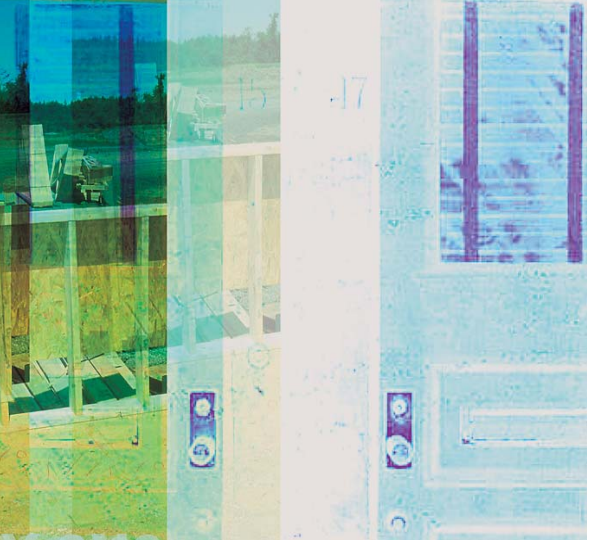
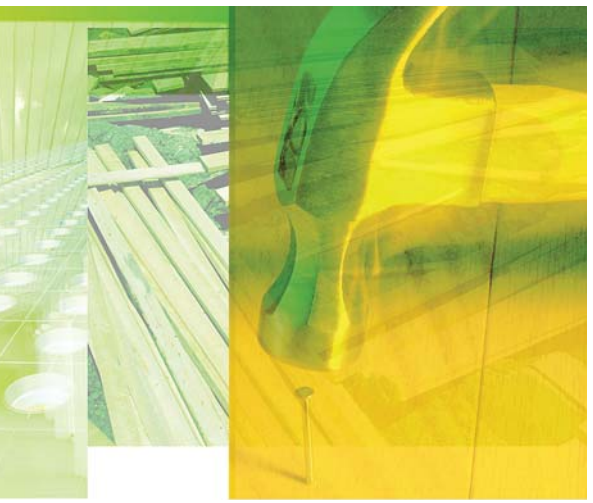
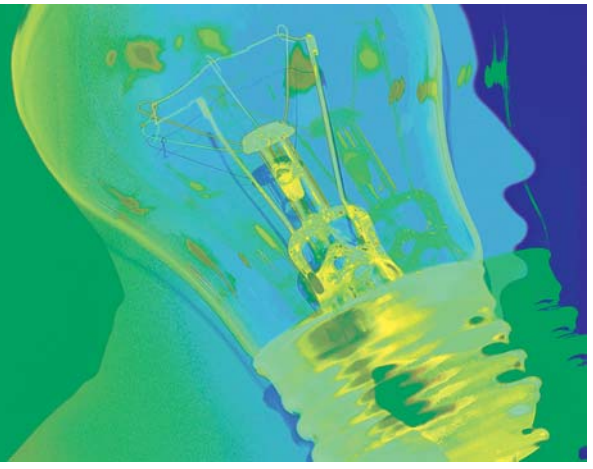






Gaining New and Wider Views

by David Eisenberg

> *Creating a new theory is not like destroying an old barn and erecting a skyscraper in its place. It is rather like climbing a mountain, gaining new and wider views, discovering unexpected connections between our starting point and its rich environment. But the point from which we started out still exists and can be seen, although it appears smaller and forms a tiny part of our broad view gained by the mastery of the obstacles on our adventurous way up.*
>
> *– Albert Einstein*

This quotation accurately describes the essential process of learning: how the experience of working something through enhances and expands our view of reality. We have been required to do much learning lately. Those who have heard about net-zero energy buildings and programs like the Living Building Challenge—which is also working toward net-zero water balance and very high environmental performance—and think these goals are decades away from implementation might want to get out their hiking boots and compasses, because there is a high probability that these kinds of projects will begin sprouting up across the country in the next few years.

The rapid changes we are seeing are driven by emerging realities that are forcing increasing numbers of people in responsible public policy and business leadership positions to rethink what is required of them to fulfill their duties with regard to the health and welfare of their communities and businesses. As a result, the dialogue is shifting from whether issues associated with global climate change are real or serious and if and when we should respond to them, to finding the most effective and beneficial path forward.

Designers, builders and developers ahead of the mainstream have been pushing hard in this direction and have discovered that high

performance green projects with much smaller ecological footprints can be built at close to conventional costs, and in many cases with enhanced profitability. For example, the August 2007 "Energy Efficiency in Buildings: Business Realities and Opportunities" report from the World Business Council for Sustainable Development (WBCSD) reveals that many of those in real estate and construction significantly underestimate the benefits and overestimate the costs of green building.

The North American Cooperation for Green Building

We are now witnessing international cooperation in support of the shift to green building through agreements between various international organizations. "Green Building in North America: Opportunities and Challenges," released in March 2008 by the Commission for Environmental Cooperation (CEC), recommends that North American leaders make green building a foundational driver for environmental, social and economic improvement in Canada, Mexico and the U.S. The report and background research papers can be downloaded from the CEC website at *www.cec.org/greenbuilding*.

