

# So You Want Your Lumber Green?

Part 2



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What component manufacturers supplying commercial and residential jobs need to know before going green.

**Above:** The photo above is lumber certified through the Forest Stewardship Council (FSC). These boards are left over from a job recently done by Shep Campbell at Glaze Components in Winchester, VA.

## at a glance

- ❑ There are two major green standards for commercial building, and two for residential construction are in the works.
- ❑ Before you can decide whether green is good for you, it's important to understand the standards and the system.
- ❑ To become authorized to handle certified lumber, evaluate proper identification of certified material, segregation of certified material, processing of certified material and thorough record keeping.
- ❑ WTCA has a new webpage dedicated to the topic of green building: [www.sbcindustry.com/greenbuild](http://www.sbcindustry.com/greenbuild).

**T**o build green, or not to build green? That is the question facing many commercial and residential builders today. Public awareness of the effects of environmental degradation, coupled with rising energy and electricity costs and less available open land, is beginning to create a viable market for "green" buildings. The first article in this series briefly introduced some of the major green building initiatives and the various forest certification programs available in the North America. With that background, this segment will discuss what you, the component manufacturer, will have to consider doing if you want to get in on the green building market.

You've undoubtedly heard the term "Chain of Custody" (CoC). It's used extensively in association with lumber certification systems specified in green building standards. It is the reason you will need to take steps to become qualified to handle the certified lumber required by a standard. True, CoC is simple in concept, but as you'll see below, the green building standards that employ CoC are not so simple.

### Commercial vs. Residential

Previously, we touched upon the three major green building standards: the U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) Green Building Rating System, the Green Building Initiative's (GBI) Green Globes System and the National Association of Homebuilders' (NAHB) National Green Building Standard (NGBS).

For almost a decade, LEED and Green Globes have had viable point-based rating systems for new commercial projects. However, no equivalent rating systems for residential construction existed—until now. It appears residential green building standards are not far off, which makes this topic all the more timely for component manufacturers.

Just how timely is it? Since the first article in this series was sent to print—in early February—a residential LEED standard has been issued for public comment. Further, GBI announced in January that they are partnering with NAHB and making their proposed National Green Building Standard the residential standard for Green Globes. What does this mean? There are now two major standards for commercial buildings (LEED and Green Globes) and two being developed for residential (LEED and Green Globes/NGBS).

These new residential standards are apparently well timed. Ben Hershey, TruTrus, echoed the comments of other component manufacturers interviewed when he said, "during the current slowdown one national builder we work with is reviewing the

products they offer, and they are considering the idea of offering homes certified by a green building standard once the market improves." However, they will need an approved residential standard to do it.

This article is not intended to be an evaluation or endorsement of these green building standards, but it's vital to explore these standards in greater depth so you can better evaluate whether you want to get involved in green building projects.

### LEED Commercial & Residential Standards

LEED is a point-based rating system. For new commercial construction, there are 69 total points available. LEED certification designations are assigned using the chart provided in the margin. (Note: some specific commercial projects, public schools for example, use a slightly different scale.)

#### LEED Rating System for Commercial Construction:

- 26 to 32 points is LEED Certified
- 33 to 38 points is LEED Silver
- 39 to 51 points is LEED Gold
- 52 to 69 points is LEED Platinum

First, in order to qualify for LEED designation, builders have to fulfill seven mandates, which range from preventing pollution on the construction site to providing a space for storage and collection of recyclables.

It's a long list, and none of those mandates earn them a single point toward their designation. There are only two mandatory points, which relate to improving energy efficiency beyond an established baseline. The remaining 24 points can then be earned through a wide variety of methods or materials that range from installing ultra-efficient HVAC systems to using renewable or sustainable materials in their building framework.

For new residential construction, the proposed LEED standard is very similar. Again, it is point based with 136 total points available. The various LEED certification designations are assigned using the second chart in the margin.

#### LEED Rating System for Residential Construction:

- 45-59 points is LEED Certified
- 60-74 points is LEED Silver
- 75-89 points is LEED Gold
- 90-136 points is LEED Platinum

The standard is supposed to measure the overall performance of a home in eight categories: Innovation & Design, Location & Linkages, Sustainable Sites, Water Efficiency, Energy & Atmosphere, Materials & Resources, Indoor Environmental

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While homebuilders will be concerned with all these categories, component manufacturers will likely only be involved in one area: Materials & Resources. In this regard, you have the potential to provide components that will qualify for points towards their certification designation.

