# **BEEP BEEP, Time to Change How You Operate: BOMA's New Energy** Efficiency Program for the Commercial Real Estate Industry

Brenna Walraven, USAA Realty & BOMA Foundation Mike Mernick and Tom Roessler, ICF Consulting Deb Cloutier, JDM Associates

### ABSTRACT

The Building Owners and Manager's Association (BOMA) Foundation is affiliated with BOMA International, the nation's oldest and largest commercial real estate organization, with approximately 19,000 members representing 80% of the commercial real estate market in the United States. BOMA's new operational excellence program, the BOMA Energy Efficiency Program (BEEP) is being offered for use with federal and regional programs as a stand alone offering or in conjunction with value added services. BEEP provides information and resources for reducing the energy consumption of commercial office buildings via six 120-minute seminars that qualify for continuing professional credits. BEEP was designed to:

- Educate owners and operators of commercial real estate on how to change their business processes to foster ongoing savings and improvements.
- Deliver energy savings quickly through no and low cost improvements
- Measure and track successes with EPA's Energy Performance Rating system
- Establish strong relationships with federal agencies, regional utilities, commercial real estate organizations, and local BOMA associations.

This paper will focus on BOMA's leadership role in developing a market transforming, energy efficiency initiative and the resulting program - BEEP – for the commercial real estate industry. BEEP was modeled after the EPA's ENERGY STAR program and developed with the expertise of commercial real estate practitioners. In addition, this paper will provide a summary of the lessons learned and best approaches to reach and educate commercial real estate practitioners on the importance of and opportunity to improve energy performance and enhance the asset value of commercial real estate.

## **Challenges Turned Into Opportunities**

One of the greatest challenges for real estate practitioners is to balance the demand for natural resources such as energy, minimize the environmental footprint of properties, and maintain tenant comfort and satisfaction. The leasing structure and ownership/management of investment real estate present many barriers to improving the energy performance of commercial real estate. The most prevalent misconceptions are that it is not in the owner's best interest to invest in energy improvements that will provide savings to the tenants via lowered energy bill expense billings and tenants should not invest in upgrades to a property they do not own. BOMA reviewed the traditional market dynamics, players and misconceptions, and drawing from EPA's success with ENERGY STAR, developed a market-based educational training series that addresses these challenges. BEEP integrates BOMA member experiences and real estate vernacular to provide practitioners concise, easy-to-implement no and low cost solutions to improve energy and financial performance. BEEP was designed to educate practitioners on the importance of energy, change operator's behavior to better manage energy use, and define operational excellence for commercial properties.

## **Building Owners and Manager's Association International (BOMA)**

The BOMA Foundation (Foundation) is a private nonprofit organization dedicated to sponsoring and encouraging innovative research and educational activities that advance the commercial real estate industry and profession. The Foundation is affiliated with the Building Owners and Managers Association International (BOMA), the nation's oldest and largest commercial real estate organization. BOMA is a federation of nearly 100 North American associations and nine overseas affiliates with approximately 19,000 members, representing more than nine billion square feet of commercial real estate, or approximately 80% of the commercial real estate market in the US.

The work of the BOMA Foundation touches all aspects of commercial real estate training and research. Programs and projects are developed to assist real estate professionals, researchers and others concerned with building performance and its impact on society. Foundation programs are supported through tax-deductible gifts, grants and bequests from BOMA members and other building owners and managers, real estate related companies, foundations and trusts, government agencies and interested individuals. The Foundation is guided by a Board of Trustees composed of BOMA International executive board members, industry representatives and other persons prominent in the real estate community.

### **Past Experience**

BOMA and the BOMA Foundation have a long history of educational programs that have and will continue to transform the commercial real estate market. BOMA has produced numerous audio seminars and classroom-based educational programs on energy efficiency, operational management, and the environment. BOMA estimates at least 2,000 attendees have participated in these energy management and environmental courses, courses which have become progressively more sophisticated in response to an increasingly more complex industry.

