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LEED 2009: Impact on Operations and Maintenance

Property managers and building engineers are on the front line of initiatives for sustainable operations in their buildings. Currently, the most recognized standard for certifying sustainable design and operations of commercial buildings is the U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED®) rating system. On April 27, 2009, the USGBC released the most current version of the rating system, LEED v3. The new version addresses three elements of the overall rating system. The first element, LEED 2009, provides technical advancements to the LEED credits and points. The next element, LEED Online, provides for an upgrade of the online tool used to manage the registration and certification processes. Lastly, a new ISO standards based certification infrastructure has been developed and implemented for improved capacity, speed and performance. The current timeline for LEED v3 now requires that all new projects register for LEED 2009 as of June 27, 2009, and that the last day for free upgrades to LEED v3 for existing projects will be December 31, 2009. In addition to the infrastructure changes, the certification process has been moved from the USGBC to the Green Building Certification Institute (GBCI), an independent non-profit organization.

The GBCI is also responsible for the LEED Certification process and the professional credentialing program. Throughout 2009 GBCI will be phasing in changes to the LEED Professional Accreditation program to distinguish building professionals with a demonstrated understanding of the LEED Rating System. When the changes are complete there will be three tiers of accreditation; LEED Green Associate, LEED Accredited Professional (LEED AP), and LEED AP Fellow. Furthermore, the LEED AP tier will be sub-divided into designations that align with specific rating systems. So, you will no longer be a LEED AP, if you pass the LEED for Existing Buildings: Operations & Maintenance exam, you will be a LEED AP O+M. Another change will be specific eligibility requirements for all levels of the exam system. Lastly, there will be a credentialing maintenance program with Continuing Education (CE) credit hour requirements on a biennial basis. These accreditation changes will not directly impact how the LEED 2009 rating system will be applied to buildings that you are certifying. However, general knowledge of the credentialing programs and designations will help you differentiate the qualifications of any LEED AP's you may engage in the certification process.

