

# WINTERGREEN

WinterGreen is a monthly publication from **Steven Winter Associates** designed to keep you updated on the latest news and information regarding energy efficiency, sustainability, and high performance buildings.

## STEVEN'S VISION: THE FUTURE OF THE BUILT ENVIRONMENT

In a [previous issue](#), we announced that Steven Winter was selected as a member of the 2014 Hanley Wood Sustainability Council and its Vision 2020 initiative. The initiative's goal is to guide the construction and design industries on a path towards sustainability to significantly reduce the environmental impact of the built environment by the year 2020.

Fast forward to the 2014 Greenbuild Conference and Expo in New Orleans this past week. Each member of the Council delivered a presentation framed by his or her focus area expertise. Steven's discussion honed in on energy efficiency and building science. If you didn't make it to The Big Easy for Greenbuild, or missed Steven's presentation, we have summarized the core message: To make a big impact, focus on improving existing buildings by applying building science methodologies to design and construction practices.



Most buildings that will be in use in 2020, and even 2030, already exist now. Many of these buildings are poor performers. On the bright-side, there is much room for improvement. Significant advancements in technology have brought the automation and monitoring of building systems, not to mention the composition of the systems themselves, to a whole new level. Coupled with increasingly advanced construction methods, materials and appliances have made energy-efficiency measures economically advantageous for building operation and maintenance.

Steven encourages people to think big, not only for the environmental benefit, but to achieve substantial financial savings. Real estate owners and managers who commit to making improvements on a portfolio-wide basis, make data-driven decisions, and leverage the bundling of services and solutions that piggyback onto each other, will have positioned themselves to reap serious cost-savings and improved net operating income.

In his presentation, Winter stated: "Our energy and environmental goals are certainly beneficial to mankind and its planet. But not everyone sees it that way, and not all institutions are set up to pursue them. Our mission is to change these scenarios."

Steven has authored an in-depth article that is currently available in the Winter 2014 edition of EcoBuilding. Read the full-length article: [http://www.ecobuildingpulse.com/energy-efficiency/energy-efficiency---building-science-steven-winter\\_o.aspx?dfpzone=general](http://www.ecobuildingpulse.com/energy-efficiency/energy-efficiency---building-science-steven-winter_o.aspx?dfpzone=general)

## RESNET ADOPTS GUIDELINES FOR MULTIFAMILY ENERGY RATINGS

The Residential Energy Services Network (RESNET) Standards have long governed the rules and procedures of rating the energy performance of single-family homes. With the demand for multifamily homes increasing dramatically, RESNET formed a Multifamily Working Group to address the lack of guidelines for buildings three stories and greater. HERS Raters, Energy Efficiency Program Sponsors, and national green building programs that support energy efficiency in mid and high rise multifamily buildings have expressed their need for guidelines that consistently cover the entire multifamily sector. The working group set out in 2013 to draft such guidelines and in August 2014, released the document, RESNET Guidelines for Multifamily Energy Ratings.

Prior to August, many raters interpreted and extrapolated the current set of rules and procedures, as needed, to address the multifamily sector. SWA, with firsthand experience with multifamily guidelines as the technical consultant to EPA under the ENERGY STAR® Multifamily High Rise program, supported the working group in its efforts.

For over a year, the working group met with the goal of drafting guidelines that cover all multifamily residential buildings, regardless of the number of stories, and heating, cooling, ventilation, and domestic hot water configurations. The new multifamily guidelines address sampling, performance testing, inspections, and energy modeling – all topics currently addressed by the RESNET Standards, but most easily applied to single-family homes. The new multifamily guidelines adapted the existing standards to provide a consistent approach to rating multifamily units across the rating industry.



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## NYC ENERGY CODE: VIOLATIONS AND EXPLANATIONS

Gayathri Vijayakumar, SWA's project manager for the firm's work on EPA's Multifamily Energy Star program summed it up: "For a long time, HERS Raters have struggled to apply the RESNET Standards to multifamily housing. These new guidelines, whether perfect or not, are the first step toward a consistent interpretation of the RESNET Standards when applying them to multifamily buildings."

To view the guidelines and the list of working group members, go to [RESNET Guidelines for Multifamily Energy Ratings](#).

For more information, please contact Gayathri Vijayakumar at [gvijayakumar@swinter.com](mailto:gvijayakumar@swinter.com).

Crain's New York recently published an article featuring the New York City Department of Buildings' audit results of thousands of architectural plans for new and renovated office and residential buildings. What they uncovered was that nine of every 10 have failed to meet the energy code, a set of standards that have been in place for 30 years. We sat down with SWA's Michael O'Donnell, Energy Consultant in our New York City office, to find out what the energy code is all about and what these results mean.



**WinterGreen:** What is the energy code? What brought about the need to enforce an energy code?

**Michael O'Donnell:** The energy code contains the minimum requirements that buildings must meet with regards to energy efficiency measures. According to the Department of Buildings, to meet the City's goal of reducing greenhouse emissions by 80% by 2050, the New York City Energy Conservation Code (NYCECC) sets energy efficiency standards for new construction, alterations, and changes to existing buildings. All new building and alteration applications filed on or after December 28, 2010 must comply with the 2011 edition of the NYCECC. The need for an energy code has been around for many years, but it is only really being enforced relatively recently.

**WG:** What are the benefits of a building meeting the energy code?

**MO:** Buildings that effectively meet the energy code will be better insulated, have better HVAC systems, and better lighting systems. As these systems are designed, implemented, and optimized, reduced operating costs for both owners and tenants will result. There are also environmental benefits of reducing greenhouse gas emissions achieved by utilizing less electricity and/or heating fuel.

**WG:** What are the potential risks of not meeting the energy code standards?

**MO:** Potential risks of not meeting the energy code include tenant comfort complaints, higher operating costs for electricity and/or heating fuel, and, more recently, action by the Department of Buildings. Energy code audits of building plans have the potential to stop a project in its tracks as well as impose fines for constructed buildings that are not meeting the code.

**WG:** What are the biggest reasons buildings fail to meet the energy code?

**MO:** There are a few reasons buildings fail to meet the energy code. Specific details are often missed or not included in the construction drawings and specifications. If details are not included, the contractor will not incorporate these items into what actually gets built. Even if specific energy related items are incorporated, the contractor may not have the knowledge to properly install or execute what is shown. Finally, it takes a trained inspector to know what to look for to ensure buildings are compliant with the energy code. NYC requires the large majority of projects to file a "TR8: Technical Report Statement of Responsibility for Energy Code Progress Inspections" form through which a licensed architect or engineer takes the responsibility for inspecting for energy code compliance. This form is required in NYC, but other jurisdictions, which do not require the progress inspections, run the risk of having items overlooked or missed since there is not a third party inspecting specifically for energy code items.

Read the Crain's New York article [here](#). For more information, please contact Michael O'Donnell at [modonnell@swinter.com](mailto:modonnell@swinter.com).



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