In the wake of September 11, 2001, BOMA led the commercial real estate industry to transform its emergency preparedness and life safety/security planning efforts. BOMA developed a variety of training programs designed to help its members and other industry professionals to enhance their security preparations and address new types of threats and risks. BOMA developed and offered a four-hour, ten-module eSeminar entitled, "Building Security and Evacuation Planning" which is available 24/7 online from any Internet connection. In addition, BOMA offers regularly scheduled audio seminars on such topics as "Emergency Preparedness in the Wake of the 9/11 Commission Report;" "Terrorist Screening: Yes, It's Your Job...What Commercial Real Estate Professionals Need to Know to Comply with the PATRIOT Act & Executive Order 13224;" "Best Practices in Fire Safety;" "Code Orange. Code Red. War. Preparing for the New Security Challenges;" "HVAC Security;" and "Liability, Insurance, Risk Assessment, and Other Legal Issues."

In 2002, BOMA published *The Property Professional's Guide to Emergency Preparedness*, which also provides comprehensive information and training on preparing for various emergencies. BOMA conducted classroom-based courses at the BOMA Annual Convention to share security information. And, several BOMA volunteer committees regularly meet to share best practices, discuss new challenges, and provide insight into new courses, services, and other guidance that BOMA can develop and provide to enhance its members' needs. The programs enumerated above have educated an estimated 10,000 industry professionals.

### **Market Opportunity**

The commercial office building industry spends approximately \$24 billion annually on energy costs and contributes 18% of US carbon dioxide emissions. Energy represents the single largest and most controllable operating expense for office buildings, typically a third of variable expenses. EPA studies and ENERGY STAR partner observations show that typical energy savings of 30% are readily achievable. BOMA International members represent approximately 80% of the commercial office real estate in the US and the federations of BOMA local associations have an opportunity to demonstrate unparalleled leadership to their members and the industry. A 30% reduction in energy consumption is equivalent to \$7.2 billion, or avoiding 120 billion pounds of carbon dioxide or removing 12 million cars from American roadways.

The BOMA Task Force estimates that more than 2,000 members representing 2 billion square feet will adopt no cost and low cost best practices as a result of BEEP over the next 3 years. It is estimated that low cost best practices to improve energy performance could alone reduce energy consumption and carbon emissions by 10%. A 10% reduction annually for 2 billion square feet will result in \$400 million in energy savings<sup>1</sup>. At an 8% capitalization rate, the enhanced asset value of the energy savings is equivalent to raising the value of commercial properties by \$5 billion. In terms of carbon reductions, these savings are equivalent to avoiding 6.6 billion pounds of carbon dioxide or removing over 650,000 cars from American roadways.

The following table illustrates the potential financial implications of various energy efficiency improvements, including no and low cost measures, in terms of financial drivers commonly used in commercial real estate. As property budgets continue to be squeezed by rising values (which increases performance demands for these assets), financial drivers are increasingly important to real estate owners and operators. Accordingly, BEEP seeks to help identify, calculate and share specific examples of the financial benefits for energy efficiency as described in Table 1.

### Barriers

In multi-tenanted office buildings, utility costs can be paid by owners and passed through to tenants using various methods of cost recovery such as sub-metering, energy cost within operating expense rent inclusion, utility cost allocation, after-hours charges, common-area allocation, or utility cost escalation; or can be defrayed directly by tenants to the suppliers (individual metering). Depending on the organizational structure of a property, the decisionmakers will vary, but can include the building owner, asset manager, property manager,

<sup>&</sup>lt;sup>1</sup> Assuming a cost of \$2 per square foot for energy in commercial office space.

engineer, and/or maintenance staff. Office buildings can be owner-occupied, but more often are owned by one organization and the space leased to tenants. Building managers and operators are either directly employed by the owner, part of an outsourced third-party property management firm, or can be employed by the tenant. Developers, contractors, architects, and engineers all influence the energy performance of office buildings, but they are traditionally more involved in new construction rather than the operations of existing buildings.

