

# RESNET Notes

January 2010

## *Special 2010 RESNET Building Performance Conference Issue*



The **2010 RESNET Building Performance Conference** will take place on February 20- 24, 2010 in dynamic Raleigh, North Carolina. The RESNET Building Performance Conference is the only national conference for the home energy rating industry. It presents the best opportunity for all members of the building performance industry to network and gain first-hand exposure to the latest business practices, technologies, products, and policy initiatives.

This year's conference is that it will be merged with the North Carolina Energy Star Conference, which will give attendees a first hand look at one of the nation's dynamic regions and enjoy some tar heel hospitality.

Join your peers in the building performance industry for its annual update on important business and technical trends.

## ***2010 RESNET Conference Offers a Unique Opportunity to Learn of New Federal Building Performance Initiatives***



Congress and the White House understands the connection between improving the energy performance of buildings and meeting the nation's goals of job creation, addressing climate change and reducing our dependence on imported oil. Through such initiatives as the proposed Home Star Program "Cash for Caulkers", Recovery through Retrofits, economic recovery funds and legislation proposed in Congress hundreds of billions of dollars are proposed to improve the energy efficiency of buildings. This creates incredible opportunities for the building performance industry. The 2010 RESNET Conference will focus on these emerging opportunities. Don't miss this opportunity to poise your business to take advantage of these opportunities. Register for the conference today.

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## **2010 RESNET Conference to Have Carbon Neutral Foot Print**



RESNET will offset 100% of the carbon dioxide emissions associated with hosting the annual conference generated from the facilities and participant travel. RESNET arranged with the LiveNeutral to offset its carbon emissions by purchasing energy efficiency certificates. LiveNeutral was created to foster education and action around the imminent problems of greenhouse gas emissions. The organization helps make it easy for individuals and organizations to reduce their greenhouse gas emissions directly and through participating in innovative market-based solutions to global climate change.

## **Raters Can Receive RESNET Professional Development Credits for Attending the 2010 RESNET Conference**



Effective on January 1, 2010, RESNET standards require that certified raters must meet professional development requirements every three years. Certified raters can meet this new requirement by attending sessions of the 2010 RESNET Building Performance Conference.

RESNET has adopted new procedures for documenting attendance of conference sessions. The conference program will contain a space by each session for documenting attendance at pre-conference and conference sessions. At the end of the session, raters wanting credit for the session must take their form and either have the moderator or a session presenter initial the session on the program.

Raters must submit the completed forms to their rating provider in order to receive the conference credits. **RESNET will not keep documentation of rater attendance at conference sessions.**

## **Reminder – January 22, 2010 Cut-Off Date for “Early Bird” Discount on Conference Registration – Register Online Now**

RESNET is offering an “early bird” discount for registering early for the 2010 RESNET Building Performance Conference. The deadline for this registration discount is January 22, 2010. The price of registration will increase by \$100 after the date. Register today for the 2010 RESNET Conference online at <http://www.resnet.us/conference/2010/registration.htm>

***The Residential Energy Services Network’s (RESNET) mission is to ensure the success of the building energy performance certification industry, set the standards of quality, and increase the opportunity for ownership of high performance buildings. For more information e-mail RESNET at [info@resnet.us](mailto:info@resnet.us). Visit RESNET’s web site at: [www.resnet.us](http://www.resnet.us)***

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## 2010 RESNET Conference Hotel Rooms Filling Fast – Make Your Reservations Now!



The 2010 RESNET Building Performance Conference will take place at the **Hilton North Raleigh**. RESNET has arranged for a special RESNET Conference rate of \$129 per night. To take advantage of the special RESNET rate you must make your reservations by January 18, 2009. You can make your reservations online by clicking on <http://www.hilton.com/en/hi/groups/personalized/RDUNHHF-RES-20100217/index.jhtml> **Be sure to enter the special RESNET Conference group code RES.**

*Rooms are expected to be filled soon. If the hotel is full please contact Vincent Washington of the Hilton North Raleigh Hotel at 919-719-4938 or [vincent.washington@hilton.com](mailto:vincent.washington@hilton.com) for alternative hotel options*

## 2010 RESNET Conference to Offer Certification Training

A special feature of the 2010 RESNET Building Performance Conference is rater certification training. The following certification programs will be offered:

### **LEED for Homes Green Rater Certification Training**

February 20 – 21, 2009

Presenters: LEED for Homes Green Rater Faculty

8:00 a.m. – 5:00 p.m.- Capital Ballroom F

### **NAHB Research Center Accredited Green Verifiers for the National Green Certification Program Training**

Presenters: Bob Hill, NAHB Research Center

Sunday, February 21 - 9:00 a.m. – Noon – Capital Ballroom D

### **WaterSense® New Homes Certification Provider Training**

Presenter: Kim Wagoner, Eastern Research Group

Sunday, February 21 - 1:30 – 5:00 p.m. – Capital Ballroom D

### **Building Science Masters Certification Training Session**

Sponsored by Environments for Living

Presenter: John Tooley, Advanced Energy

February 22 – 24 – 8:30 a.m. – 5:00 p.m. – Sandalwood

Pre-registration will be required for all of the certification training sessions. To register for these training opportunities, click on <http://www.resnet.us/conference/2010/pre-registration.htm>

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## 2010 RESNET Conference Sponsors and Supporters

RESNET wishes to recognize the leaders in the building performance industry that are supporting this year's conference. Without their support, the conference would not be possible.

