



 EPSTEIN

Sustainability Action Plan



Company Overview .....Page 1

Section 1 .....Page 3

**Vision**

- 1a. Context
- 1b. Sustainable Design Goals

Section 2 .....Page 4

**Knowledgebase Development**

- 2a. Education, Resources and Programs

Section 3 .....Page 5

**Office Sustainability Practices**

- 3a. Carbon Footprint Reduction
- 3b. Facilities and Maintenance Improvements – Green Certification
- 3c. Small Change
- 3d. Support Sustainability Initiatives

Section 4 .....Page 6

**Design Process**

- 4a. Integrated Project Delivery
- 4b. Sustainable Cost Database

Section 5 .....Page 8

**Business Strategy**

- 5a. Green Team
- 5b. Sustainable Business Plan

Section 6 .....Page 9

**Appendices**

- Appendix A. 2030 Challenge



Rondo 1  
LEED-EB:O&M v2009 Gold

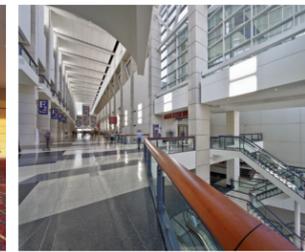


## Company Overview

Established in 1921, Epstein is one of the oldest Chicago based architecture firms. We offer full-service architecture, interiors, engineering, strategic and construction services to a wide range of clients in the commercial, industrial and public sector. Currently the firm has over 30 projects certified or pursuing LEED certification and nearly 30% of Epstein's domestic design and engineering staff are LEED Accredited Professionals. As the primary vehicle for maintaining our commitment to sustainability, Epstein has instituted a Sustainability Action Plan in our offices worldwide. This Plan, which follows, is a dynamic document that is reviewed by the Board of Directors each year and is continually updated by the company's Green Team.

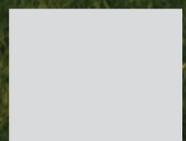
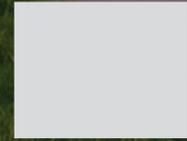


McCormick Place West Expansion  
LEED - NC™ Certified



Client Testimonial: Nonda Harris  
Senior Director of Development- McCormick Place West

*"Epstein's efforts, commitment and dedication were essential in providing the Metropolitan Pier and Exposition Authority with a first class, state-of-the-art convention center."*



S.C. Johnson & Son, Inc.  
Fortaleza Hall & The Commons  
LEED-NC™ Gold Status

1a. Context

Environmental Crisis

Our global carbon footprint is expanding in tandem with increased energy use, spurred by continuing population growth and explosive economic expansion- both in emerging economic powerhouses like China and India, as well as mature economies such as our own. By-product greenhouse gas emissions- most notably Carbon Dioxide (CO<sub>2</sub>)- are by widespread scientific consensus contributing to global warming, which may have severe repercussions including widespread flooding, droughts, species extinctions, increased hunger worldwide, as well as other threats<sup>1</sup>.

In the United States, greenhouse gas emissions from residential and commercial buildings along with transportation have increased 25% over the last 25 years, while industrial emissions have actually decreased<sup>2</sup>. It is projected that total U.S. carbon emissions could grow by 16% between 2006 and 2030 unless current trends are arrested<sup>3</sup>.

Buildings (of all kinds) are responsible for approximately 48% of energy usage in the U.S.<sup>4</sup>, and about 39% of CO<sub>2</sub> emissions<sup>5</sup>. Ongoing operation and maintenance of buildings account for approximately 76% of the country's electrical use<sup>6</sup>.

With this acknowledgement, it is clear that architects, engineers, designers and constructors in general – and Epstein in particular- are uniquely positioned to reverse these trends through sustainable design practices that yield reduced carbon emissions and conserve natural resources.



1b. Sustainable Design Goals

At Epstein, our goal is to be a leader in Innovative Sustainable Design.

At Epstein, sustainability is a core element of our identity. We will employ sustainable practices in our offices worldwide and we will design and build economically feasible, green projects for our clients. We will promote healthy, sustainable lifestyles to our employees and we will contribute to the sustainable welfare of the communities where we live and work.

Epstein will pursue partnerships with like-minded clients to promote green practices. In our everyday commerce, we will communicate with a focus on sustainability to encourage an understanding of its importance. Epstein will research carbon-reduction strategies, and will seek opportunities to share our expertise through seminars, conferences and publications.