Measures	Investment/ Square Foot	Rate of Energy Savings	Square	Increase to Net Operating Income	Asset Value Increase	Simple Payback
Janitorial Services	\$0.01	5%	\$0.10	\$10,000	\$125,000	Immediate
Operations and Maintenance	\$0.05	10%	\$0.20	\$20,000	\$250,000	4 months
Lighting	\$1.10	15%	\$0.30	\$30,000	\$375,000	3.7 years
HVAC	\$1.80	20%	\$0.40	\$40,000	\$500,000	4.5 years
All Measures	\$2.96	50%	\$1.00	\$100,000	\$1,250,000	3 years

**Table 1. Investments in Energy Performance Have High Financial Returns** 

Building owners, managers, and operators are all strongly motivated by financial performance, and spend most of their time ensuring tenant/occupant satisfaction, which leads to retention. The Program aims to change behavior by helping organizations understand the financial value of energy management, and by making it easy for them to implement best practices to reduce costs, while maintaining tenant satisfaction.

The barriers to energy management in commercial real estate are broad and complex and include such factors as the following:

- Lack of understanding of how to affect energy performance as well as the benefits of energy efficiency by both owners, operators and tenants
- Complicated lease structures
- Issues of split incentives (who pays versus who benefits)
- Translation of energy savings into business drivers such as net operating income and asset value

There are two serious and related misconceptions that BEEP will work to overcome:

- Why should the owner invest in energy improvements when the tenants are paying the utility bills?
- Why should a tenant invest in energy efficiency upgrades to a property that it does not own?

In addition to barriers specific to the real estate industry, commercial office buildings also struggle with some of the same barriers faced by all building operators. Managing energy requires more than an understanding of technical solutions and an appreciation of financial value. It also requires that management have the ability to create effective business practices that result in sustainable organizational change. Many commercial organizations are interested in improving management of their energy costs, but have not fully developed the internal resources to do so. One of the major barriers to improved energy performance is uncertainty of how to proceed with next steps. This occurs at many stages in the energy management process, including the following:

- Understanding energy performance relative to peers
- Establishing an energy performance baseline
- Determining energy and cost savings opportunities
- Dispelling the myth that capital is the only way to improve energy performance
- Translating energy savings into financial drivers
- Evaluating implementation priorities
- Allocating staff time and resources
- Changing business practices
- Developing internal resources and knowing where to go for outside help
- Determining the credibility and value of external resources

In addition to understanding next steps, organizations struggle to find the time to take next steps, and to make energy management a priority.

# **The BEEP Approach**

In response to this opportunity, the BOMA Foundation developed BEEP, an innovative new operational excellence program that delivers environmental benefits. A prevalent misconception in the marketplace is that owners have to spend significant capital in order to reduce energy costs. Rather than focusing on the purchase of new technologies and equipment, BEEP teaches property owners, managers, and operators important no and low cost strategies for optimizing the use of equipment, people, and practices. BEEP's mission is to continue to develop industry standards for operational excellence, train practitioners about cost-effective operational improvement strategies and measures, document and reward success through recognition programs, and communicate those successes to our industry and stakeholders. BEEP is directed toward the stakeholders that have the greatest influence over adopting operational excellence and the most to gain from its success – owners, managers, operators, engineers, architects and service and product providers.

BEEP draws from BOMA's extensive experience in developing large scale, multi-year market transformation programs in designing a cost-effective program to educate owners, managers, building engineers, and service/product providers for commercial office buildings about the financial and environmental benefits of improving energy efficiency. BOMA has a strong focus on training the industry on whole-building no and low cost, value-added operational improvement strategies and measures.