### Conference Winners Circle

AppleBlosson Insulators, Inc.  
Environmental Protection Agency  
Environments for Living  
North Carolina State Energy Office

Progressive Foam Technologies  
U.S. Department of Energy  
U.S. EPA Indoor airPlus

### Conference Sponsors

Duke Energy  
The Energy Conservatory

FLIR  
Fluke Thermography

### Conference Patrons

Apogee Interactive  
Architectural Energy Corporation  
Conservation Services Group  
Florida Solar Energy Center

Guaranteed Watt Saver  
Progress Energy  
Texas Home Energy Raters Organization

### Conference Supporters

California Living & Energy  
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CertainTeed  
Dow Building Solutions  
ElectriCities of NC  
Energy Inspectors  
EnergyLogic  
Georgia Power Home Performance  
with ENERGY STAR  
Georgia Power ENERGY STAR Homes  
HomeGauge Home Inspection Software

ICF International  
MaGrann Associates  
Monroe Infrared Technology  
Oncor  
PeaPod Homes  
Salt River Project  
SENERCON  
Southface Energy Institute  
VEIC  
WECC

### Conference Patners

Affordable Comfort

Home Energy

# RESNET Notes

## 2010 RESNET Building Performance Conference Conference Session Schedule and Descriptions



### Pre-Conference Sessions

#### Saturday February 20

Conference Registration Open 7:00 a.m. – 5:00 p.m.

#### LEED for Homes Green Rater Certification Training

Saturday February 20 – 21, 2009

Presenters: LEED for Homes Green Rater Faculty

8:00 a.m. – 5:00 p.m.- Capital Ballroom F

If you're interested in becoming a green rater as part of USGBC's new LEED for Homes Green Rater program, you must meet initial qualifications and complete a two-part training, and an online course beforehand. Join us for the workshop to build upon the material presented in the online course, further prepare you to rate on LEED for Homes projects, and delve deep into the verification services you will provide. Mandatory Prerequisite: Green Rater Training Online Modules available. Pre-registration will be required. To register online, click on <http://www.resnet.us/conference/2010/pre-registration>

#### RESNET Committee Meetings

Public Invited

#### RESNET Training and Education Committee

9:00 a.m. – Noon – Capital Ballroom G

#### RESNET Quality Assurance and Ethics Committee

1:00 – 4:30 p.m. – Capital Ballroom G

#### RESNET Technical Committee

2:00 – 5:00 p.m. – Boxwood

# RESNET Notes

## Sunday February 21

**Conference Registration Open 7:00 a.m. – 5:00 p.m.**

### **RESNET Board Meeting**

Open to Public

8:30 a.m. – 5:00 p.m. – Boxwood

### **LEED for Homes Green Rater Certification Training – Day Two**

Presenters: LEED for Homes Green Rater Faculty

8:00 a.m. – 5:00 p.m. - Capital Ballroom F

### **Hands-on Expert Training on Blower Door and Duct Leakage Testing and Infrared Scanning**

Instructors: Gary Nelson, The Energy Conservatory and Brett Monroe, Monroe Infrared Technology

8:00 a.m. – Noon

**Registration is Full** e-mail laurel@resnet.us to be placed on waiting list.

A unique opportunity to learn from Gary Nelson of The Energy Conservatory and Brett Monroe of Monroe Infrared Technology experts. This performance testing in-field training session will demonstrate and discuss field techniques for using diagnostic tools for evaluating the thermal performance of buildings. Using a blower door and IR camera to distinguish among insulation, air leakage, and moisture problems will be discussed. Attendees are encouraged to come with questions and topics they would like to see addressed. There will be transportation from the conference hotel to the home

### **REM/Rate Advanced Users Workshop**

Presenter: Rob Salcido, Architectural Energy Corporation

9:00 a.m. – Noon – Capital Ballroom C

This session is specifically designed for those who have previous experience using Architectural Energy Corporation's REM/Rate home energy rating software. The session will be led by V. Robert Salcido, P.E, a Senior Engineer at AEC who has been involved with development of REM/Rate for over 10 years. The session will cover new features as well as the more obscure features of the software - custom reporting, utility bill disaggregation, batch processing, library management, improvement analysis and more. If you've always had the feeling that you're not using REM/Rate to its full potential, or if you have specific questions about the software, you shouldn't miss this session.

### **Florida Solar Energy Center Performance Testing Lab Demonstration**

Session 1: 10:00 – 10:30 a.m.

