



## Energy Performance in the LEED Rating System

### Reconciling Design and Performance

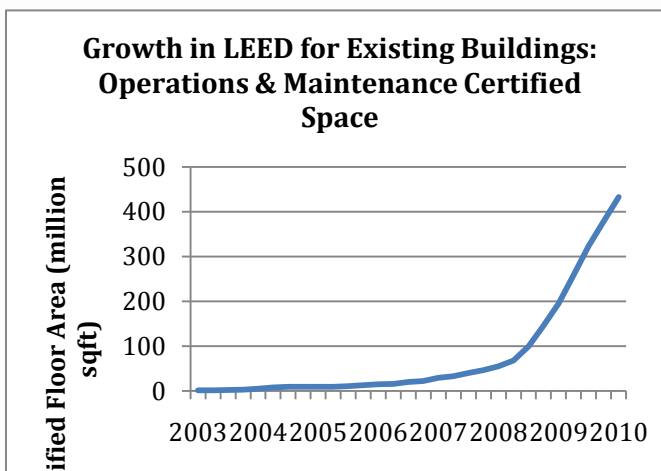
Too often, buildings do not perform to their full design potential. The integrated approach used to design and construct LEED buildings is only a part of the whole performance process – how much energy and water a building consumes is influenced by its design but determined by the management and operations, as well as the behavior of the occupants.

Because actual performance is the key to reducing a building's impact, USGBC has developed several tools to help building managers and owners achieve and maintain high-performance operations. USGBC is working with our stakeholders to tackle this issue by continuously improving the LEED rating system and by working directly with building owners to help them understand and improve their building's performance.

### A Focus on Operations and Maintenance

The first step in improving performance is to understand where a building stands in comparison to similar buildings and its own potential. To encourage owners to take the first step, USGBC launched LEED for Existing Buildings in 2004. The rating system required minimum energy performance of building operations to attain certification at any level. Re-launched as LEED for Existing Buildings: Operations & Maintenance in 2008, the rating system continues to require whole-building energy metering and reporting via ENERGY STAR® for at least one year prior to certification, and additional points are awarded to incentivize higher performance.

Figure 1: Growth of LEED for Existing Buildings: Operations & Maintenance



LEED for Existing Buildings: O&M has seen explosive growth since 2008. More certifications are awarded under LEED for Existing Buildings: O&M on a square-footage basis than any other LEED rating system. As a result of this growth, LEED projects are becoming predominantly existing buildings that have received certification based on verified energy performance.

The rapid uptake of this tool signals that the market is becoming increasingly aware of energy performance and is ready to move further toward even higher levels of performance. Because existing buildings make up the vast majority of the U.S. building stock, tools like LEED for Existing Buildings: O&M are essential to reducing energy consumption from this sector.



### Data Disclosure

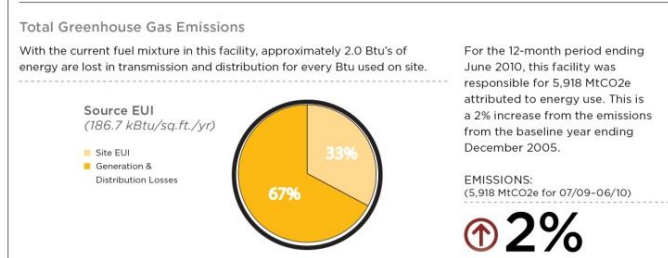
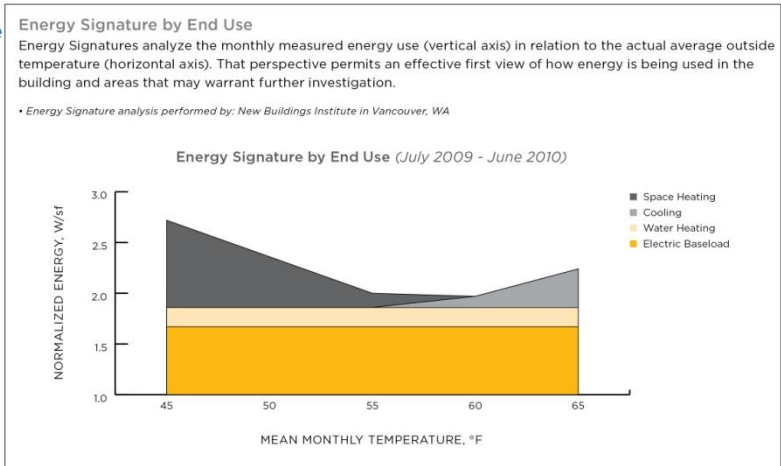
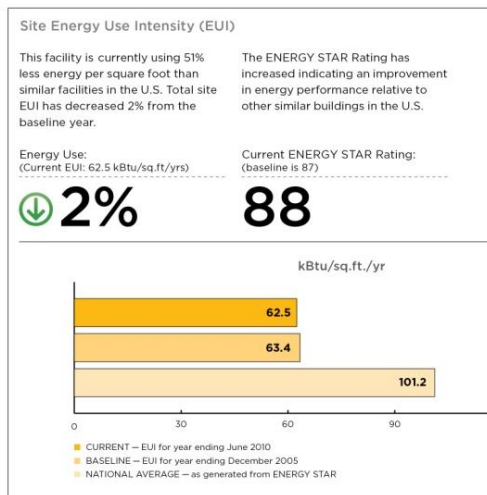
In an effort to highlight the need for performance monitoring of LEED buildings, USGBC requires building owners of all projects share their water and energy usage data with USGBC for at least five years. Unlike credits within the rating systems, energy and water data sharing is a minimum program requirement and is not optional. This data will be used to inform future versions of the rating system and provides valuable information to building owners on the performance of their facilities though information sharing and partnerships, such as the Building Performance Partnership.

### Building Performance Partnership

The Building Performance Partnership (BPP) is a comprehensive data collection and analysis infrastructure to capture feedback from all LEED-certified projects, both commercial and residential. Participation is voluntary and helps building owners manage their project's water and energy use and provide benchmarking to see if it is operating as it was intended. Participants in the program receive annual performance reports and online data interfaces to aid in their building performance goals, and the data collected by USGBC informs future updates to LEED.

Figure 2. Sample BPP Report on Energy Use

#### Energy Performance



### A Look Ahead: What's in Store for the Next Version of LEED

Strengthening the bridge between design potential and actual building performance over the lifetime of a building is a primary focus in the next version of LEED, currently in development. Within this theme, the next draft version of LEED features an entire category on Performance

in addition to improvements to the Energy and Atmosphere credit category. Recertification guidelines for LEED for Existing Building: Operations & Maintenance projects are currently being revised to fully address continued improvement in the performance of a LEED building.

**Contact:** For questions, please email [LEEDPerformance@usgbc.org](mailto:LEEDPerformance@usgbc.org).