

### **Green Building Pioneer Stephen Carpenter Wins Order of Canada**

Green building pioneer Stephen Carpenter was [presented with the Order of Canada](#) on September 12, 2014 at Rideau Hall in Ottawa. Mr. Carpenter, P.Eng, was recognized for "for his visionary leadership in the development and stewardship of Canada's green building industry."

Raised in Ottawa, Mr. Carpenter attended the University of Waterloo (B.A.Sc '78, M.A.Sc '80), studying mechanical engineering. Realizing there were few Canadian firms that specialized in energy-efficient, building design, in 1981 Mr. Carpenter founded Enermodal Engineering in Waterloo, Ontario. Enermodal's early work focussed on developing Canada's first energy modelling software. Mr. Carpenter's "cracked the code" for the mathematical modelling of energy loss through building components such as windows, and this allowed for the development of sophisticated computer modelling tools used in the design of energy efficient buildings.



In the early 2000s, a green building rating system called LEED (Leadership in Energy and Environmental Design) was established in the US. Appreciating the value in a rigorous, independent rating system to determine the "green-ness" of a building's design, Mr. Carpenter became involved in creating the

Canadian version of the LEED rating system. He was the co-author of the LEED Canada manual and was the first chair of the Canadian Green Building Council's (CaGBC) Technical Advisory Group. For his role as an early adopter of LEED, Mr. Carpenter received the CaGBC's first Exceptional Service Award in 2010 and was one of only two Canadians named to the inaugural class of LEED Fellows in recognition of highest level of expertise and commitment to the rating system.

Mark Hutchinson, Director of Green Building Programs at the CaGBC says, "When thinking of the many professionals who have contributed to the success of the CaGBC and LEED in Canada, Stephen Carpenter ranks among the most dedicated and instrumental experts in this field. His firm was responsible for 23 of the first 25 LEED NC certified buildings in Ontario. Steve's firm has been instrumental in delivering some of the best performing green buildings and showing that LEED Gold and Platinum projects are cost effective and achievable."

Enermodal became the dominant LEED/green building consultant in Canada and has certified over 270 LEED Canada buildings. The firm grew to 120 staff and under the leadership of Mr. Carpenter, pioneered some of the most innovative yet practical green building technologies in Canada, including rainwater cisterns, onsite biofiltration, radiant cooling, renewable energy systems, and variable flow refrigerant systems. Mr. Carpenter's effectiveness as a building designer led to the wider adoption of his preferred design approach, which is the use of integrated design teams with a strong engineering component. This design approach ensures that buildings actually achieve the energy or resource savings expected, and are more likely to meet the needs of building occupants as well as those of owners--and it pioneered a broader and more effective role for engineers in the design process.

Most recently, Mr. Carpenter led the design and construction of the new Enermodal head office in Kitchener, A Grandeur View, to take the title of Canada's most energy-efficient office by using 80% less energy and water than a conventional office. A Grandeur View became the first building in Canada to achieve the highest level of LEED certification (Platinum) in three LEED rating systems. A Grandeur View won a variety of design awards including North America's Most Liveable Office (Center for the Built Environment), and the Canadian Consulting Engineer Tree of Life Award.

John Kokko, vice president of Enermodal Engineering (now MMM Group Limited), describes this effective approach, "Steve is a down-to-earth visionary, able to turn revolutionary ideas into practical, cost-effective realities. He is recognized as a man of action, focused on sound, real-world solutions to the significant issues in the design and construction of the most sustainable buildings being built today. Steve's deep commitment to the ideals of sustainability and broad understanding of engineering principles is demonstrated in the results: buildings with 50-80% energy savings over conventional buildings."

Mr. Carpenter's professional awards include the Alumni Achievement Award from the University of Waterloo's Faculty of Engineering, and the Entrepreneur Award from the Professional Engineers of Ontario.

In 2010, Enermodal Engineering joined MMM Group Limited, with the Enermodal team serving as the building sustainability experts within the firm. Joining MMM Group has allowed the firm to work on larger projects and to expand into green communities and cities.

In late 2013, Mr. Carpenter retired from his position at MMM Group. Currently, he manages his own sustainable design and investment consultancy, [Building Rapport](#). One of his projects is serving as a Principal and green building expert at [CityCraft](#), an urban revitalization firm based in North Charleston, South Carolina.

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*The Order of Canada, established by the Queen in 1967 as Canada's highest honour, is awarded annually for a lifetime of distinguished service to a particular field or community. The independent Advisory Council for the Order of Canada reviews all nominations and makes recommendations to the Governor General.*

*Over the past 46 years, only 30 individuals from Waterloo Region and 116 engineers have been awarded the Order of Canada. Stephen Carpenter joins three other engineers from Waterloo Region who have received this honour.*

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