Session 2: 11:00 – 11:30 a.m.

Session 3: 1:00 – 1:30 p.m.

Session 4: 2:00 – 2:30 p.m.

Luncheon Tent

The Florida Solar Energy Center's Energy Gauge Office uses "instructional tents" to train raters to perform the blower door and duct tests, both total and outside. The tent's versatility allows both envelope and ducts to be varied for testing in a controlled environment. These "instructional tents" also provide the trainer with the tools to test the student's ability to set-up and execute performance tests. These tests are used in Florida to pass the performance tests required by the state. The demonstration will show how the tent is set-up and utilized for training and testing.

## **HERS 101**

Presenter: Abe Kruger, Kruger Sustainability Group

1:30 – 5:00 p.m. – Capital Ballroom C

Many individuals attend the RESNET Conference to determine whether they will enter the rating industry. Many of the sessions offered in past conferences are a bit too high in jargon and assumed knowledge for persons just entering the rating industry. This session will introduce a beginner to the rating industry and provide a context for the other more advanced sessions to be offered at the conference. **Pre-registration will be required.** To register for this training, go to [www.resnet.us/conference/2010/pre-registration](http://www.resnet.us/conference/2010/pre-registration)

## **WaterSense® New Homes Certification Provider Training**

Presenter: Kim Wagoner, Eastern Research Group

1:30 – 5:00 p.m. – Capital Ballroom D

WaterSense, a voluntary partnership program sponsored by the U.S. Environmental Protection Agency, has recently released its Single-Family New Home Specification. To earn the WaterSense label, builders must have their homes inspected and certified to meet EPA's specification criteria by an EPA licensed certification provider.

Are you interested in learning more about EPA's WaterSense new homes specification and how you can become licensed to certify and label new homes for the WaterSense program?

EPA is teaming up with RESNET to provide WaterSense labeled new home inspection and certification training for potential licensed certification providers. This training is a requirement for QA personnel from organizations interested in certifying new homes for the WaterSense program. Have your QA personnel attend this training to learn about the WaterSense new homes program, including the inspection and certification process, satisfy the training requirement which is the first step in EPA's approval and licensing process, and find out how simple it is for your organization to add WaterSense new home certification services to your portfolio. **Pre-registration will be required.** To register for this training, go to [www.resnet.us/conference/2010/pre-registration](http://www.resnet.us/conference/2010/pre-registration)

## **Field and Class Room Combustion Safety Testing Training - A Raters Perspective**

Instructor: Scott Suddreth, Building Performance Engineering

1:00 – 5:00 p.m. Capital Ballroom E

**Registration is Full** e-mail laurel@resnet.us to be placed on waiting list.

Come out into the field with one of NC's own raters who is also now a BPI Trainer/Proctor to see what all the fuss is about with combustion safety. This half day training will involve a two hour presentation on combustion safety and then a two hour demonstration of how combustion safety testing is performed. Elements to be discussed include BPI's Building Airflow Standard (their building tightness limit protocol), Carbon Monoxide Testing, Gas Leak Detection, Spillage Testing, Draft Testing, and Worst Case Depressurization scenarios. This class is by no means a comprehensive training, but more of an overview of combustion safety and how it relates to raters. BPE, who has been a Rating organization as well as a Provider for several years understands how these two markets (new and existing) correlate and how raters should prepare to be successful in both.

## **Conference Sessions**

### **Monday, February 22, 2010**

#### **Conference Registration**

7:00 a.m. - Grand Ballroom Foyer

#### **Continental Breakfast - Exhibits Open**

7:30 - 8:30 a.m. - Grand Ballroom

#### **Opening General Session**

**8:30 a.m. – Noon – Capital Ballroom**

#### **Welcome to RESNET Conference**

RESNET Board President

#### **Welcome to North Carolina**

North Carolina State Energy Office

#### **RESNET Update**

Steve Baden, RESNET

#### **The Role of Building Performance in Addressing the Global Climate Challenge**

Donna McIntire, United Nations Environmental Program

#### **Recovery Through Retrofit – The Obama Agenda**

U.S. Department of Energy

## **ENERGY STAR Awards Presentation**

David Lee, Environmental Protection Agency

## **Indoor airPLUS Award Presentation**

## **RESNET Leadership Awards**

RESNET Board President

**Lunch—Noon - 1:30 p.m. – Various Locations**

## **Session 1**

**1:30 – 3:00 p.m.**

## **Combustion Safety & Testing: Do No Harm (Home Performance with ENERGY STAR Track)**

Rich Moore, Invisible Energy

Capital Ballroom A & B

Effective insulation and air sealing treatments can make a huge difference in the tightness of a home. In some cases, well-intentioned work can cause undesirable and dangerous consequences. Understand the conditions that contribute to back drafting, spillage, or carbon monoxide production. Find out how to recognize visual indicators of combustion problems. Learn how integrating combustion safety testing can lower your liability and increase your profit.