BEEP has the following features:

- A series of 6 trainings that can be delivered on-line and in person.
- Marketing materials that highlight the benefits of energy efficiency.
- Recognition opportunities.
- A Web Portal which will be the key resource center for BEEP.

BEEP offers the following six 120-minute seminars that qualify for continuing professional credits:

- Introduction to Energy Performance Overview of the program; fundamentals of energy; why energy performance is important to commercial real estate operators; creating an energy management policy and plan; and case studies.
- How to Benchmark Energy Performance Overview and value of energy performance benchmarking using EPA's Energy Performance Rating System; live demonstration of Portfolio Manager; how to review rating for accuracy; tips and typical errors; and review available benchmarking resources.
- Energy Efficiency Audit Concepts & Economic Benefits Overview of energy audits and benefits; identifying often-missed no- and low-cost operational opportunities; equipment inventory and sequencing; importance of record management; understanding energy loads; tips to verify performance; and have attendees share best practices.
- No and Low Cost Operational Adjustments to Improve Energy Performance Most efficient operations and maintenance practices; metering and data loggers; energy management systems; commissioning existing buildings; and have attendees share best practices.
- Valuing Energy Enhancement Projects & Financial Returns Overview of key financial concepts and resources; how to sell enhancements to owners/asset managers/tenants; and case studies.
- Building an Energy Awareness Program Review key components of energy awareness programs for tenants, brokers, leasing agents, and BOMA and ENERGY STAR recognition opportunities; creating a communications plan; creating a project case study; review of tools and resources; have attendees share best practices and lessons learned.

Businesses are not required to attend all seminars in the series, but can choose how many they wish to attend. Each attendee at a BEEP training seminar receives training materials with templates and sample language that can facilitate incorporation of the concepts of improved energy performance into their business practices. The training materials include such items as a sample energy management plan, a quick reference guide on benchmarking, a best practice and low-cost measure checklist, and a financial model to support recommendations for approval by owners.

BEEP seminars are designed to be delivered as online and live trainings, based on the preferences of BOMA members. Building owners and managers, with their busy schedules, prefer shorter seminars to those that can take up a whole day or more. Many find it easier to attend from their desk than travel to off-site locations.

BEEP's approach to whole building performance improvement is innovative because:

- It promotes the value of energy management and operational excellence to building owners, managers, and operators by their peers and colleagues. Many property managers are skeptical of recommendations from organizations that promote energy efficiency, believing that they do not understand the business dynamics. BOMA has the experience and credibility to address this barrier, and provide real-life examples of what works and how to make it work.
- Through leveraging of BOMA resources, this initiative represents partnerships with commercial real estate owners and operators. This model will allow federal and regional programs to work with market players to effect change, rather than try to force change upon them.
- The Program focuses on the impact of the whole building's energy consumption by including all fuel and energy sources (electricity, natural gas, oil, steam, etc.).
- It creates long-term, sustainable results by taking a two pronged approach that spurs changes in management practices, as well as addressing needed equipment upgrades.
- It provides a timely and easily understood indicator of the actual performance of a building through changes in benchmarking scores. Other approaches use expected savings from energy modeling (which are not always realized) or equipment efficiency ratings (which do not reflect how the equipment actually performs in the field).
- It promotes all potential measures to reduce energy consumption, starting with fundamental changes in energy management business practices before it progresses to promoting implementation of no and low cost measures. These efforts will dispel the common myth that energy efficiency can only be achieved with large capital investment.
- Since BEEP is not limited to electricity savings, it will help set the foundation for natural gas and fuel oil demand side management programs.

