the two balers in six months," Mohr explains. "That really got people's attention and gave our environmental work real credibility. The senior staff's immediate response was 'Keep going!'"

In 2008 the Indians also launched a campaign called "Our Tribe Is Green... Are You in the Tribe?" to better engage staff and fans about the Indians' mission to reduce the ballpark's environmental impact. The campaign introduced 125 new Pepsi-sponsored plastic bottle recycling receptacles spread around the ballpark concourse. "Recycling is the main green activity we can offer the fans to participate in with confidence. If I put out composting, it would be contaminated in a minute," says Mohr. "In this part of the country, the lack of public education about diverting waste is a real challenge."

FINANCIAL SAVINGS FROM SMART WASTE MANAGEMENT

- ★ In 2007 the Indians generated 1,261.6 tons of trash requiring 254 pickups at approximately \$500 each.
- ★ By 2009 the Indians' improved recycling program had cut their trash back to 613.4 tons needing only 92 pickups.
- ★ The Indians have earned about \$50,000 in pure profit every year moving forward (relative to 2007 costs), thanks to fewer trash hauls.
- ★ Since purchasing balers in early 2008, the club has earned more than \$20,000 in commodity rebates for its recycled materials.

“THAT'S WHERE WE SEE THE FINANCIAL DIFFERENCE...IN RECYCLING, AND AVOIDING TRASH BEING HAULED AWAY,” Mohr says. **“GREEN INITIATIVES ARE HERE TO STAY BECAUSE THEY SAVE TEAMS MONEY.”**

The Indians improved ballpark recycling by implementing a ballpark “pick” after every game to sort compost and recyclables from trash. The Indians hire an average of 30 custodial staff to complete three sweeps of the entire ballpark, the first for compost, the second for recyclables, and the third for trash. In order to increase the recycling rate at the ballpark, Mohr now employs more custodial staff, hiring about eight additional workers to collect recyclables after each game, creating more local jobs while reducing the ballpark's environmental impact.

Mohr explains that the most effective way to implement front-of-house composting in Cleveland is with the ballpark pick. “It's almost preferable for fans to put their leftover waste underneath the seats so that after the game, our custodial crew can do three sweeps of the park and guarantee a clean waste stream, while sending the least amount out to the landfill as possible,” explains Mohr. “But I don't encourage the fans to leave all waste under their seats because I don't want to give mixed messages about the importance of fans recycling themselves. We also want our fans and staff to stay safe and healthy, so we don't want to encourage unsanitary practices throughout the ballpark.”

While encouraging fans to recycle more in the concourse, in 2009 the Indians also ratcheted up their recycling facilities in their home and visiting clubhouses, encouraging players as well as staff to recycle more. In 2010, composting bins (for food waste and grass clippings) were added to the clubhouses

and across internal operations. The bins were quickly put to use, with a 96-gallon bin of food waste filled every two days during the season. “We get most of our compost from our restaurants, including some post-plate collection, aka leftovers from guests' plates at restaurants,” says Mohr. “We get a surprising amount of compost from the clubhouses as well.”

In three years the Indians cut their annual waste generation in half. In 2007 the ballpark generated 1,261.6 tons of trash; by 2010 this was down to 613.4 tons. This reduced the number of trash compactor pickups, which cost an average of \$500 each, by 64 percent, from 254 pickups in 2007 to 92 in 2010, saving the club \$50,000. Mohr is confident that the Indians will continue to save \$50,000 or more annually, relative to 2007 costs, with the ballpark's improved waste management and recycling system. “That's where we see the financial difference...in recycling, and avoiding trash being hauled away,” Mohr says. “Green initiatives are here to stay because they save teams money.”

The ballpark recycled more than 150 tons of materials in 2009 and in excess of 125 tons in 2010, including cardboard, paper, aluminum, PET plastic, scrap metal, cooking oil, fluorescent bulbs and ballast, batteries and electronics. The year 2009 was a record recycling year, because that year the ballpark recycled all of the scrap metal from retired portable concession stands. Since installing balers in early 2008, the club has earned \$20,000 in commodity rebates for its recycled materials.

“The Indians have a wide breadth of activity and efforts in greening and sustainability thanks to the guidance and support of NRDC and NRDC's unparalleled sports greening resources,” says Mohr. “Our comprehensive recycling program is just the beginning, as we're also the first Major League club to install wind power. And we are trying to add a new green feature each year.”

In 2008 the Indians partnered with Cleveland State University to pilot a pioneering helical wind turbine design, at no cost to the club, in the hope that it would help teach fans about the potential of renewable energy. The project was also designed to help boost renewable job opportunities in the region by providing a successful real-world test of a locally manufactured technology.