## **Closed Crawl Spaces at the Extremes: Measured Performance in Cold and Hot/Humid Climates (North Carolina Energy Star Track)**

Presenter: Maria Mauceri, Advanced Energy

Capital Ballroom C

This session will present the design, implementation and field results of a three year DOE/NCEM BT funded research project to test the moisture and energy performance of closed (unvented) crawl spaces in Baton Rouge, LA and Flagstaff, AZ. Discussion will include critical design considerations, e.g. radon mitigation, drainage, etc.

By attending this session, participants will:

- Learn about closed crawl space designs for hot-humid and cold climates.
- Learn about preferred materials and tools for installing closed crawl space systems.
- Learn about the moisture, energy, and radon performance of closed versus vented crawl spaces in hot-humid and cold climates.

Content addresses: technical issues, provides research results, conveys tried and true principles/content, explores deep energy reductions and/or sustainability, addresses market-based approaches, applies to the low-income sector.

## **Plugging Homeowners into their Energy Efficient Futures...**

Presenters: John Baden and Shane Monday, RESNET

Capital Ballroom D

The Race is on... The future is here. The government is funding it. The media is talking about it. The consumers are looking for it. But where do the consumers go to find the certified auditors to perform energy audits on their homes? Where do they then find the qualified contractors to perform the retrofit and energy related improvements? How do they know what tax incentives and programs are available to them? Introducing the new RESNET website and member directory. Find out how the new RESNET website can answer these questions.

## **Air Infiltration Prevention – What the Test Results Showed**

Presenter: Robert Hill, National Association of Home Builders Research Center

Capital Ballroom E

Limiting air infiltration is important in reducing the overall energy consumption of a home. Some of the approaches to limiting infiltration include selection of insulation type, air sealing measures such as housewrap, taping the housewrap, and caulking joints in the envelope. Laboratory testing was conducted to quantify the differences in air infiltration as a function of insulation type and different air sealing measures. This presentation will provide test results and cost information that you can use with your builders in assessing the best approach for their needs.

## **Moving Rater Quality Assurance Into the Future – RESNET’s Proposed Changes (2 Back-to-Back Sessions)**

Presenter: Daran Wastchak, D.R. Wastchak and chairman of RESNET Quality Assurance and Ethics Committee

Capital Ballroom F

Over a million U.S. homes have been rated through the RESNET standards. The demand for ratings, raters and rating providers continues to grow. RESNET clearly needs to ramp up its quality assurance procedures to meet this demand and maintain the quality of our services. The RESNET Quality Assurance and Ethics Committee is developing a comprehensive approach to RESNET quality assurance standard. This session will introduce the proposed changes prior to their being submitted to the public review and comment process. This will be a two part session.

(This session will meet the new professional development requirement of a two hour RESNET roundtable for Quality Assurance Designees.)

## **Verifying LEED for Homes Projects: Calling all Green Raters!**

Presenters: Courtney Baker, USGBC and Beth Holst, GBCI

Capital Ballroom G

This 90 minute session will begin with a high level overview of the LEED for Homes Program and spend the majority of the time delving into the verification process and roles and responsibilities of

of the LEED for Homes Green Rater. A focal point of the session will be on the pathway to become a LEED for Homes Green Rater and the benefits of pursuing the designation. A special focus will be placed on the synergies between RESNET HERS raters and LEED for Homes Green Raters.

## **Infrared Thermography: Getting Started Successfully**

Presenter: John Snell, The Snell Group  
Boxwood

Getting started using thermography can be an intimidating investment to consider. In this presentation, you will get an overview of what the "thermal territory" looks like, including details about available infrared systems, conditions required for successful use of the technology, and an understanding of the new RESNET standards related to infrared home inspections. You will leave with a clear idea of whether or not you want to "make the leap," and, if so, what your next steps might be. The presenter is 100% independent of imager sales.

## **HERS Raters & HVAC**

Presenter: Brett Dillon, IBS Advisors  
Judicial

Will provide an overview of how to review a Manual J load calculation, what to look for and how far to go. The session will also provide an essential overview of Manuals J, S & D from a Rater's perspective.

## **Session 2**

**3:30 – 5:00 p.m.**

## **Streamlining the Diagnostic Process (Building Performance with ENERGY STAR Track)**

Presenter: Rich Moore, Invisible Energy  
Capital Ballroom A&B

Discover how you can turn any home into a research project. However, spending too much time can drive up overhead, drive down hourly revenue, or both. Find out how to go about doing a top-notch evaluation and spend quality time with the client. The right diagnostics are important, but you need to do them effectively and efficiently. This session explores how to get in, get what you need, and get out.

## **Training for Work in Existing Homes- A New Model for Getting the Job Done Right! (North Carolina Energy Star Track)**

Presenter: John Tooley, Advanced Energy  
Capital Ballroom C

In this session, John Tooley will talk about a new model for retrofit, house characterization. In addition to describing the overall concept of house characterization, John will lead the group through a

specific job training such as attic sealing. Participants will not only learn the details of this job but will also learn proper techniques on training others doing retrofit work.