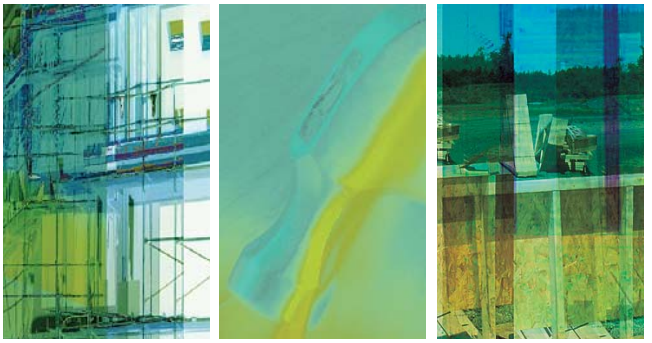
The CEC was created under the North American Agreement on Environmental Cooperation to address regional environmental and trade concerns and promote the effective enforcement of environmental law as a complement to the environmental provisions of the North American Free Trade Agreement. The following is from the report's Preamble, which was excerpted from the "Advisory Group Statement and Advice on Recommendations."

> *We are standing on the threshold of the largest opportunity in human history to increase significantly the quality of life for all citizens of North America and the vitality of our social, economic and environmental systems.*
>
> *North America is facing unprecedented challenges in areas such as climate change, concerns regarding the security of energy supplies and the depletion of water and natural resources.*
>
> *These challenges are not insurmountable. Canada, Mexico and the United States have the resources, wealth and ingenuity to overcome these challenges and create a sustainable, healthier and more productive North America.*
>
> *Success, however, will require a fundamental shift in the way we think about our environment. At the heart of this thinking should be a plan to make green building a foundational driver for change in North America.*

The WBCSD—whose corporate members include national and international industry leaders—is among the many groups supporting this report and is working to develop a plan to accomplish net-zero energy buildings by 2050.

Aggressive efforts have also been rolled out by Architecture 2030 in the form of its 2030 Challenge, which now has commitments from the American Institute of Architects, the International Council for Local Environmental Initiatives, the Royal Architectural Institute of Canada and the U.S. Council of Mayors. In addition, the American Society of Heating, Refrigerating and Air-Conditioning Engineers; the Illuminating Engineering Society of North America; and the U.S. Green Building Council, with support from the U.S. Department of Energy, have signed a memorandum of understanding to support the development of net-zero energy buildings with the goal of carbon-neutral buildings by the year 2030.

It is now time to begin the process of aligning our energy and building codes with these goals. Although there has been great concern and speculation raised about the economic impacts of addressing climate change, the "Fourth Assessment Report" (2007) of the Intergovernmental Panel on Climate Change (IPCC) states that buildings represent the greatest opportunity for substantial carbon dioxide emissions reductions. The IPCC report adds that 30 percent of projected global



reductions of greenhouse gas emissions by 2030 can result from the building sector with a net economic benefit while also improving indoor and outdoor air quality and enhancing energy security and social welfare.

On the Way Up

Many have been navigating through a great many obstacles on the way to gaining new and wider views. There is still a ways to go, but the initial points of concern now occupy a much smaller aspect of what we can see and the path forward needs to be based on the view from where we are now. That includes both what we have learned about how to design and build safely and well, and what we've learned and are continuing to learn about new risks that need to be addressed.

A part of the new focus on risk must be learning how to balance the specific, local and relatively short-term risks that have garnered so much attention in the codes with these larger, generalized, distributed, aggregated mid- to long-term risks we now recognize. These new risks are generated at virtually every step of the entire life cycle of our built projects, beginning with the acquisition of resources and extending all along their journey through transportation and processing, installation and use, repair and maintenance, and eventual disposition, as well as the flows of energy, water and air, and even wealth. Although we can look back with deserved pride on the tremendous accomplishments in building safety to date, we cannot become complacent with our accomplishments.

Among the biggest challenges will be the need to respond quickly to climate change and energy-, water- and resource-scarcity issues through major changes in building design and construction. Acceleration of the rates of change will increase certain kinds of risk. The conversation that needs to begin in earnest is how to create an appropriately balanced, flexible and responsive regulatory system that doesn't impede crucial changes or compromise public health and safety. In order to accomplish this, we will need a much broader and more robust process for assessing risks relative to each other that doesn't shortchange future generations.

New regulatory structures must be created that facilitate projects seeking to address the full spectrum of risks we now recognize. Mechanisms that more easily allow demonstration and experimental projects through multiple iterations, with appropriate review and monitoring to provide real-time research results, are necessary. This will require a new regulatory role: one of real partnership so that when, inevitably, some things don't work exactly as expected the opportunity is there to take corrective action and try again.

There is no question that a fundamental shift in the way we currently approach things—both in theory and in practice—is needed. This will require that regulatory systems be sufficiently integrated and operate against a large enough background that we can comprehend the full range of risks taken and created in order to preclude others. To accomplish this, we need to keep working together to arrive at a point where we can see clearly and far enough ahead to safeguard each other and the natural systems we all depend on for our health, safety and welfare. ◆

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To learn more about DCAT, visit its website at www.dcat.net.