

The EBies: “Oscars” for Existing Building Heroes

*Jonah “Cecil” Scheib, PE, CEM, LEED AP
Urban Green Council (USGBC-NY), New York, NY*

ABSTRACT

Existing buildings consume 40% of the energy and 12% of the potable water used in the United States. As a result, emissions reduction plans and energy use cuts must include a strong component focused on existing buildings if they are to be successful. However, most media and award attention is given to new buildings. The EBies (from “existing buildings”) are national, annual awards given in multiple categories for sustainability improvements to existing buildings. As the “Oscars” for existing buildings, they honor the unsung heroes of energy and water efficiency. Focusing well-deserved attention on the people working in this area is a fundamental part of the culture change needed to bring about lasting improvement in energy and water efficiency and greenhouse gas emissions reductions.

INTRODUCTION

Most of the buildings that will be part of our national infrastructure in the decades to come are already built. A Brookings Institution study shows that 50% of the projected 2030 building stock has already been constructed [1]. At the same time, jurisdictions at various levels are calling for significant energy efficiency improvements and greenhouse gas emission reductions. For instance, California has mandated an 80% cut in emissions (below 1990 levels) by 2050 [2]. A detailed study by Lawrence Berkeley Labs calls for “fundamental changes in the built environment,” changes that are impossible to achieve without working with the existing building stock [3]. Many other states plan similar cuts, including Colorado, Massachusetts, Michigan, and New York [4]. To reach these targets, significant reduction in energy use in the existing building sector is a must.

New construction grabs most of the attention around green building. For instance, a Google search on “green building award new construction” yields 26.7 million results, while a search on “green building award retrofit” yields far fewer, about 1.4 million. “Starchitects” design glitzy new buildings with claimed sustainability benefits, before any measurement and verification is performed. The installation of waterless urinals in a building may be a news story [5], but repairing an underground leak wasting ten times as much water will only be recognized in an inter-office memo at best.

Rewarding O&M Efforts

There are national programs that reward efforts in existing buildings for energy efficiency, both when performing retrofits and when managing operations and maintenance for energy savings. For instance, as of December 2011, square footage of LEED certified existing buildings surpassed LEED certified new construction on a cumulative basis [6]. Also, since 2010, US EPA’s ENERGY STAR program has sponsored a “Battle of the Buildings” to show how commercial buildings can “save energy, save money, and protect the environment by shedding their excess energy waste” [7]. This year, over 3,200 buildings are competing in the event.

These important programs give building awards for performance improvements (based solely on EPA Portfolio Manager data for Battle of the Buildings and other information for LEED existing building operations and maintenance (EBOM)). However, there are individuals working in existing buildings who have made great strides in improving environmental performance but may go unheralded. Their work is likely to have been done on a shoestring budget with great tenacity and conviction. The people creating these significant environmental performance improvements in existing buildings may be owners and operators, facilities managers, engineers, retrocommissioning agents, and other key personnel. Research shows that this critical building segment goes unnoticed and unrecognized, despite the important contributions made and the sheer size of the market compared to new construction.

The Awards

In response to the need to reward individual efforts in improving performance in existing buildings, the EBies were born [8]. Winners are awarded in several categories, including:

1. *THE ALL-ROUNDER: Performance excellence in multiple categories* (most improved building across two or more sustainability categories, including energy, water, waste management, materials use, indoor environmental quality, and tenant engagement)
2. *THE SMOOTH OPERATOR: Operations and maintenance excellence* (most improved building across two or more sustainability categories achieved solely through improved operations and maintenance and/or retrocommissioning exercises)
3. *THE REFORMED DRINKER: Winning water savings* (highest percentage of savings in water usage)
4. *THE REFORMED GAS GUZZLER: Exceptional energy savings* (highest percentage of energy savings)
5. *SHINE A LIGHT ON ME: The best lighting retrofit* (best lighting retrofit, as measured in energy performance)
6. *VERDANT BRAINIAC: Green renovation innovation* (most innovative green renovation project, particularly one that overcame significant barriers—cost, institutional, or technological—in a manner that is scalable)
7. *IT TAKES A VILLAGE: Tenant-driven performance improvements* (most effective tenant-led performance improvements in commercial buildings across multiple categories)

The rules of the competition are designed to allow for a level playing field among applicants. Awards that recognize improved energy efficiency require applicants to provide EPA Portfolio Manager data to ensure standardization of energy reporting systems. In general, the awards are based on comparison of a year of data from before the project period to a year of data following the implementation period.

To keep the focus on noteworthy renovations of existing buildings, and not gut renovations, the EBies recognize those projects that have achieved improvements over time, with some tenants in place, while working with all of the attendant constraints. Projects that would be eligible for any LEED award other than LEED EBOM are not generally

eligible for an EBie. Applicants are allowed to apply in multiple categories for awards and are encouraged to do so.

The Applicants

In 2012, there were 67 entries made to the EBies. They were from around the country, including every continental U.S. ASHRAE climate zone except 1 and 7. They included commercial and residential projects as well as private, nonprofit, and institutional buildings. Properties represented included multifamily residential buildings, commercial real estate, educational buildings, industrial facilities, museums, medical and health care facilities, and even a parking garage. Projects ranged from less than 1,600 square feet in building area to 2,500,000 square feet; however, over 50% of the buildings represented were between 50,000 square feet and 500,000 square feet in size. Although some buildings submitted had received LEED EB certification or were ENERGY STAR certified, the majority had not received a previous certification.

