



The Green Architect

The Definition of Green Architecture is About to Change

By Blair Seibert, AIA, LEED AP, CSBA

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hile not being LEED certified does not preclude a building from being very “green”, the LEED certification system has given laymen worldwide a definition of green building that they understand and grasp. Beginning next fall, the U.S. Green Building Council anticipates rolling out an updated version of the LEED rating system. Currently it’s being called LEED 2012.

Over the past year, the USGBC has provided two drafts of the 2012 system to the public. There have been two 45-day comment periods following each publication, allowing the public to respond to the system’s possible changes. In the latest version, of which the comment period ended on September 31st, LEED has expanded the building types that can utilize the system to Data Centers, Warehouse & Distribution Centers and Hospitality facilities. In addition, the number of minimum requirements (or prerequisites in LEED) a building must meet in order to pursue LEED points and certification has increased by 40%. Dramatic changes and layers of compliance have been added to the credits or points.

In this article, we’ll focus on the expected prerequisites and how they are changing the bare minimum components of a “green” building. With the introduction of CALGreen earlier this year, California projects fare much better than other state’s building in the minimum requirement category. Note: there are other mandatory measures required by CALGreen that are not being addressed.

The CURRENT system’s simplified prerequisites are:

1. Erosion control and sediment loss control during construction (close to CALGreen’s requirements for projects over an acre)
2. 20% water demand reduction by typical restroom fixtures and minimum performance standards for those fixtures (CALGreen requires the same percentage but does not require minimum performance from fixtures.)
3. 10% reduction in energy demand over Title 24-2010 and source energy use intensity reduction. The building owner must share their utility bills with the USGBC for five years after the building has been certified. (CALGreen requires a 15% reduction from T-24-2007.)
4. The elimination of chlorofluorocarbon refrigerants from all HVAC & R equipment (HVAC & R units utilizing this refrigerant were outlawed in California years ago.)
5. The recycling of paper, plastic, glass, metals, cardboard, batteries and mercury containing lamps from the facilities waste. (CALGreen requires the first five categories be recycled. The state of California declared batteries and fluorescent lamps as hazardous waste years ago which makes it illegal to them into landfill.)
6. The introduction of outside air in conformance to ASHRAE standards. In addition outside air flow monitoring MUST be provided. (California follows ASHRAE or outside air standards only.)
7. Elimination of smoking in buildings and preventing smoking outside buildings within 25’ of operable windows, doors and outside air intakes (CALGreen’s the same.)
8. Fundamental Commissioning (Cx) of building’s energy systems. The BIG change is the addition of Building Envelope Cx. (CALGreen requires some form of Cx in energy systems for buildings larger than 10,000 square feet.)

The NEW prerequisites include:

1. Not allowing a new building to be built on a Greenfield or previously undeveloped portions of a site. Not allowing buildings to be built within specific distances of water bodies or wetlands. Not building in 100 year floodplain areas, on land with threatened species, etc. (Numerous California laws prevent building upon some of these same properties. The EIR process often limits the development on others.)
2. Reduce the water demand of your landscaping by 30% through plant selection and/or efficient irrigation systems. (CALGreen requires that weather based controllers manage more efficient irrigation systems.)
3. Reduce water demand of appliances such as washing machines and dishwashers at prescriptive measures. Heat rejection equipment (cooling towers and others) are also limited on their use of potable water. (CALGreen does not comment on appliances or water dependant equipment.)
4. Requiring a construction waste diversion plan for all projects with a minimum diversion target of 20%. (CALGreen requires a much higher level at 50% diversion.)
5. Protecting the quality of the building’s inside air during construction by following SMACNA air protection guidelines. (CALGreen requires the protection of ductwork from dust infiltration.)
6. Separate water meters for buildings with demands of over 100,000 gallons of water a year, with more than 5,000 square feet of landscaping and any process that uses 1,000 gallons of water per day. In addition the building owner must share water utility bills with the USGBC for five years after certification. (CALGreen requires meters for uses of 1,000 gallons per day and/or buildings over 50,000 square feet.)
7. Building energy meters are required for all energy sources the building demands. Again, the provision of sharing energy bill information for five years upon certification is required. (CALGreen does not address the issue of energy metering or reporting.)

While the final version of LEED 2012 (to be published next fall) will change after a detailed analysis of the credits in both drafts and also recognizing that the USGBC's mission is to "transform the way buildings are designed, built and operated", it is obvious that the USGBC will continue to demand and reward the reduction of carbon emissions and potable water demand of buildings. In order to obtain metrics for LEED buildings, their collection of actual building performance will help prove or adjust their system to meet their goals.

While being LEED certified does not necessarily make a building greener than the new building built next door, it is more likely. When people ask me whether CALGreen has eliminated the need for California building owners to use LEED I tell them: "No". The folks that choose to follow this increasingly demanding system are doing so to show they have put their money where their mouths are, for stewardship or to set themselves apart in a competitive marketplace. CALGreen alone won't do. □



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