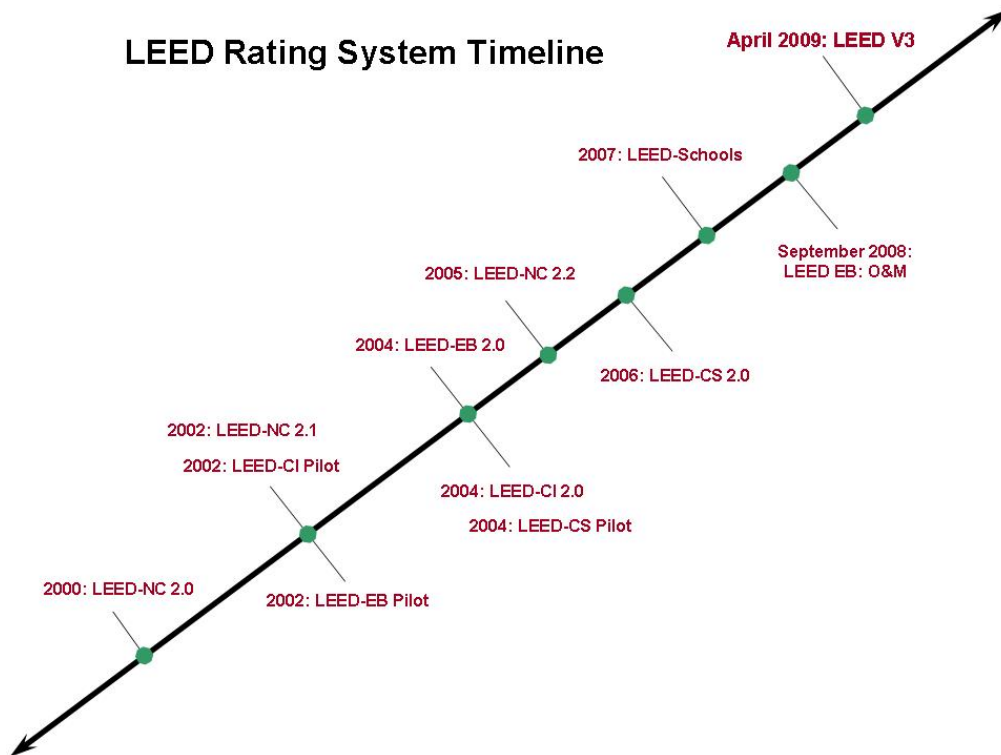
LEED 2009 Rating System

Property managers are most likely to be directly involved in or managing LEED certification projects for existing buildings. With that in mind, the focus of this article will be a discussion of the general LEED 2009 Rating System changes and more

specifically the LEED Existing Building Operations and Maintenance (EBOM) Version 3.0 rating system changes.

The technical advancements of LEED 2009 are based on three enhancements of the rating system; harmonization of prerequisites and credits for increased consistency, adjustment of credit weightings based on their impact on human and environmental health concerns, and prioritization of select credit weightings to address regional environmental issues. The USGBC has stated on their website, “LEED 2009 is not a ‘tear down and rebuild’ of the LEED that exists in the market but rather a reorganization of the existing commercial and institutional LEED rating systems along with several key advancements”. A quick review of the history of the LEED rating system will put into perspective why the USGBC felt a need to “reorganize” the existing commercial and institutional LEED rating systems.

Following the formation of the USGBC in 1993 the first LEED Pilot Project Program for New Construction (LEED-NC), was released in 1998. In 2000 LEED-NC Version 2.0 was launched followed in 2002 with an upgrade to LEED-NC Version 2.1. In the same year the pilots for LEED for Commercial Interiors and LEED for Existing Buildings were launched (Reference the graphic below for further details on the timeline). Since 2000, the introduction and changes to the LEED rating system have been many, significant, and sometimes confusing.



Harmonization of prerequisites and credits

As you can see from the timeline above the number of rating systems that have been introduced, along with subsequent upgrades, could produce a situation where the various LEED rating systems could diverge in the type and importance of prerequisites and credits for a given rating system. Also, some rating systems could have carryover ratings and credits from other systems that did not really apply and could be a hindrance to reasonable certification. For example, LEED-EB 2.0 had a prerequisite for soil and erosion control that appeared to be a carry-over from the LEED-NC system. Soil and erosion control, while important, is not as critical for the operation of an existing building as opposed to a construction site. Also, there were significant points available for daylighting and views. These points are more achievable when designing a LEED-NC project, but most likely not highly achievable in a LEED-EB project without major structural renovations. LEED-EB O&M addressed these issues in September 2008 by removing the soil and erosion control prerequisite and reducing the number of daylighting and views credits possible as part of the harmonization process. LEED 2009 has also created a more harmonized and integrated point system. Now all ratings are determined based on a 110-point system – 100 base points, plus 10 potential bonus points – six potential points for Innovation and Design (only 3 are available for exemplary performance) and four potential points for regional priority. This applies to all the existing commercial and institutional LEED rating systems.

Adjustment of credit weightings

The USGBC has stated on their website that “credits will now have different weightings depending on their ability to impact different environmental and human health concerns”. Through a process of evaluating the individual credit against a list of 13 environmental impact categories the credits were weighted based on their ability to mitigate those environmental issues. The original credits are intact but the points have been changed to reflect the new weighting. A greater emphasis was placed on points that have an impact on a building’s carbon footprint, such as energy efficiency and alternative transportation. For example, in the Energy and Atmosphere category the total number of points available has been increased from 30 to 35. The energy efficiency credit has been increased from 15 to 18 points with the elimination of the 2 point credit requirement in the prerequisite. The renewable energy credit has been increased by two points to a maximum possible of 6. Both these credits have a direct impact on the building’s carbon footprint. The 100-point scale for LEED 2009 is a result of this process. The base points possible changed from 85 for LEED - EBOM 2008 to 100 for LEED EBOM 2009. For LEED EBOM 2009 the following credits were reduced:

- MR 1 Sustainable Purchasing: Ongoing Consumables
- MR 4 Reduced Mercury in Lamps
- MR 7 Solid Waste Management – Ongoing Consumables

Also, the commissioning credit was broken into 3 separate credits allowing for incremental improvements for a credit that may not have been achievable under the previous system. If a currently registered project is being considered for upgrade to the new system under LEED 2009 an analysis should be conducted to confirm that certification will still be possible.

