



The Insider

National Elevator Industry, Inc.

Mar 19, 2012

Building Transportation & Energy Efficiency – The North American Response

[Previous editions](#) of *The Insider* have explored the mechanics of energy efficiency for elevators, escalators and moving walks as well as the international initiatives that are underway to make building transportation systems more energy efficient. This final article in *The Insider's* sustainability series will explore the North American responses to both the work being done in the international codes and standards arena and the rapidly increasing demand for green technology in the United States and Canada.

A Current Snapshot: The United States

In September 2011, the U.S. Department of Energy issued its non-mandatory *High Performance Sustainable Building Guidelines*. These guidelines establish a set of principles in the siting, design, construction and commissioning of federal buildings that must conform to the Department's energy efficiency mandates. Included in those guidelines is a reference to the *Energy Standard for Buildings Except Low-Rise Residential* (ASHRAE 90.1), a document that has become the primary standard for energy efficiency in the design and construction of buildings in the United States.



The consensus committee that develops the ASHRAE 90.1 standard recently established a "Elevator Working Group" to develop energy efficiency requirements for elevators, escalators and moving walks. The result of this working group's deliberations will be significant, not only because the U.S. government recognizes the ASHRAE 90.1 standard, but because the developers of the model building codes in the U.S. (International Code Council, National Fire Protection Association) defer to ASHRAE expertise for its green technology specifications.

Recognizing the need for industry input in its deliberations, the Elevator Working Group has welcomed participation by *NEII*® as it develops new requirements for energy efficient elevators, escalators and moving walks. It has listened to industry concerns that any energy provisions required by ASHRAE 90.1 not compromise the safety of the equipment for the riding public, and acknowledged that North American standards must remain consistent with the energy efficiency requirements developed by ISO and the European community.

Canada and the NECB

In Canada, the National Research Council published the *National Energy Code of*

Canada for Buildings (NECB) in 2011. The NEBC has requirements for energy model calculations that account for the annual energy consumption of electrical and mechanical equipment in a building, including elevators and escalators. It also specifies the development of building performance compliance calculation reports that must include a breakdown of energy usage for all elevators and escalators in a building. The NECB is a model code that has yet to be adopted by any Canadian jurisdictions.

The Path to Harmonization

Unfortunately, *NEII*'s efforts to achieve consistency with the green initiatives coming from the international community and safety regulations in the U.S. and Canada have not always been successful. In 2009, the International Code Council (ICC) launched the development of a new International Green Construction Code (IgCC) initiative, subtitled "*Safe and Sustainable: By the Book*," committed to developing a model code focused on new and existing commercial buildings addressing green building design and performance.

The first edition of the IgCC, scheduled for publication in spring 2012, will include requirements that are either impractical (*e.g.*, requiring roller guides on hospital and freight elevator cars) or unsafe (*e.g.*, requiring escalators and moving walks to stop in violation with the Safety Code for Elevators and Escalators (ASME A17.1/CSA B44) requirements for variable-speed escalators and moving walks). It will do so despite *NEII* protests that these "green" requirements are either unsafe or unworkable, and will actually violate the requirements of the ICC's own *International Building Code* that require compliance with the current ASME A17.1/CSA B44.

The National Elevator Industry Inc. and its member companies are strongly committed to producing energy efficient building transportation products for the North American and worldwide markets. The industry has included energy efficiency provisions in its own [*NEII-1: Building Transportation Standards and Guidelines*](#) which have been available to the public for years. Recent revisions to the energy efficiency guidelines provide designers with a basic understanding of how elevators and escalators contribute to energy usage in a structure, employing a "credit-based" approach similar to the one used in the Leadership in Energy and Environmental Design (LEED) system.



NEII also continues to work with model code writing organizations (ASHRAE, ISO, ICC, NFPA), and the U.S. and Canadian governments to establish safe and energy-conscious regulations for the products it provides to the design and building community. We view the current problems of harmonizing the North American and European

requirements (to say nothing of resolving the inconsistencies amongst the ICC codes) as a challenge that can be resolved in time to the benefit of the environment, building owners and – most importantly – the riding public.

Have a comment or question for the experts? Want to submit a topic for a future issue of the newsletter? Send us your thoughts at theinsider@NEII.org to keep the conversation going!



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