

WINTERGREEN

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A monthly update on Steven Winter Associates, Inc.'s work in the realm of Energy Efficient, Sustainable, and High-Performance Buildings

Gables Residential Seeking NGBS Certification in Rockville, Maryland

In early 2007, the National Association of Home Builders (NAHB) partnered with the International Code Council (ICC) to develop a series of guidelines known as the National Green Building Standard (NGBS). The guidelines encompass all types of residential new construction including single family and multifamily projects; the lots and sites upon which the residential buildings are located; and the remodeling of and additions to existing residential buildings. The guidelines were officially approved by the American National Standards Institute (ANSI) in early 2009 as the first and only residential green building rating system to undergo the full approval process from ANSI.



Now Gables Residential, a real estate company specializing in the development, construction, ownership, financing and management of multifamily and mixed use communities, is constructing its first projects to meet NGBS. Four midrise multifamily apartment buildings at Gables Upper Rock in Rockville, Maryland are targeting Bronze certification under the Standard, with Steven Winter Associates, Inc. serving as the Verifier in support of building certification.

For the past five years, Gables has committed to incorporating a variety of sustainability programs into its projects, including ENERGY STAR®, LEED® for Homes™, and LEED® New Construction™. The Upper Rock project represents the firm's first foray into the

NAHB-supported standard. Similar to LEED, NGBS is a voluntary point-based system that combines mandatory items with optional credits. With 697 possible points, the Standard offers a variety of options from which to choose. The baseline for energy savings is 15% better than the 2006 IECC. While no performance testing is required for certification, accredited Verifiers perform visual inspection and documentation review to ensure compliance with program criteria.

Gables Upper Rock has incorporated a number of green features that will achieve a minimum Bronze certification for all four buildings. Some of these features include energy conserving, 13-SEER split system heat pumps for heating and cooling, electric DHW heaters rated at 91% efficiency, select ENERGY STAR appliances, water conserving kitchen and bath fixtures, installation of a drip irrigation system for landscaping, use of low VOC paints, energy efficient lighting, and convenient access to public transportation with dedicated shuttle bus service. Gables Upper Rock is also a smoke free community, improving the indoor air quality for tenants. Amenities include bicycle storage, electric vehicle car charging stations, and preferred fuel efficient parking.

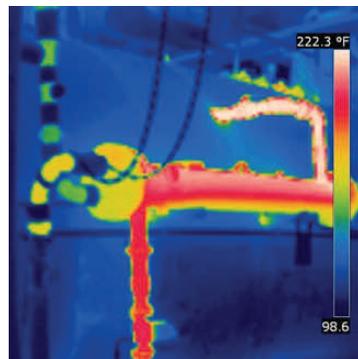
For more information on Gables Upper Rock or NGBS, please contact Lauren Hildebrand at lhildebrand@swinter.com

If It's Hot, Take the Shot

Testing the combustion efficiency of a big boiler can be useful, but it tells only part of the story. That's because there are many hot surfaces in a boiler plant that don't actually contribute to heating the building. In other words, due to standby losses, an 80% efficient boiler is only part of a substantially lower efficiency plant. An excellent tool for identifying these standby losses is an infrared camera.



In the boiler room, most things are warm, but some really stand out. For example, boilers that burn #6 heavy oil must heat it continuously so that it flows easily. A heat exchanger (pictured above right) on the side of a boiler is a very common way of accomplishing this task, using hot water from the boiler and oil circulated between the heat exchanger and the storage tank.



An infrared picture tells the whole story. Parts of this uninsulated heat exchanger (left) are hotter than 220°F. Many other poorly insulated parts exist in this chain: piping, oil pumps, and even the oil tank itself. Obviously these hotspots represent major sources of standby loss for the boiler, and although difficult to quantify, they may amount to as much as several percentage points of overall system performance.

Even though the use of #6 oil is being phased out, nearly every building's boiler has room for improvement of the uninsulated system parts.

Taking the infrared camera into the boiler room may quickly identify how bad the situation is. So if it's hot, take the shot.

For more information on this subject, contact Sean Maxwell at smaxwell@swinter.com.

Upcoming Events featuring SWA staff...



2012 ACI National Home Performance Conference

SWA Presenters: Srikanth Puttagunta, Sean Maxwell, Marc Zuluaga, Lois Arena, Robb Aldrich
 March 26 - 30, 2012
 Baltimore Convention Center, Baltimore, Maryland



Connecticut Energy Efficiency Fund: Implementing ENERGY STAR® Homes Version 3.0 Workshop Series

Water Management, Moisture Control, and Proper Ventilation for ENERGY STAR® Homes

Speaker: Bill Zoeller
 Thursday, April 5, 2012, 8:00 a.m. - 12:00 p.m.

HERS Rater Training: Getting Into the Details of Rating ENERGY STAR® Version 3.0 Homes

Speakers: Gayathri Vijayakumar & Srikanth Puttagunta
 Tuesday, April 17, 2012, 8:00 a.m. - 12:00 p.m.

For more information visit
 the SWA Website:
swinter.com

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