## **How to Engage and Profit from the Retrofit Industry**

Presenters: Dallas Jones and Sean Zobaa, Home Energy Team

Capital Ball Room D

Energy efficiency is all the rage. Homeowners know they need it. But some Energy companies offer fee audits. Other folks offer audits cheap and homeowners are not knocking down our doors with their wallets wide open begging to pay us for our audit and reporting services. So what do we do? Market? Traditional marketing can be very expensive if not handled properly. So what is the solution? Find out at our seminar.

This session is intended for Accredited Rating Providers and especially certified Quality Assurance Designees who are responsible for implementation of the standards by Providers. This session will provide an important discussion forum on how RESNET can continue to be effective at setting and maintaining quality standards for its membership.

## **HUD's Energy Efficient Mortgage Initiative**

Presenter: Michael Freedberg, HUD

Capital Ballroom E

In 2008, Congress required the U.S. Department of Housing and Urban Development to prepare a report to Congress on how to make energy efficient mortgages more attractive to home buyers. This session will review HUD's findings and what initiatives the agency is undertaking the mortgage product.

## **Moving Rater Quality Assurance Into the Future – RESNET's Proposed Changes (Part II)**

Presenter: Daran Wastchak,

Capital Ballroom F

## **WaterSense: Water-Efficient Homes, a New Era in Building Green**

Presenter: Kim Wagoner, Eastern Research Group

Capital Ballroom G

Water-efficiency is an integral, but sometimes overlooked part of green building. Reducing what comes out of the tap can provide significant water and energy savings, which is good for the environment and the wallet! Building water-efficient homes doesn't have to mean a sacrifice in performance or quality of life. In fact, US EPA's WaterSense program is developing a specification to make it easy for builders to build and home buyers to find water-efficient single-family new homes, which offer all of the comfort and amenities of a traditional home, but use less water and energy. Come to this session to learn more about the WaterSense specification for water-efficient single-family new homes and the part that certification providers, inspectors, and builders can play in helping

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Americans make informed home buying decisions that will save water for future generations. It is time for water-efficiency to take off. Make sure you are doing your part!

## **Green Building: Past, Present and Future**

Presenter: Don Ferrier, Ferrier Custom Homes

Boxwood

The session will take a look at the history of green building and trace the evolution of strategies & technologies to date. Attendees will leave with an understanding of the fundamentals of green building and what it means for both our current and future generations.

## **Teaching Adults Effectively**

Presenter: Brett Dillon, IBS Advisors

Judicial

This session covers the concepts behind providing effective vocational instruction to adults including cognitive load management, how to design curriculum and how to effectively deliver presentations.

(This session will meet the new professional development requirement of a two hour RESNET roundtable for Rater Trainers)

## **RESNET Reception—5:30 - 7:30 p.m. - Grand Ballroom Foyer**

## **ENERGY STAR Qualified Homes Evening Roundtable: Appraisal Work Group**

Moderators: Brian Ng and Sam Rashkin, Environmental Protection Agency

7:00—9:00 p.m.

Capital Ball Room F

Open to the Public

## **Tuesday February 23, 2010**

### **Conference Registration**

7:00 a.m. - Grand Ballroom Foyer

### **Continental Breakfast - Exhibits Open**

7:30 - 8:30 a.m. - Grand Ballroom

### **Session 3**

**8:30 – 10:00 a.m.**

## **Home Performance Consulting: A Business Opportunity for Raters (Home Performance with ENERGY STAR Track)**

Presenter: Keith Williams, Building Services and Consulting, LLC

Capital Ballroom A&B

Integrate specific strategies and results used to break into the world of home performance contracting. Discover how “value-added” services and products will help start or improve your home performance career. Find out how to develop your business plan, product, and service offerings for your own home performance business.

## **Green Goofs: What Were They Thinking? (North Carolina Energy Star Track)**

Presenters: Danny Gough of Energy Solutions and Andrew J. Courts, Jr. of North

Carolina Energy Partners (NCEP)

Capital Ballroom C

DUH! This session presents the “DUH” moments in every HERS Rater life when we scratch our heads and say, “WHAT were they thinking?” From the unfortunate to the truly pitiful, we’ll investigate pictures and stories from around the country of the biggest green “goofs” and “voids” that lead to low performance buildings at best and outright failures in the worst case. Join us to learn, laugh, and scratch your head and wonder, “What WERE they thinking?” as we take an informative look at scenarios in the world of green building that will leave you better informed with stories to tell and caveats for your customers.