*Epstein has completed over 14 million square feet (1,306,000 m<sup>2</sup>) of LEED certified space, which equates to approximately 1.5% of all LEED certified building square footage in the world.*



353 North Clark  
LEED-CS™ Gold

<sup>1</sup>2030, Inc. / Architecture 2030 – Web Site, www.architecture2030.org

Vincent Martinez, Research and Production Coordinator

<sup>2</sup>Blueprint for American Prosperity, Brookings, "Shrinking the Carbon Footprint of Metropolitan America," Marilyn A. Brown, Frank Southworth, Andrea Sarzynski, May 2008, page 2

<sup>3</sup>Ibid

<sup>4</sup>AIA Sustainability 2030, "50>>50," version 1, 2007, introduction

<sup>5</sup>Blueprint for American Prosperity, Brookings, "Shrinking the Carbon Footprint of Metropolitan America," Marilyn A. Brown, Frank Southworth, Andrea Sarzynski, May 2008, page 2

<sup>6</sup>AIA Sustainability 2030, "50>>50," version 1, 2007, introduction

2a. Education – Resources and Programs

Epstein's resources supply employees with up-to-date information and education on critical aspects of sustainability. The tools and methods to provide this education include:

1. "Green" Library
 

An electronic library is maintained that allows every discipline to contribute information. The system includes information such as sustainable products, vendors and research.

  - a. Training sessions are conducted for all employees to explain:
    - 1) The value of the library
    - 2) The library's organization
    - 3) The importance of each employees input.
  - b. Library Maintenance
 

While all employees may access the library materials, the responsibility of maintaining and updating the library belongs to the Sustainability Analysts and Senior Sustainability Analysts. Employees are encouraged to submit materials or offer suggestions for expanding the library holdings to any Sustainability Analysts.

2. "Green" Master Specifications and Sustainable Design Standards

- a. Epstein's Master Specifications are used on all projects and organized to gear projects towards sustainable design solutions that address goals such as LEED certification, improving indoor air quality, meeting carbon reduction targets, increasing energy efficiency and providing sustainable energy sources. The master specification is written with a holistic approach towards sustainability establishing certain sustainable products and practices as standard requirements, with additional improvements made to those requirements on a project to project basis.

- b. Sustainable design guides and standards are also catalogued and are available to all employees. This information includes LEED Guides, ASHRAE Standards, AIA Sustainability 2030 and others.

3. Sustainability Seminars

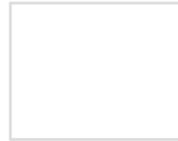
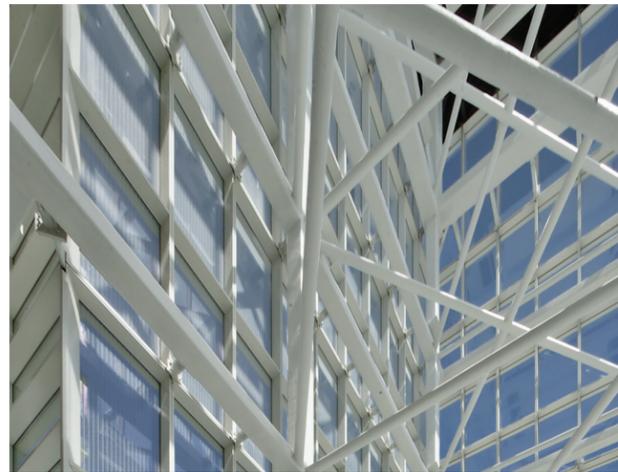
Epstein's ongoing sustainability education strategies include Lunch n Learns, web-seminars and field trips.

- a. Each discipline is responsible for organizing their seminars. Topics and schedules are established quarterly and then modified as needed.

- b. Seminars are hosted by outside specialists or in-house resources.
- c. Company wide Updates
 

Epstein's sustainable initiatives and goals are delivered by a variety of means, including: Epstein World Report; periodic whole-office and/or studio meetings; company wide email bulletins.
4. LEED Exam Study Group
 

Epstein encourages all architecture and engineering employees to obtain a Green Associate level from the USGBC by reimbursing employees for the cost of the exam. A study group has been created in order to help each employee reach their goal of obtaining the certification.