Dr. Majid Rashidi, a professor of mechanical engineering at Cleveland State University's Fenn College of Engineering, developed the innovative design using grants from the U.S. Department of Energy and the State of Ohio. The grants also fully covered the cost of the turbine and installation at Progressive Field. “It was cost savvy for us because it's a Department of Energy project,” explains Mohr, “though it was still a little difficult to convince senior staff and the general council to invest time in a pilot technology. We were successful thanks to our organization's mission to act as a community role model.”

After three years of work—planning, designing and building the innovative, corkscrew-shaped turbine—the Indians secured the apparatus on top of the southeast corner of Progressive Field on March 28, 2012. The 1,800-pound turbine was strategically assembled in the players' parking lot

at Progressive Field to cut down on transportation emissions and costs. Ironworkers affixed 80 translucent white plastic pieces around a heavy aluminum frame to form the thick corkscrew helix. The 18-foot wide cylinder now constantly rotates atop the ballpark to find the strongest wind to keep the four 6-foot circular turbines spinning, and generating energy, as fast as possible.

With the turbine installed and lit from within by colored LED lights, the Indians look next to engaging fans with interactive digital kiosks about wind energy. “It’s a great opportunity to teach fans about the importance of clean energy technologies,” says Mohr.

Thanks to a combination of energy efficiency and renewable energy projects, the Indians have cut their energy use by more than 20 percent. “We’ve shaved about 4 million kilowatt-hours a year off our average energy consumption, but that hasn’t given us any cash savings,” says Mohr, “as electricity was deregulated in Ohio on January 1 in 2009 and our electric rates went up 20 percent.” However, with their green initiatives well under way by 2009, the Indians were able to avoid paying significantly more for their electricity by cutting their use.

LESSONS FROM THE FIELD

ANYONE CAN CHAMPION GREENING AND START A GREEN PROGRAM:

When Mohr expressed interest in expanding the Indians’ recycling program and applying for green grants back in 2005, he quickly was put in charge of the team’s green program. “I turned into our greening and sustainability person even though I had no background knowledge and just believe recycling is important,” says Mohr. “After our solar and recycling successes I was given the freedom, tools and trust to find additional green projects that we could do here at the ballpark.” Mohr explains that any staff member can spark an organization’s interest in greening by brainstorming with other staff, getting like-minded colleagues on board, identifying smaller-scale achievable projects and building a green program from there.

ENVIRONMENTAL BENEFITS FROM SMART WASTE MANAGEMENT

The environmental benefits of the Indian’s efforts are also significant. Recycling just one ton of paper to avoid the production of paper from virgin materials saves enough energy to power an average home for six months, saves 7,000 gallons of water, and keeps 60 pounds of pollutants out of the air. Although it varies by grade and technology, making paper from recycled paper instead of from trees involves 64 percent less energy and 58 percent less water. Recycling one aluminum can saves enough energy to run a 25-watt compact fluorescent for nearly 16 hours (or a 100-watt incandescent light bulb for nearly four hours).

LOOK FOR LOCAL, REGIONAL AND FEDERAL FUNDING OPPORTUNITIES AND PARTNERSHIPS: “The entire solar project cost about \$180,000. We got a \$50,000 grant from the Cleveland Foundation, a local philanthropic organization, via Green Energy Ohio, which is a great nonprofit in the state that we work with very closely,” says Mohr. “Combine that with \$30,000 from the Ohio Department of Development, and there’s \$80,000 off the project.”

INTEGRATE GREEN PRINCIPLES INTO YOUR PRACTICES WHEN ESTABLISHING OR RENEWING CONTRACTS:

The Indians were able to save tens of thousands of dollars by reevaluating their waste processes when their garbage hauling contract was up. By talking with other local recyclers, Mohr’s team was able to learn about more efficient and profitable practices. “Because we were no longer bound by our contract, I was able to pick the brains of and get proposals from a number of local recyclers,” explains Mohr.

INVOLVE FANS IN YOUR GREEN PLANNING (AND THEY’LL BE PROUDER OF THE RESULTS):

“The general fan response to our green projects is positive, especially when we talk about the payback, such as how we’ve cut our trash going to landfill by 50 percent compared with 2007 and how much money we’ve saved on trash hauls,” says Mohr. “The best part is that when I give examples of our savings people say, ‘What can I do to help?’ or ‘I have another idea.’ It really starts a conversation, and I can always learn new things. I will listen to anybody’s idea, no matter how weird it is. I think everybody has something to contribute, and I’ll listen.”

ENCOURAGE STAFF TO MAKE GREENING PART OF THEIR LIFE:

A regular class for staff can help recruit new interest in your green program, keep staff up to date on your organization’s accomplishments, spread your green message to a broader audience and help shift your community toward more environmentally preferable practices. “I hold a class each year about what we’re doing to be greener at the ballpark. I want to encourage staff members to take it home, take it beyond downtown Cleveland,” says Mohr.

