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REFERENCE

Michael J. Crosbie is a senior associate with Steven Winter Associates Inc. (an architectural research and consulting firm) and the chair of the Department of Architecture at the University of Hartford.

For more information on CEC's efforts, and copies of the studies as they are completed, [visit the council's Web site.](#)



FACE OF THE AIA

SUSTAINABILITY

Think Regionally!

by Michael J. Crosbie, PhD, AIA
Contributing Editor

Summary: Worldwide efforts and agreements on reducing environmental impacts are the ones that grab all the headlines, but countries are also working together at smaller, regional scales to study the impact of buildings on the environment and suggest ways to make reductions in greenhouse gases. Take, for instance, the Commission for Environmental Cooperation (CEC). The CEC is an international organization created by Canada, Mexico, and the U.S. under the North American Agreement on Environmental Cooperation (NAAEC), a subset of the North America Free Trade Agreement, to address regional environmental concerns, help prevent trade and environmental conflicts, and promote the effective enforcement of environmental laws.

The "2030 Challenge," articulated jointly by the AIA and the Royal Architectural Institute of Canada (RAIC), is one benchmark that CEC is studying in terms of the impact it could have on the environment. The AIA and RAIC have established a schedule to achieve a "carbon neutral" goal for new buildings by 2030 and substantially reduce carbon in existing buildings. The 2030 Challenge has received support from architects and others in the industry and appears an achievable if ambitious goal. Currently, it is estimated by the U.S. Department of Energy that buildings account for about 40 percent of the energy consumed—and related greenhouse gas emissions—in the U.S. (It is nearly half of the nation's consumption if you include the embodied energy in building materials.) And consumption is expected to rise by more than a third by 2030. That's a large energy appetite to curtail.

International cooperation

Getting a handle on how energy is being consumed and the prospects for making reductions are major foci of CEC right now. In an example of international cooperation, North American architects, builders, engineers, environmental scientists, and others are now working on a major CEC study. "Green Building in North America: Opportunities and Challenges" will profile the status of and prospects for green building. The firm I practice with, Steven Winter Associates, is one of several sustainability experts that have been selected by the CEC to contribute to this comprehensive study, through the creation of a paper focusing on green housing initiatives in Canada, Mexico, and the U.S. The paper is one of five commissioned by CEC that will examine different aspects of green building and look at how green housing programs can help lower resource requirements, lower environmental impact, and improve comfort in the different countries that are part of the CEC.

Surveying green housing efforts in the three countries, the study will examine specifically:

Getting a handle on how
energy is being consumed

- Projected housing stock over the next generation
- Resource demands by housing stock in each country
- The role of governments and the private sector in facilitating market transformation
- Federal, state, and community-based efforts to build green housing
- Systems to finance and assess the financial viability of green housing
- Drivers and barriers to green affordable housing development
- Efforts to overcome such barriers.

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The studies will be released later this year, but our work has already uncovered a number of barriers to moving forward.

Barriers to overcome

For example, the higher perceived first-cost of many green building strategies and technologies is perhaps the biggest barrier to consumer interest. The challenge is to help homeowners and commercial clients understand lifecycle costs—not just first costs. Another barrier is the sheer number of ways of measuring green building, or defining what a green building is. The LEED® standard is one way, but it has its shortcomings and there are other yardsticks available. An international effort to standardize green building metrics would help overcome this barrier. A third barrier is information—too little and too much. Clients, builders, lenders, and architects not only need green information targeted to their needs, they need guidance in what is the most critical information needed throughout a project's life-cycle (from first proposal to recycling years later) without becoming overwhelmed with the wealth of information out there (some of which lacks adequate grounding in building science or market realities).

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