## **"Truth Behind the Walls" - Determining Insulation Quality Installation**

Presenter: Peter Hopkins, United Infrared

Capital Room D

This training will explain how to detect the quality of insulation installation through infrared technology. Topics will include, utilizing infrared for building envelope (post construction), utilizing infrared with blower door (qualitative and quantitative testing), identifying defects (insulation, duct leaks, weather stripping etc.), and various standards on insulation specifications and inspections. The presentation will be based upon 50 homes worth of images that were taken. These were post-construction (final phase and existing home) inspections done for homeowners who wished to have their homes checked for thermal breaks or insulation quality. Of the group, not a single home complied with the insulation installation requirements.

## **Why Manual J is Just a Good Start**

Presenter: Mark Hutchins, Conservation Services Group

Capital Room E

A Manual-J load calculation is a very important first step to ensure mechanical systems are designed correctly. But it is only the first step. Should you conduct a “whole house” calculation or a “room by room” calculation? How is mechanical equipment matched correctly to the calculated load? Not based on AHRI ratings! What about getting the conditioned air to the spaces it is

supposed to heat or cool? Does it work to correctly size the load and match the mechanicals to the load, if the distribution system and termination devices are left to chance? Or will you end up worse off than using HVAC contractors "rules of thumb"? This session will answer these questions by demonstrating why Manual-J is only step one. We will then provide an overview of Manuals S, D, & T to show the correct calculation sequence required to ensure a correctly sized and installed HVAC system.

## **Federal Retrofit Initiatives – What It Means to Your Business**

Presenters: David Goldstein and Lane Burt, Natural Resources Defense Council

Capital Ball Room F

As part of the economic recovery and job creation effort, President Obama and Congress have proposed incentives for homeowners to improve the energy performance of their homes. These initiatives include Home Star (cash for caulkers) and REEP. This can create an incredible market of opportunities for energy auditors, raters and contractors. This session will explore the proposed initiatives and discuss the business development opportunities.

## **Set Yourself Apart: Get Green Certified to the National Green Building Standard**

Presenters: Michelle Desiderio, NAHB Research Center and Kelly Parker, Guaranteed Watt Savers

Capital Ballroom G

If you aren't building green homes, you're missing a rapidly growing segment of homebuyers seeking green products and services. Find out how certification to the National Green Building Standard™ can help you build green homes. As the first green building standard approved by ANSI, this rating system is the setting the national definition of green for residential builders and developers. Come hear from a local builder, remodeler, and Verifier how the National Green Certification Program worked for them. Get all the information you need to get your next project Green Certified to the Standard and set yourself apart from the competition.

## **The Indoor airPLUS Technical Specifications: How to Rate It**

Presenters: Eric Werling, Environmental Protection Agency and Casey Murphy, ICF International

Boxwood

Indoor pollution derives from a variety of internal and external sources and can have negative effects ranging from poor occupant health, durability concerns for the home, increased litigation, lower customer satisfaction, and higher societal costs for health care. The proper strategy to improve indoor air quality is to eliminate it at the source, and then to ventilate or filtrate. EPA's Indoor airPLUS label helps builders implement this strategy by incorporating more than 30 home design and construction features into a systemic and concise framework. EPA's Indoor airPLUS specifications were developed based on best available science and information about risks associated with indoor air quality problems, balanced with practical issues of cost, builder production process compatibility, and enforceability. This presentation will walk through the Indoor airPLUS technical specification checklist with a focus on the role HERS verification plans in IAP certification.

## **A Rater's Primer on How to Write a Scope of Work**

Presenter: Brett Dillon, IBS Advisors

Judicial

As raters become involved in the existing homes market, it is critical that raters learn how to prepare a scope of work for recommended energy improvements to the home. This session will cover the details behind writing a clear, concise Scope of Work for performing work on an existing home. The session presenter, Brett Dillon wrote the scope of work provisions for the Texas Home Energy Raters Organization for the Texas existing homes program.

## **Building Science Masters Certification Training Session I**

Presenter: John Tooley, Advanced Energy

Sandalwood

**Registration is Full** e-mail laurel@resnet.us to be placed on waiting list.

The two day session will provide training on total home performance and how a systems approach to construction is needed to ensure home performance. The training will address home performance related to air, moisture, and heat flow and their impact on home performance. The training will also cover how the following elements impact home performance: tight construction, improved thermal systems, combustion safety, right sized HVAC, pressure balancing, and fresh air ventilation. Completion of training will result in certification by Advanced Energy in Building Science Masters Certification and also qualify certified home energy raters to participate in the Environments for Living program. Course covers major areas of Building Science (House as a System, Air Flow, Heat Flow, Moisture Flow, and Indoor Environments.)

## **Session 4**

**10:30 a.m. – Noon**

## **How to Determine a Fair Price (Home Performance with ENERGY STAR Track)**

Presenter: Mike Gorman

Capital Ballroom A&B

The goal of your first appointment with the client is to start getting paid. By using a 'unit cost' system for estimating, the contractor has the advantage of using numbers that are scientifically determined and verifiable, allowing estimating functions (including writing of specifications) to be handled more quickly, consistently and accurately. Additional benefits of using pre-determined prices are that the emotion is removed from the estimating process. Using a laptop computer in the home allows you to quote an exact price on those simpler jobs, or fall back to a design/build agreement or even a cost-plus arrangement for those more complicated projects. Either way, the outcome of the first meeting is a signed agreement of some sort, accompanied by a check or credit application.