McCormick Place West Expansion  
LEED- NC™ Certified

3a. Carbon Footprint Reduction

We strive to reduce our top 3 carbon contributors. We will determine and track our carbon footprint.

1. Reduce Carbon From Paper Use  
We are increasingly employing methods to reduce usage, print double sided, use recycled paper processed without chlorine and recycle our paper waste.
2. Reduce Carbon From Transportation  
We are increasingly employing methods to reduce the carbon contribution to the company from employee commute and business travel through incentives, reduced use and facility modifications.
3. Reduce Carbon From Energy Use  
We are increasingly employing methods to reduce our GHG emitting energy demand, obtain sustainable energy contracts and investigate on site sustainable energy production.
4. Reduce carbon from other methods, join a carbon reduction program and make incrementally larger purchases of carbon offsets. We will explore other methods to reduce our carbon footprint such as a carbon reduction program.

3b. Facilities and Maintenance Improvements – Green Certification

We are pursuing a healthier, more efficient workplace in all new and existing offices.

1. New Facilities: LEED Gold or Equivalent

In our designs for new Epstein facilities we will place a strong emphasis on the following concepts:

- a. Reducing carbon footprint due to daily commute.
- b. Reducing water use.
- c. Setting a high bar for the energy performance of the building and equipment.
- d. Tracking energy use for internal and external education.
- e. Reusing existing building stock.
- f. Using sustainable construction materials.
- g. Creating a non-toxic workplace.

2. Existing Facilities

As we make changes to our existing facilities that hold long term leases, we place a strong emphasis on sustainability. Some examples that we have implemented are:

- a. Reducing carbon footprint due to daily commute.
- b. Reducing water use.
- c. Increasing the energy efficiency of equipment.
- d. Purchasing office supplies that are reusable, biodegradable, recyclable and/or made with a high content of recycled material.
- e. Recycling extensively.
- f. Using green cleaning products and continue to educate ourselves in sustainable design.
- g. Adding occupancy sensors to conserve lighting energy use.

3c. Small Change

We are creating big impacts by supporting simple changes.

1. Five Annual ‘Greening’ Projects per Office  
We are selecting and budgeting at least five projects per year with a net cost <\$1000 each in the Green Team annual proposal to fill the gaps in our commitments to established programs, encourage employee involvement, alter corporate culture and create visible improvements to the workplace.
  - a. Projects should include at least one geared towards Carbon Reduction and one towards a Certification.

3d. Support Sustainability Initiatives

We are joining the sustainable community and putting a face to our commitments.

1. The 2030 Challenge  
By signing on with the AIA 2030 Challenge, we agree to educate our clients as to the objectives of the 2030 Challenge and apply its GHG emissions limits to all of our design work, including new facilities for our own offices.
2. Sustainable Organizations and Events  
We participate in local sustainable business organizations and conventions:
  - a. Chicago Sustainable Business Alliance
  - b. Greenbuild
3. Sustainable Philanthropy  
We target donations to Community, National or International Programs and/or Charities that operate in a sustainable manner or make sustainability their objective.
  - a. Provide matching contributions to sustainable donations made by employees.
  - b. Encourage the incorporation of sustainability into volunteer work made by employees.

Current goal: *become sustainable.*  
Future goal: *become restorative.*



Charles & Brady LLP  
LEED-C1™ Gold

Exelon Corporation  
LEED-C1™ Platinum



4a. Integrated Project Delivery

As an AEC firm, it is our work product that largely defines us to our clients, to the public and to our fellow practitioners. Epstein employs the principles of Integrated Project Delivery (IPD) on a firm-wide basis to consistently achieve design excellence and to deliver projects that support our identity as Leaders in Innovative Sustainable Design.

IPD is a process acknowledged by organizations such as the AIA, ANSI, ASHRAE, CURT, AGC and others as the preferred means to deliver the best designed, highest quality and highest performing sustainable projects.

1. Benefits of IPD- Team Based Approach  
The Increased complexity of sustainable projects requires a collaborative design approach to resolve the often-competing objectives of project team members.

IPD is a collaborative, holistic approach that encourages the successful synthesis of sustainable site development, sustainable system design, program functionality and architectural form.

The IPD method fosters interdisciplinary communication that results in efficient design decision-making that can lead to savings for the Client in both construction costs and operating expenses.

