

Far From One-Dimensional

BY GEOFF WEISENBERGER, LEED GA

The Sustainable Steel sessions at this year's NASCC demonstrate the variety of ways in which the two S-words interact.

AS SOME OF YOU MAY RECALL, I used to be the senior editor of this magazine.

At that post I had an email folder for each issue and in it a folder for each article—in addition to plenty of other folders for article ideas, subject areas and projects. When I moved over to the marketing side of AISC to focus on one particular topic—sustainability—I figured my list of email folders would become much shorter. I was wrong. I have created more folders than I ever thought possible, and the list is ever-growing.

I'm not telling you this to impress you with my organizational skills (or frighten you with my lack thereof), but rather to communicate that I never imagined how multifaceted the word sustainable could be, particularly within the realm of structural steel. Sustainability affects and is affected by our industry in many ways, and this variety is reflected in the Sustainable Steel sessions at this year's NASCC.

The article "The 2011 NASCC Opportunity" in the March 2011 issue of *MSC* (available online at www.modernsteel.com/backissues) provided a quick look at what each of the eight Sustainable Steel sessions will cover. In this column, I'd like to focus briefly on why they're each important.

Sustainability and Steel – Consider this one: Green Steel 101. It provides an overview of how steel and sustainability are closely related, including a basic introduction to the importance of green buildings; steel's environmental improvements over the past few decades; green attributes, talking points and opportunities for steel in each link in the supply chain; relevant green codes, standards and rating systems; opportunities for steel within the LEED system;

and building case studies that demonstrate that there's more to designing and building a green framing system than just choosing the material.

The Fabricator and LEED – With LEED projects come a whole new level of accountability for all parties involved. This session will give fabricators a better idea of what is required of them in terms of documentation for LEED projects, providing practical examples of LEED calculations as well as suggestions for decreasing the environmental impact of a fabrication shop.

Building a Ship in a Bottle—Accident Fund Insurance Co., Lansing, Mich. – A major push within the green building community is adaptive reuse of existing structures. Our industry is certainly focused on new buildings being fabricated and erected, but constructing new buildings today using structural steel is also a wise choice to allow for future structural adaptation and expansion. That point is illustrated by this case study of a power plant-turned-office building in Lansing, Mich. For a preview of this session, read "An Inside Job" in the December 2010 issue of *MSC*, available at www.modernsteel.com/backissues.

Saving Buildings from Collapse—and the Landfill – Designing buildings to withstand the stress of earthquakes or other disasters is sustainable in that it keeps them out of the landfill and also alleviates some or all of the environmental and safety impacts of structural failure and subsequent demolition and reconstruction. The concrete industry promotes building durability via overdesign and using more concrete—a bunker mentality, if you will. Proponents of steel, on the other hand, feel that durability can be achieved with smarter design, leading to easily repairable buildings. This session highlights a seismic system that is both efficient and rapidly repairable.

Legal Pitfalls of Green Design and Construction – This session is an expansion of the March 2011 *MSC* column "The Legal Side of Green," which is available at www.modernsteel.com/backissues. As the number of green projects increases, so does the number of potential green lawsuits, and this session covers important considerations for anyone becoming involved in projects that have stated green goals or hopes of becoming LEED certified.

Thermal Steel Bridging: Minimizing Building Envelope Energy Loss in Structural Steel Buildings – The issue of energy loss via steel that penetrates a building's façade—thermal



Geoff Weisenberger, LEED GA, is AISC's director of industry sustainability. You can reach him at weisenberger@aisc.org. Learn more about steel and sustainability at www.aisc.org/sustainability.

bridging—is seeing increased attention in the construction industry. This session provides potential solutions for minimizing the problem.

Solar Steel – As the use of renewable energy increases in the U.S. and the electrical grid becomes greener, steel stands to gain a lot from an environmental standpoint. Think of it this way: most of steel’s carbon footprint is tied to electrical use at the mill level, so as the grid becomes greener, so does the steelmaking process. In addition, the solar power market is providing increased opportunities for steel, as HSS can be used to support solar cells on both rooftops and the ground. This session illustrates the reciprocal relationship between steel and renewable energy via a case study of an HSS manufacturer that is constructing the largest solar rooftop array in North America on one of its facilities—with the panels, of course, being supported by its own HSS.

Reused: A Tale of Salvaged Steel – Salvaged structural steel isn’t currently seeing a lot of use in the U.S., but the potential is there. As with structural expansion and adaptation projects, steel is perfectly suited for deconstruction, salvage and reuse. This session provides a case study of a project that used salvaged steel for structural columns. It also discusses the challenges of testing and certifying salvaged steel—and illustrates one more reason why steel is a superior material from a green standpoint.

AISC’s sustainability initiative is geared toward communicating and educating steel’s advantages and opportunities to the construction industry at large, as well as looking inward and seeing where we can make improvements to our industry and how we can design, produce, fabricate and build with steel in the most sustainable manner possible—both with the end goal of seeing structural steel continue to expand its market share in green-minded projects and as a whole.

The topic of sustainability and steel doesn’t fit into just one folder, or one session, and our hope is that this conference-within-a-conference will provide you with talking points and tools to help you spread the “green word” about steel. Perhaps it also will give you ideas on how to make your own role in the steel supply chain more sustainable—and see your business increase as a result of both.

For more details on these sessions and others at this year’s NASCC, visit www.aisc.org/nascc.

MSC