## **Whole-House HVAC Skills for Raters & Inspectors (North Carolina Energy Star Track)**

Presenter: David Slater, Stream Residential Air and Energy Experts  
Capital Ballroom C

Learn new skills on how to inspect and evaluate HVAC systems with respect to building performance problem diagnosis, whole-house performance testing, HERS ratings, etc. Many industry tips and techniques will be offered to make inspections or analyses quickly and accurately. With other “Green HVAC” aspects also included, this session will not only arm the rater or inspector with an increased specific knowledge tool set but also will expand their general understanding of whole-house system interactions with HVAC.

### Sub-Topics:

- Duct sealing – the sneaky leaks
- Major duct design guidelines
- Variable speed blowers and airflow
- Common conditions for fungal (mold) growth
- Filtration
- Fresh air ventilation
- Humidification and dehumidification
- UV light technology overview
- Combustion analysis & carbon monoxide safety overview
- Major load calculation factors
- Other Green HVAC topics

## **Air Flow - The Hidden Moisture Mover**

Presenter: Steve Easley  
Capital Ballroom D

Most energy raters understand the energy and comfort impacts of air infiltration and exfiltration. This class will use field slides to demonstrate how air leaks lead to serious moisture and mold related issues from real world failures. In this class, students will learn moisture mechanics and the relationships of airflow, dew points, insulation and air sealing. This class is focused on helping attendees understand how to build structures that reduce moisture damage and indoor air quality issues. The class will give students the fundamentals needed to communicate how sealing the envelope not only reduces energy costs but create more durable structures that are healthier to live in.

## **Testing the Energy Analysis Tools of Existing Homes: BESTEST-EX Update by NREL**

Presenter: Dr. Marcus Bianchi, National Renewable Energy Laboratory  
Capital Ballroom E

The BESTEST-EX procedure will enable software developers to test their products' performance in modeling energy usage and predicting energy savings in existing homes. In addition to its

usefulness as a certification procedure, BESTEST-EX will allow software providers to vet their energy analysis tools and evaluate their model calibration procedures. BESTEST-EX is currently under development by NREL on behalf of DOE. Brush up on the goals of the initiative, get a progress report and projected timeline for its completion, and gain insight into how it may influence and inform the market. Any program sponsors, administrators, implementers and software developers interested in how this important initiative could impact their market should attend this session.

## **COMNET: Supporting Existing Commercial Building Energy Rating Systems**

Presenters: Cliff Majersik, Institute for Market Transformation, David Goldstein, Natural Resources Defense Council, and Lane Burt, Natural Resources Defense Council

Capital Ballroom F

This presentation will briefly describe the COMNET (Commercial Energy Services Network) project, including how it supports LEED, ASHRAE, ENERGY STAR and other existing energy rating systems for commercial, mid-rise and high-rise residential buildings. COMNET will fill an important void by creating a clear, consistent, rigorous and easy-to-use method for demonstrating compliance with federal tax deduction provisions for energy-efficient commercial buildings. (The provision of the 2005 Energy Policy Act created a tax deduction of up to \$1.80 per square foot.) COMNET will also be usable for code compliance, utility incentive programs, appraisal and financing, and commercial building energy labeling. In some ways, COMNET will serve as a commercial-sector equivalent of RESNET. COMNET specifications will be incorporated into existing systems to generate "asset" ratings of buildings. COMNET is establishing a standard rule set for defining reference buildings against which the subject building will be compared. This rule set will be made available in the public domain so that any provider can freely incorporate the rules into its energy modeling software for automatic generation of reference buildings.

There is a rapidly growing need for energy ratings for new and existing buildings, creating new opportunities for building raters. The COMNET project is also helping to define minimum qualifications and best practices for such raters.

## **ENERGY STAR Qualified Homes 2011 Spec Training: Overview of New Specifications and Compliance Procedures**

Presenters: Sam Rashkin, Glenn Chinery and Zak Shadid, Environmental Protection Agency

Capital Ballroom G

ENERGY STAR Qualified Homes is introducing significant changes to program compliance procedures, including new threshold requirements, a size adjustment factor, and a significant increase in mandatory requirements via new checklists. This session will explain how existing plan analysis and field verification procedures used by HERS raters today can be simply modified to accommodate these new requirements, analytical underpinnings behind the cost and energy savings performance projections, plans to ramp up quality assurance requirements for field certification, and, finally, how the new checklists provide complete systems intended to ensure the performance goals for all qualified homes.

## **90% Energy Code Compliance - A Dream Role for Raters**

Presenter: Mike Barcik, Southface Energy Institute

Boxwood

Recovery Act (ARRA) funding is contingent on a state demonstrating 90% compliance with the IECC-2009. This unique situation creates many favorable circumstances for HERS Raters. Come and experience a quick overview of the '09 code but also discover the many roles for a rater ranging from duct tightness verification to documenting compliance for a home to helping a state demonstrate overall 90% conformance (and learning what this means) - the opportunities abound!