## **Non-Energy Benefits**

Beyond energy savings, improved energy management and operating standards can lead to greater occupant comfort, enhanced indoor air quality, and tenant satisfaction and retention. The most common occupant complaint in office buildings is hot and cold spots. Optimizing the use of energy management systems and controls by ensuring that they are correctly calibrated, regularly checked for optimal performance, and operated by trained engineers and operators, can reduce temperature complaints. Improved occupant comfort results in lower absenteeism and increased productivity, which creates real cost savings for tenants. More satisfied tenants results in improved tenant retention and attraction, further enhancing the financial motivation for owners to make energy management an integral part of their overall organizational structure. In addition to reducing energy costs, increasing property value, improving indoor air quality and tenant occupant comfort, well-managed buildings will also significantly reduce atmospheric pollution, conserve natural resources, and reduce their overall environmental footprint.

#### **Customized Technical and Management Support**

Energy management training can provide a strong foundation for organizations working to improve their energy performance, but the training must be put into action to achieve real energy savings. BOMA's experience has shown that many organizations need additional assistance to help them to overcome the barriers to action. In the future, BEEP will provide these organizations with technical and management support, in the form of an energy management advisor who will work with them to assess their performance, determine next steps to improve performance, and find solutions to overcome challenges as they do so.

#### **BOMA Resources**

The primary support mechanism for BEEP participants is a resource library accessible via the BEEP Web portal. The Web portal has links to ENERGY STAR, BOMA local associations, strategic partners, and other agencies and associations with appropriate industry resources. Further, the Web portal will house specific BEEP useful content and related materials, a calendar of training opportunities and materials, case studies, features such as how to calculate impact on the bottom line, information to translate energy savings into NOI/asset value/earnings per share/etc., and it will potentially provide for advertising or sponsorship for BOMA members or non-BOMA member sponsors. The program will provide staff to respond to telephone calls and emails from BOMA local associations, members, and the public with questions related to BEEP.

BOMA anticipates that the Web portal and support center will provide the majority of assistance needed for BOMA members wanting information on BEEP and how to improve the energy performance of their properties. However, the Foundation will also staff a booth at the Annual Convention to promote BEEP and answer questions.

#### **Marketing and Promotion**

By partnering with BOMA, Federal and regional programs can leverage the contacts and infrastructure of the association, as well as the national marketing strategy BOMA has developed for the BEEP program. On a national level, BOMA is promoting BEEP through all association channels, including the BOMA Magazine, BOMA newsletters, and the BOMA annual convention. The association is maintaining a Web site to house key information on BEEP, leveraging media contacts to place articles in trade journals and mainstream business magazines, and coordinating with regional and national energy efficiency program promotion and advertising resources. BOMA is also developing marketing materials to educate real estate practitioners and tenants on the value of BEEP, which will incorporate strong value propositions developed by BOMA to address owners, managers, operating and design engineers, energy professionals, architects, and product and service providers.

#### Recognition

Recognition is a strong motivator and thus a key component of the implementation plan. BOMA plans to recognize BOMA local associations and their members' properties for energy performance improvements of 10, 20, and 30 points on EPA's energy performance rating system. The point improvements may correlate to BOMA bronze, silver, and gold levels and all improvements could be tracked on an additive basis. In this way, recognition can be achieved at anytime and be based on an improvement from the baseline rating.

BOMA will coordinate with BOMA local associations to incorporate BEEP accomplishments into existing BOMA awards programs including TOBY, Earth Awards, and other international/regional/local awards. BOMA will also identify opportunities to highlight accomplishments for members and BOMA local associations. BOMA will:

- Develop template certificates for course completion.
- Recognize local association accomplishments.
- Acknowledge property rating improvements.
- Acknowledge innovative business linkages and core business benefits (e.g., asset valuation, sales price).
- Create an honor role on the BEEP web portal.
- Model or utilize existing pollution prevention calculators.
- Draft case studies.

BOMA will also promote BEEP and leading participants in industry trade journals and mainstream business publications.