2. Interdisciplinary Team  
In an integrated project, owner, designers, consultants, constructors, and suppliers must work in a collaborative spirit, with mutual respect, to achieve the project's goals.

- a. At project onset, an Interdisciplinary Team is selected by the owner and main designer(s). The team is comprised of knowledgeable, experienced and empowered decision-makers including senior project leaders for all design disciplines (LEED accredited), construction/cost disciplines, owner representative(s), selected consultants, and other stakeholders.

- b. It is critical that all team members understand the value of collaboration and are committed to working as a team for the best interests of the project.

3. Early Involvement of Key Decision Makers  
Decision-making by informed team members has the greatest effect during the projects early stages. Added front-end effort results in fewer coordination errors to be corrected at later stages.

4. Charette Process

The kick-off meeting is conducted as a charrette. The charrette process is a good vehicle for facilitating the design process, accelerating the education of stakeholders- allowing for early buy-in of major decision makers- and ensuring that all important and complex issues are addressed. The Team first meets to:

- a. Clarify the client's vision and program.
- b. Identify the goals and design objectives to achieve that vision.
- c. Establish the scope of work for each IPD team member.
- d. Prepare an initial consensus budget conforming to the scope of program and design objectives.

5. Team Continuity Through All Project Phases

Key decision-makers must stay actively involved throughout the project.

- a. The interdisciplinary Team is actively involved through all project phases and meets regularly to provide continuity, to monitor progress, and to ensure that design objectives are met and the owner's vision realized.

6. Total Building Commissioning

- a. Total building commissioning is performed throughout the entire process, with energy modeling, tracking all design goals, consideration of the envelope, mechanical and electrical systems, controls, etc.

7. Use of Building Information Modeling (BIM)

Technology BIM software is important for both design coordination and fabrication coordination:

- a. Given the constant desire to accelerate the building development process, the use of 3-dimensional modeling together with detailed model databases facilitates well-informed decision-making between disciplines.
- b. BIM enables the potential for virtual design and construction (VDC)
- c. BIM data can help with construction sequencing issues.

8. Organization and Leadership

Team leadership roles may vary from project to project.

- a. With IPD, team leadership is taken by the team member(s) most capable with regard to the specific work being addressed.
- b. Design professionals and contractors may each lead in areas of their traditional competence with support from the entire team.

- c. Specific roles are necessarily determined on a project by project basis.
- d. While roles are defined, there should be no artificial barriers that discourage open communication.

4b. Sustainable Construction Cost Database

A sustainable database is currently being developed to organize initial costs for building products and installation. The Database will provide initial cost and life cycle cost for specific sustainable design strategies and indicate the applicable LEED points for each strategy. The database will aid the designers in selecting products and help the client make environmentally conscious designs while evaluating first costs and life cycle costs. The database will be updated and maintained by our construction department. The aggregated data will be available to review by all other disciplines. Employees with new and updated information are encouraged to pass on that data to be entered into the database. The database will also be populated with historical data, vendor supplied pricing and contractor input.



S.C. Johnson & Son, Inc. Fortaleza Hall & The Commons  
LEED-NC™ Gold Status

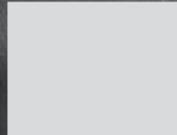


Testa Produce, Inc.  
Pursuing LEED-NC™  
Platinum Certification



Client Testimonial: Deborah Kuo  
Director, Real Estate- Exelon Corporation

*"Epstein worked closely with Exelon leadership to meet our commitment of developing a space that aligns with our vision of environmental stewardship, while providing an exceptionally productive workplace for our employees."*



Exelon Corporation  
LEED-CI™ Platinum

5a. The Green Team is a standing committee, meeting on a regular basis to maintain the Sustainable Action Plan (SAP) through a continual improvement process. It develops programs for increasing the sustainability of the company and employee-owners, and it develops proposals to the Board of Directors for capital and operational improvement projects that will significantly impact the sustainability of Epstein.

The Green Team generates ideas, proposes budgets and pursues implementation of concepts in the effort to meet the Sustainable Objectives for each fiscal year as guided by the SAP and as directed by the Board of Directors.

The Green Team is composed of employee volunteers appointed by respective business unit leaders, representing a cross section of Epstein.