The individuals being considered for an EBie were similarly diverse. The included project managers, homeowners association board members, energy consultants, energy managers, energy engineers, building managers, real estate asset managers, and corporate officers.

The Jury

To evaluate the applicants, members of the jury were selected to represent many different areas of building design, technology, and management. Jurors included senior professionals from the EPA, Fannie Mae, Vornado Realty Trust, and other key market segments.

Since buildings show such wide variation, jurors needed some flexibility in selecting finalists and winners. Each EBie entry was judged on energy, resource and cost savings figures, clarity of the project description and narrative, and project innovation and originality. Measurable performance improvements accounted for two-thirds of the project evaluation. As appropriate, jurors were allowed to select more than one winner based on building size. In addition, the jury was given latitude to combine awards when appropriate, based on submissions received.

The Winners

Eighteen finalists were selected by the jury and invited to the gala awards ceremony. The finalists included applicants from eight states, on both coasts, and in the Midwest, South, and Southwest. To suitably

honor the competitors, the ceremony was held at the Hard Rock Cafe in Times Square, New York City. While sipping custom-mixed “EBie Elixirs,” finalists and other attendees were treated to a performance by a Broadway star and introductions of finalists by leaders of the green building community. Finally, the audience breathlessly witnessed the ripping open of award envelopes and the announcement of the winners in each category, to wild applause. Winners made an acceptance speech, thanking all the people who had helped them make it happen, and then had their pictures taken on the “green carpet” at the venue. When the lights came on and the audience was shoed out into Times Square, finalists, winners, and well-wishers were still networking, swapping war stories, and congratulating each other for their ongoing efforts in improving existing building performance.

Winners’ speeches were inspirational as well as educational (and often funny, since building professionals are well-known for their sense of humor). The principal of Rosa Parks Elementary School (Lexington, KY), Leslie Thomas, stole the show when she described how her team involved the kids in her school in the process of creating energy retrofits. The kids came up with great ideas, including lighting controls and de-lamping, helping the team walk away with a *Reformed Gas Guzzler* EBie.

Winners received a custom-designed trophy. Each award had the same shape and construction but appeared distinct from any other. They were constructed of Bioresin for its affordability, soft smoky aesthetic, and unique material.

Challenges

Creation of award categories is a tricky part of the EBie process. Since the awards are designed to recognize building performance, designing categories that allow for measurable metrics was essential. In some cases, this was a challenge. For instance, engaging tenants and residents is often considered a key part of institutional strategy, but it is difficult to measure objectively.

Award categories in 2012 included the greatest reduction of water or energy, or both, as well as lowest use of those commodities. This led to spirited discussion about whether to recognize those who had cut consumption substantially but whose buildings still performed worse than average. Large energy cuts often represent substantial effort, and the greatest savings come from greatly improving worst-in-class performers rather than slightly improving the best buildings, so there

is value in recognizing these improvements. On the other hand, some had hesitation to laud buildings or individuals for their environmental performance if they were not even performing better than average after project completion.

Portfolios represent special challenges and opportunities in sustainability improvement for existing buildings. Portfolios allow best practices to be replicated across multiple buildings, and lessons learned within an organization have a greater chance of influencing future projects. On the other hand, it can be difficult to allocate sufficient resources to make portfolio-wide changes very quickly. A “portfolio” award category would recognize those making strides on a portfolio basis; however, the complexity of defining what counts towards a portfolio and the need to prevent applicants from “cherry-picking” their best buildings require careful design of the award criteria.

Next Steps

To extend the reach of the positive benefits offered by the EBies, it would be good to use the submissions of EBies awardees to share best practices. For example, winning projects can be featured at sustainable building conferences such as Greenbuild. In the future, it would also be helpful to do more technical case studies of winning projects.

Meanwhile, 2013 EBies planning is in full swing. Anyone proud of their successes in improving the performance of existing buildings is encouraged to consider applying in the future. (Entries for 2013 were accepted until February 26, 2013; see ebies.org for more information.) Finalists will be announced at the end of April, with the 2013 awards ceremony in New York City to take place in June.

Results

The EBies are something special in the field of existing building environmental performance. Building professionals may be justly proud of their ENERGY STAR recognition, their LEED certification, and their low energy and water bills. However, they probably never get the chance to stride across stage, with spotlights wheeling and music playing, to the cheers of an audience full of peers who understand why their work is so important. By providing that opportunity, the EBies stimulate the field and provide valuable case studies for others to use in their efforts. Few may win an Oscar, but the dream of appearing onstage someday, clutching a golden trophy, has motivated countless people.

Those unsung heroes who are making existing buildings better also deserve their time in the spotlight.

For More Information

To learn more about the EBies, or to apply for the 2013 awards, go to ebies.org or contact Urban Green Council (USGBC-NY) at 40 Fulton Street, Suite 802, New York, NY 10003, 212-514-9385, EBies@urbangreencouncil.org.

References

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ABOUT THE AUTHOR

Cecil Scheib, PE, CEM, LEED AP, is Advocacy Director at Urban Green Council, the New York chapter of the USGBC. He also works with the New York City Mayor's Office as a Green Codes Fellow. With over twenty years of sustainability experience, he was previously Director of Energy and Sustainability at New York University, cutting energy use and greenhouse gas emissions by 30% in five years. Prior to NYU, he founded Dancing Rabbit Ecovillage, an off-grid community dedicated to innovating sustainable technology and social systems. He teaches Green Building Professional (GPRO) Operations and Maintenance, and holds a BS in civil engineering from Stanford University. He can be reached at cs@urbangreencouncil.org.