## **Performance Measurement**

Tracking and monitoring progress is essential for a sustainable program. BOMA will develop key metrics to track program accomplishments and success. Metrics will include:

- Number of BOMA local associations promoting campaign
- Number of participants
- Number of educational seminar attendees
- Square footage benchmarked
- Pollution prevented
- Energy Performance Rating increases, as captured by the EPA rating system

Based on non-proprietary data provided by EPA, the Foundation will generate periodic reports on BOMA and industry aggregate accomplishments. In addition, the Foundation will develop templates for BOMA local associations to use to track and promote member accomplishments.

Based on the metrics identified in program tracking, BOMA will hire industry experts to perform evaluations of BEEP. These will be periodic depending on the type of evaluation. At a minimum, the Foundation will provide an annual report of program effectiveness. BOMA will review the program's effectiveness in achieving stated milestones; assess participant satisfaction (at local and national levels); and perform a cost-benefit analysis to understand the program's progress toward the stated goals of environmental leadership, reduced energy costs, improved operational performance, and to determine if BEEP is contributing to the overall success and stature of BOMA. BOMA will measure success using direct and indirect metrics and will recommend adjustments for areas that need improvement. The evaluation methods will include, but not be limited to:

- Post- training surveys
- Interviews with key stakeholders
- Consolidation and evaluation of reports generated for performance tracking
- On-line surveys (ongoing or limited time accessible)
- Direct mail surveys
- Focus groups

BOMA will use some of the following benchmarks to measure program accomplishments and effectiveness:

- Number of real estate practitioners recruited
- Number of BEEP seminars attendees
- Energy consumption and cost reductions
- Pollution prevented and associated equivalencies, such as acres of trees, autos removed from roadways, and homes powered
- Number of buildings and square footage benchmarked
- Materials created for the program
- Energy improvements documented by the EPA Energy Performance Rating system
- Anecdotal business benefits associated with appraisals and sales of properties or portfolios
- Member survey responses

# **Experiences with Federal Agencies, Regional Programs and Utilities**

One of the key issues for BOMA has been funding. Using limited internal funds, committee member volunteer efforts, and support and funding supplied by EPA ENERGY STAR, BEEP has been able to develop the majority of the educational trainings and had a national launch of the first two trainings in spring 2006. Going forward BEEP cannot rely on past support mechanisms to take the program to the next level. Specifically, the ultimate goal of the program is to expand the training schedule to allow each course to be offered more than once a year as well as to allow the curriculum to evolve over time, creating a "continuous process" improvement" environment. Also the other strategy is to tie BEEP education to utilities and energy efficiency awareness organizations' resources to support energy efficiency. For example, many utilities offer audit and retro-commissioning services as well as offer rebates and other financial incentives to improve efficiency that are not taken advantage of by the real estate industry. BOMA needs additional funding to help vet and facilitate access to these resources and drive further long term energy performance improvements. Therefore, BOMA has been seeking funding partners who could mutually benefit from the program's success. BOMA is currently exploring sponsorship opportunities with leading national real estate firms, energy efficiency service providers as well as utility groups.

Having limited time to find funds and seek partners who have what appear to be mutually beneficial goals, BOMA's efforts to build relationships with utilities and regional market transformation programs have been positive but still have not resulted in meaningful, long term commitments that would allow for the energy efficiency outreach effort to grow and evolve. The roadblocks to date with these critical market actors have been:

- Potential partners may want to own BEEP or at least own content of BEEP.
- Requests for customization cannot be met.
- The low cost/no cost opportunity is not understood.
- Political forces seem to interfere.
- Delivery cost and pricing is still being developed.
- Funding mechanisms for these groups is not geared towards supporting education and outreach efforts.