### Green Globes Commercial & Residential Standards

Green Globes is also a point-based rating system. It is also quite progressive in that the entire certification process for builders can be accomplished using their online questionnaire-based software. For commercial projects, the points are based on seven areas of assessment: Energy, Indoor Environment, Site, Water, Resources, Emissions and Project Management. If you're supplying one of these jobs, you will likely play a role in just the Resources category.

Their commercial standard is based on 1000 total points and certification designations are based on the percentage of points attained.

#### Green Globes Rating System for Commercial Construction:

- 85-100% is 4 Globes
- 70-84% is 3 Globes
- 55-69% is 2 Globes
- 35-54% is 1 Globe

The Resources portion of the Green Globes assessment is worth up to 100 points, and like LEED, is focused on renewable or sustainable materials. However, one substantial difference is that Green Globes considers the life cycle of materials while LEED does not.

As mentioned earlier, the Green Globes residential standard is

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now the NAHB's proposed National Green Building Standard. Powered by the same online questionnaire-based software, this standard uses criteria established through a collaborative process sponsored by the NAHB's Research Center.

This residential standard is not based on overall points, but rather point levels attained in each of seven areas: Lot Design, Preparation & Development, Resource Efficiency, Energy, Water, Indoor Environmental Quality, Operation, Maintenance and Homeowner Education, and Global Impact. For example, as the chart to the right shows, in order to obtain a Silver des-

ignation, you would have to earn ten points in Lot Design, 60 in Resource Efficiency, 62 in Energy Efficiency, etc., in each Guiding Principal. In addition, you would have to earn 100 additional points from any of the categories.

Due to NAHB's close involvement in the development of this standard, it is tied to the local green building initiatives sponsored by regional Home Builder Associations (HBAs). In cases where there is a local HBA green building standard, the HBA acts as an independent verifier or third-party agency.

#### Scoring Points

Assume your company has made the decision to proceed with supplying components built with certified lumber for either residential or commercial jobs. Your job is to help your customer score points. While at first glance there appears to be many ways to obtain a large number of points, in reality most builders are scraping points together to achieve their targeted green standard designation.

For example, they may qualify for 72 LEED points (three points shy of achieving a gold level) with all the work they've done on design, site development and energy use. They've maxed out those categories to where doing anything more would be cost prohibitive. So, now they're looking to obtain at least three more points somewhere else. They decide they want to use pre-fabricated roof trusses (worth one point), and if they can get them made with FSC-certified lumber, they can get two more points and with these three additional points they earn their LEED Gold designation.

Guiding Principal	Bronze	Silver	Gold
Lot Design, Preparation and Development	8	10	12
Resource Efficiency	44	60	77
Energy Efficiency	37	62	100
Water Efficiency	6	13	19
Indoor Environmental Quality	32	54	72
Operation, Maintenance and Homeowner Education	7	7	9
Global Impact	3	5	6
Obtain additional points from sections of your choice	100	100	100

With the Green Globes/NAHB residential standard, let's say a builder has 53 points under the Resource Efficiency category through other means, and their goal is to obtain the 60-point "Silver" designation. They receive three points for using pre-fabricated roof trusses, and three additional points if the trusses are made out of a renewable material like wood. That still leaves them with 59 points. However, they can qualify for four additional points if the wood is from a recognized certification program (all those listed below qualify). That will get them over the threshold with 63 points, well done.

#### Certiably Certified

As the previous article discussed, there are a number of recognized forest certification systems available in North America. The most significant are: FSC (Forest Stewardship Council); SFI (Sustainable Forestry Initiative Program); PEFC (Pan European Forest Certification); ISO (International Organization for Standardization); CSA (Canadian Standards Association); and ATFS (American Tree Farm System).

Under the two proposed residential green building standards, pre-fabricated components made from wood will qualify for points whether the wood is certified or not. However, when points are at a premium, builders are looking for components made from certified sources. Currently, if they are trying to obtain a LEED designation, they are looking for FSC certified lumber because it is the only one recognized under LEED. Under Green Globes/NAHB's residential standard FSC, SFI CSA and ATFS are all recognized and treated the same.

If your builder customer is going for any type of green certification, you are likely to find one of these acronyms in the job specs. Pay close attention to this prior to submitting a bid for the project.