Additionally, the weighting for the Indoor Environmental Quality category, originally 23% of the score under LEED-EBOM 2008 was reduced to 15% of the total possible points for LEED - EBOM 2009. Other items of note were the dramatic weight reduction in the MR category, less emphasis on green cleaning and purchasing, the addition of 3 credits for buildings previously certified under NC or CS, and a higher emphasis on sustainable sites and a transportation management plan.

Regionalization of credits

The LEED Rating System is no longer a “one-size-fits-all” system under v. 3. Often times the emphasis and weighting on a credit did not reflect the priority of environmental issues for the building’s location. In order to reflect these local priorities, existing credits will be identified for bonus points based on specific regional issues. Six Regional Priority Credits (RPCs), determined by regional councils and chapters, are eligible for the regionalism weight and four bonus points can be earned in the RPC category. When you register a project LEED Online will automatically select the RPCs based on the project’s zip code. If the RPCs are achieved, LEED Online will automatically award the bonus points. You can visit www.usgbc.org/LEED2009 to download a state-by-state list of the RPCs to find out which ones are available for your project. The spreadsheet you download will have tabs for the five LEED 2009 Rating Systems. When you select the appropriate tab you will see a list of zip codes for your state in the left hand column. The six columns to the right of the zip code identify the RPCs that are eligible for bonus points. If you meet the credit requirements the bonus point will be awarded. The RPCs that include a percentage indicate the level of achievement required for multi-threshold credits. For example the first credit identified for my zip code in Indiana is Sustainable Sites Credit 4, a multi-threshold credit. The bonus point threshold shown on the spreadsheet is 10%. The credit requires demonstrated reduction of commuting round trips by the building occupants. Three to fifteen points are available on a sliding scale from 10% to 75%. If a 10% reduction can be documented the building will be awarded 3 points for the credit and an additional bonus point for meeting the RPC threshold requirement. The addition of the Regional Priority Credits to the rating system does not appear to negatively impact the ability to accomplish LEED certification for an existing building since they are not new LEED credits. Rather, they provide additional opportunity to score bonus points for credits that a project may already be able to achieve.

Since most of the changes from LEED-EBOM 2008 to LEED-EBOM 2009 are cosmetic and relate to the number of and the weighting of points, it appears overall that certification under the LEED-EBOM 2009 rating system is as achievable as it was under the previous system. If you are currently pursuing LEED-EBOM 2008, you can easily determine if an upgrade to LEED-EBOM 2009 will be beneficial to your project. The combination of harmonization, weighting adjustments and regionalization of prerequisites and credits does not create additional hurdles to overcome. The process for conducting a certification project remains essentially the same. First you must assemble your team ensuring that you involve the various stakeholders and necessary expertise. Then a “gap analysis” should be conducted to assess the building’s current practices and status relative to the LEED-EBOM 2009 requirements. Once you have determined which points you can achieve, which points are possible with additional effort and which points

are not achievable you can then begin to develop a plan with the steps necessary to gain certification. Understanding that the LEED-EBOM 2009 rating system is a set of performance standards designed to minimize a building's environmental impact while increasing operational efficiencies will help you develop the plan. One way to view these standards is as a collection of best practices for "green" operations. When you are on the front line of initiatives for sustainable operations utilizing the LEED-EBOM 2009 Rating System will help you achieve your organization's goals and receive recognition in the market place for your certification efforts. Recognition in the market place can then also lead to differentiation and market advantage.