BOMA believes that it can be a model partner for utilities and regional market actors. Associations offer the credibility needed to gain broad support from specific audiences. Specifically in the case of BOMA, member research has shown tremendous connection to the industry, with some of the highest "loyalty rankings" based on the value and trust members see This is important not only because BOMA represents roughly 80% of the in BOMA. commercial office market in the United States, but because while other education and outreach programs have difficulty getting the real estate industry to the table, BOMA can bring the target audience. Evidence of this relationship and success in delivery of operational excellence training is in the results of BEEP to date. Original planning called for 500 - 1000 real estate professionals to be trained in the first full year of BEEP trainings; however the first BEEP course offered in April 2006, was not only sold out weeks in advance causing BOMA to have to double capacity, but also, total people trained exceeded 1,100 – exceeding the annual goal in just the first course offering alone. Regional initiatives, states and individual utilities or collaboratives, seeking to provide a higher level of training and technical support for their customers can partner with BOMA to reach their audience. Leveraging the BEEP training, and BOMA's local chapters, program sponsors are offered a broad and deep training as well as a local knowledge base to help promote and deliver the program.

In addition to providing technical support for their customers, the BEEP training has also been considered a valuable *internal* training resource for sponsoring partners, enabling utility account executives or energy efficiency managers to better understand the use of and issues regarding energy in commercial buildings. BEEP provides important insights as to how operation and maintenance and efficiency improvement decisions are made within their customer's internal organizations. For new employees, or for those transitioning onto commercial building support teams, or even for those seeking a refresher course on commercial building energy efficiency terminology and trends, BEEP provides a considerable amount of information in a concise and practical format. In short, BEEP helps partners to better support their customers.

As industry practitioners, BOMA has recognized that training only goes so far and that techniques and strategies discussed in the training need to be acted upon if the organization hopes to improve. Knowing this, BOMA has engaged teammates to assist sponsoring partners with supporting their customers. These activities are separate functions from the BEEP training

program itself, and are offered as stand alone or as packaged offerings, depending upon the partner's preference. Included in these offerings are:

- Onsite technical support for a partner's customers.
- Benchmarking assistance.
- Assistance with identifying and implementing operations and maintenance strategies.
- Assistance with identifying and implementing energy conservation measure strategies.
- Recruiting and supporting customers into other demand side management programs.
- Measuring the effectiveness of the BEEP training with customers.

BOMA and their teammates realize that one size does not fit all and that multiple program offerings will need to be available to support the varying needs of their sponsoring partners. This flexibility has been naturally factored into the development of BEEP. While the technical content of the BEEP trainings must remain consistent, BOMA's interest in providing customized solutions for their partner's is the key commitment which BOMA feels will be the driving force for the success of BEEP.

### Conclusion

In conclusion, the BOMA Foundation and BOMA International are playing a key leadership role in transforming the commercial real estate industry. BEEP's innovative approach is being developed from within the industry and hopefully will be more successful in raising the consciousness of practitioners about the importance of energy, drive change in their behavior, and ultimately define operational best practices for energy management in commercial real estate. As evidence of the likelihood of BEEP's success, the first education seminar conducted in April 2006 drew an unprecedented 1,100 attendees from a geographically diverse group representing all aspects of the commercial real estate market. BOMA will continue to rollout the remaining educational trainings throughout 2006 and has fully integrated BEEP and the concepts of energy efficiency into their annual convention and trade show in Dallas this June. This will provide a tremendous opportunity to reach over 10,000 real estate practitioners and further drive home the message, "BEEP, BEEP it's time to change how you operate." The BOMA Foundation will continue to explore opportunities for funding and monitor the effectiveness of the program in reducing the industry's energy consumption and related environmental impacts.

# References

- Brodsky, Stuart. 2004. "Buildings That Earn the EPA Label." In *TOBY: The Office Building of the Year and Earth Awards*, Volume 2, Real Estate Magazine Limited.
- Thurman, Dennis. 2004. "How to Boost Energy Efficiency and Raise Environmental Awareness in the Commercial Real Estate Industry." Houston Office & Commercial Real Estate Magazine, Volume 3, Summer 2004.
- Walraven, Brenna. 2005. "Market Opportunities for Developing High Performance Buildings Push & Pull Drivers." Urban Land Institute Magazine, Summer 2005.