As mentioned in the introduction, in order to provide components made with certified lumber, you have to become certified yourself. In essence, you must become part of the Chain of Custody (CoC). The CoC is a bureaucratic process that, in this case, documents the voyage of a stick of lumber from the moment the tree is cut down to the when it arrives on the jobsite as part of a component. It provides reasonable assurance to the builder/customer that the wood in the components provided is indeed from a forest managed by the approved certification process (FSC, SFI, etc.).



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In talking with various component manufacturers, it is not difficult to become certified. However, it takes upfront money (approximately \$2500 for FSC), and may require some time to adequately document your manufacturing and delivery processes.

First, the cost: both FSC and SFI contract with approved third-party agencies to monitor and preserve their CoC. For example, FSC uses a company called SmartWood to inspect and certify manufacturers using FSC certified wood. If you want to become part of the FSC CoC, you hire SmartWood. SFI is very similar, although their list of approved third-party agencies is considerably longer.

With any of the certification processes, you will be required to assess four main areas of your operations: proper identification

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of certified material, segregation of certified material, processing of certified material and thorough record keeping. In other words, you will have to be able to adequately document how you will differentiate certified lumber from the rest of your stock from when it arrives at your facility until it is delivered to the jobsite. Shep Campbell, Glaze Components, said, "it was simple, we already had that process in place. We just handled [the FSC lumber] like we do our fire retardant treated lumber."

Once you become certified, you will need to find a distributor or mill to provide the specific certified lumber you require for the job. Some component manufacturers who had already

participated in this process suggested this may actually be the most difficult task. Brian Johnson, Structure Systems, explained, "I come from the lumber side of things and I know typical wholesalers and mills don't have a lot of FSC inventory, so it's sometimes a real pain to find. Eight out of ten times I can find SFI, a lot of engineered wood products are SFI certified, but FSC is difficult because their requirements are so rigid."

Shep added, "For our first job we needed FSC certified southern yellow pine, but according to our lumber coop there's only one mill in the U.S. that supplies it. We were able to get the wood from them, but they were able to dictate the terms of the purchase."

For your first green building job, there is the strong possibility you will have to inform the builder there will be an extra long lead time in providing the components. "For us, we estimate that between getting FSC certified and then ordering the special FSC lumber, it would add eight weeks onto the length of time for the first job we did," said Tom Lambert, Roberts & Dybdahl, Inc.

**Overcoming Challenges**

The green building movement is still relatively young. The leading commercial standards covered here are still being tweaked, and the residential standards are just being introduced for the first time. There is also plenty of debate in the scientific community, as well as with end users, as to what factors do and do not contribute to making a building truly "green." In addition, there's disagreement about how heavily these different factors should be weighed in relation to each other.

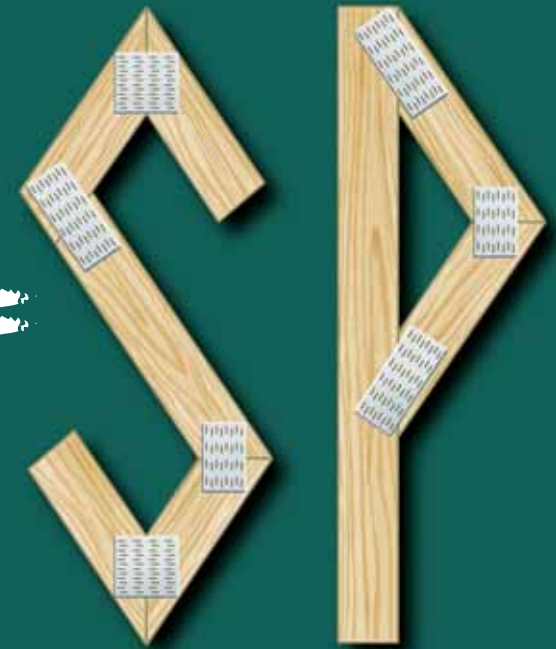
Yet, momentum appears to be growing behind these concepts, and it is a good time

to evaluate whether you want to begin participating at the leading edge of this trend. LEED and its requirement of FSC lumber currently has the greatest commercial market penetration, but the Green Globes/NAHB residential cooperative and its acceptance of SFI and other readily available lumber may have an edge among home builders.

So the ultimate question for you is: To be certified, or not to be certified. Only you can answer that question. But if you have other questions about the green building movement, WTCA has developed a new webpage devoted to the subject, you can access it by going to [www.sbcindustry.com](http://www.sbcindustry.com) and clicking on [www.sbcindustry.com/greenbuild](http://www.sbcindustry.com/greenbuild). **SBC**

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