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# THE TROWEL

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## Construction Technology

**NWCB Convention  
Presents Opportunities**

*Also in this issue:*

**Better Buildings with BIM  
Bob Wright Centre, University of Victoria**

## Changing Times For Architecture

The great economic crisis rocketing round the world is evoking both a sense of fear and a quest for pragmatic long-term solutions. Leaders across the globe are trumpeting green buildings as a part of their economic revival packages. This is undoubtedly good news for the building industry as a whole, because green building solutions encompass both new high-performance construction and well-informed retrofits of existing building stock. This is also beneficial for the general economy, as we will finally see a trigger to stimulate the development of alternate technologies and renewable energy systems.

In Canada and around the world, architects and engineers are exploring new standards and systems of sustainable building designs including LEED®, BREAM, Passivhaus, and Living Buildings. For what it is worth, I believe we should also be developing a new economic theory with a value placed on 'natural capital'. The idea behind this concept is the application of a value – economic or political – to all essential natural resources. It is a theory that is gaining much credibility and rightly so. However, in our pursuit of new ideas, we are constantly frustrated by the lack of reasonably priced alternative technologies. Now is the time for us to invest in the advancement of more cost-effective thin film photovoltaic window systems, rather than roof-applied solar panels. We also need to develop in-core wind turbine systems for tall buildings that can take advantage of the stack effect and complement remote ocean and landscape wind turbines. We also need to focus on the creation of urban waste-heat energy recovery systems, which can be connected to micro-utilities at the building site level to complement clean hydro-electric power. Society needs to rapidly move away from a fossil-fuel based economy and towards an electric economy, with a large micro-utility generation capacity.

This will enable us to better address the gross (70 percent) transmission losses currently embodied across the system, from the dam to the plug, in the existing infrastructure. The sun alone supplies us with 100w per sq. ft. of energy across the daylight earth every day. This life-giving force needs to be properly utilized if we are ever to balance our fuel consumption and resulting impact on the climate.

The old Chinese curse – 'may you live in interesting times' – reflects our turbulent age. We are all now embroiled in a great human experiment. Buildings are currently responsible for 50 percent of the resource extraction and fossil fuel consumption on our planet each and every day. It is incumbent on all of us in the design and construction industries to maximize this current opportunity to develop a new 'green' economy, which will ultimately lead the way to a better and brighter future for all. ■



by / Teresa Coady AIA, MAIBC, FRAIC, LEED® AP  
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*Recognized as a pioneer in sustainable and energy efficient design, Ms. Teresa Coady is the Chief Executive Officer of Bunting Coady Architects ([www.buntingcoady.com](http://www.buntingcoady.com)). Her vision, to create 'living breathing buildings'™, has led her practice to create more square footage of LEED®NC Gold certified institutional and commercial projects than any other firm in North America. The firm is also responsible for developing and pioneering the Integrated Design Process (IDP), which involves the client in all aspects of design and construction. Ms. Coady is a recent recipient of the RBC Canadian Woman Entrepreneur Awards (CWEA), the only architect to receive this honour.*

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