1. Size  
There are a maximum of 12 members as follows: 1 each from NYC, Warsaw and Bucharest offices; the remainder from the Chicago office.
2. Term  
Members have a term of one year, which may be extended if requested at the discretion of the respective business unit leader. If a member is unable to complete the term a replacement will be appointed by the respective discipline director.
3. Chairman  
A committee Chairman is elected by majority vote at the beginning of each calendar year.
4. Redundancy  
Each member should have a stand in or back up.
5. Meeting Location  
Meetings take place in Epstein's Chicago office (usually) with teleconferencing for members in NYC the office. Warsaw and Bucharest members will participate via meeting minutes and email.
6. Current Objectives  
Enact the Sustainability Objectives of the current year. Track and monitor the Objectives as required for recording.
7. Future Objectives  
Propose the Sustainability Objectives for the following year by November 1st of the current year. The objectives shall include carbon reduction efforts, capital and operating improvements required to meet LEED certification and five projects under \$1K. The proposal shall include a timeline, budget and identify members

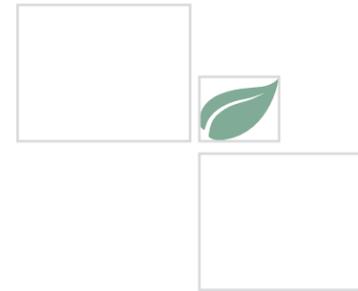
serving on the Implementation Committee. The Board will review the budget for these Objectives later in November.

8. Update  
Produce a quarterly report for the Board, Officers and Company on Epstein's progress towards the Sustainability Objectives laid out for the current year by the SAP. Incorporate this report into Epstein's quarterly newsletter.
9. Sustainable Events  
Organize at least two company events per year to remind employees of our efforts, collect ideas for future Sustainability Objectives and recruit support for scheduled efforts. The Green Team shall schedule these events prior to March 1st of the current year.
10. AIA 2030  
Prepare and submit the required reporting documents according to the AIA 2030 Commitment.
11. Monitor Resource Use  
The Green Team shall acquire resource use history from all offices and monitor it quarterly to establish baselines and goals for improvement.
12. Revise  
The Green Team shall revisit the SAP every year or sooner as deemed necessary to determine if it requires updates, revisions or overhaul.
13. Accountability  
The Green Team is held accountable to the Epstein Board of Directors as to progress and budget.

5b. Sustainable Business Plan

We believe that GREEN DESIGN = GOOD ECONOMICS. We strive to change the design/build/operations process through integrated sustainability strategies with world class consulting services. As a result, our clients, their employees and customers will benefit from reduced negative environmental impacts while also gaining improved economic performance.

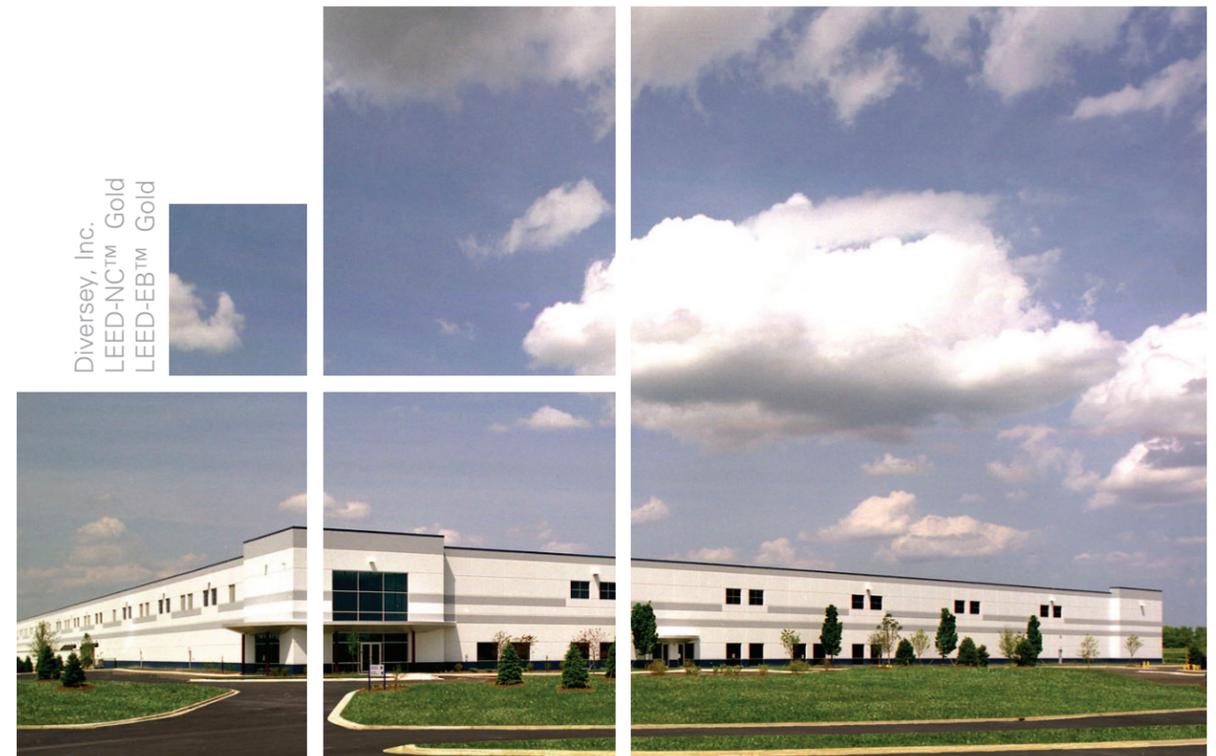
Epstein has built upon its expertise in sustainable design on our own design projects and can provide sustainable design and LEED consulting services to owners, other architect and engineers, contractors and government agencies. These services are overseen by a focused department within Epstein dedicated to providing these services to clients. A diverse group of LEED Accredited Professionals, with education and professional experiences in engineering, architecture, interior



design, and environmental health, are able to provide high performance buildings focused on a healthy and productive built environment in the Sustainability Services Department. Our clients appreciate these services and our precision, resources, knowledge and resourcefulness to answer any question and solve any problem. We prefer the department gets involved early to inform all disciplines of a project team of the opportunities to integrate, rather than add, sustainable design. Our work includes a variety of project types, including industrial, where sustainable design is typically less understood, in an effort to shape and develop a more sustainable building sector. In addition to industrial, we continue our focus to provide sustainable solutions regardless of building type, size, or location, with projects currently underway in all major sectors for clients across the nation and in Europe. We remain committed to providing services that are sensitive to the end user, local culture, and owner desires.

A variety of services are offered from the department to achieve client and project goals including Energy Use Auditing and Analysis, LEED Certification Consulting/ Benchmarking, Energy Modeling and Analysis, Daylighting Modeling and Analysis, IAQ Testing and Analysis, and Carbon Footprint Analysis. Our group is supported by the resources of our full service AEC firm, including our in-house MEP department that is directly or indirectly involved on every project as needed. Additional resources are also available within our Architecture, Structural, Interiors, Civil, Strategic Consulting, Project Management and Construction departments.

 Providing the guidance to reach our goals.





## Appendix A: 2030 Challenge

Credible scientists give us ten years to be well on our way toward global greenhouse gas (GHG) emissions reductions in order to avoid catastrophic climate change. Yet there are hundreds of coal-fired power plants currently on the drawing boards in the US. Seventy-six percent (76%) of the energy produced by these plants will go to operate buildings.

Buildings are the major source of demand for energy and materials that produce by-product greenhouse gases (GHG). Slowing the growth rate of GHG emissions and then reversing it over the next ten years is the key to keeping global warming under one degree centigrade (°C) above today's level. It will require immediate action and a concerted global effort.

To accomplish this, Architecture 2030 has issued The 2030 Challenge asking the global architecture and building community to adopt the following targets:

- All new buildings, developments and major renovations shall be designed to meet a fossil fuel, GHG-emitting, energy consumption performance standard of 50% of the regional (or country) average for that building type.
- At a minimum, an equal amount of existing building area shall be renovated annually to meet a fossil fuel, GHG-emitting, energy consumption performance standard of 50% of the regional (or country) average for that building type.
- The fossil fuel reduction standard for all new buildings shall be increased to:
  - 60% in 2010
  - 70% in 2015
  - 80% in 2020
  - 90% in 2025
  - Carbon-neutral in 2030 (using no fossil fuel GHG emitting energy to operate).

These targets may be accomplished by implementing innovative sustainable design strategies, generating on-site renewable power and/or purchasing (20% maximum) renewable energy and/or certified renewable energy credits.



353 North Clark  
LEED-CS™ Gold