## **Ethics in the Industry**

Brett Dillon, IBS Advisors

Judicial Room

This session covers the code of ethics and how it governs business practices, includes a look at the ethical paradox (why people behave unethically yet believe they are ethical) and how to ensure that you stay within the boundaries while growing your business.

## **Building Science Masters Certification Training Session II**

Presenter: John Tooley, Advanced Energy

Sandalwood

## **Putting Web 2.0 to Work for Your Business**

Presenters: John Baden and Stephanie DeZee, RESNET

Board Room

Social networks such as Facebook and Twitter are increasingly offering a cost effective way to reach a whole new set of customers. This informal session will introduce the potentials of this new medium and show you how to plug into this new opportunity and link with RESNET's efforts.

**Lunch—Noon - 1:30 p.m. – Various Locations**

## **Session 5**

**1:30 – 3:00 p.m.**

## **Marketing in a Down Turn (Building Performance with ENERGY STAR Track)**

Presenter: Mike Gorman

Capital Ballroom A&B

A less than plentiful supply of leads may cause you to waste time and energy. Let's explore how to place your name in front of those decision makers or influencers wherever they are in the marketplace. We'll define which marketing systems seem to deliver the biggest impact with the least investment of time, energy and money with the quickest response. We'll figure out how many leads you need and how much they are likely to cost

## **Growing From HERs to Multi-Program Green Verification (North Carolina Energy Star Track)**

Presenters: Dona Stankus, NC Solar Center, and Leigh Scott, HBA of DOC

Capital Ballroom C

This session will focus on how several programs in a geographic region (NC, Triangle area) are working together to create a green program verification track for local HERS raters that allows them to provide those services to more than one program in an efficient manner. Focus will be on collaboration, market benefits & drivers, overview of the multi-program track and benefits to HERS raters. This session will include a feedback session to get ideas from attendees on how to make the program even better if time permits.

## **Principals of Residential Ventilation and Their Role in New and Existing Homes**

Presenter: Paul Raymer, Heyoka Solutions

Capital Ballroom D

Ventilation for indoor air quality, health, comfort and building durability is a key component of new and existing energy efficient buildings. Primary and spot ventilation systems are key elements in a HERS rating. ANSI-ASHRAE 62.2-2007 residential ventilation standard is being adopted by building codes across the country. Home designers, building scientists, builders, and HVAC contractors need to understand the tools for ventilation that will comply with these programs and deliver the best indoor environmental quality for the occupants at the best cost - both first cost and operating cost. There are the issues of system choices, duct design, building pressures, controls, and codes that must be addressed if the system is going to operate as intended.

## **Streamlining Energy Analysis by Standardizing Assumptions and RESNET Occupied Homes Software Task Force and Working Group**

Presenters: Philip Fairey, Florida Solar Energy Center and David Goldstein, Natural Resources Defense Council

Capital Ballroom E

Internationally there is a great interest in the labeling the energy performance of buildings as a policy initiative. Discussions on this issue will focus on the different "asset value" labels which are how a building should perform at standard operating conditions and "operating value" labels which are based on measured energy performance at a defined space of time. Both types of labels characterize energy use for different purposes, and there has been much discussion and some misinformation on this subject. This session will separate the myths from the facts and report on RESNET efforts to develop guidelines.

## **Texas Home Energy Audit Program**

Presenter: Tom Fitzpatrick, Texas HERO

Capital Ballroom F

This session will describe an initiative to build a statewide program on top of RESNET's standards. Working with a leading utility, Texas HERO developed a certification for auditors to perform comprehensive home energy audits, emphasizing reliability, regional appropriateness and clear communication of the opportunities for action. We'll describe some of the benefits and challenges of

of this regional approach and provide an update on partnerships with other programs and stakeholders.

## **ENERGY STAR Qualified Homes 2011 Spec Training: Completing Systems: HVAC**

Presenters: Dean Gamble, ICF International and Ted Leopkey, Environmental Protection Agency  
Capital Ballroom G

For the first time since ENERGY STAR Qualified Homes was introduced in Fall 1995, home builders will prescriptively be required to provide a complete heating, ventilation, and cooling (HVAC) system in all labeled homes. This includes proper sizing for all components of the system (equipment, ducts, and terminals), proper air-flow, proper refrigerant charge, properly installed ducts, whole-house and spot-ventilation conforming to ASHRAE 62.2, and air filtration. This will help ensure installed systems perform at or near their rated efficiencies and moisture vapor flow is more effectively managed. This session will go over the building science behind these new requirements, ACCA Quality Installation Specification technical underpinnings, detailed scopes of work, field verification requirements for HVAC contractors, and expectations regarding rater enforcement.

## **IECC: How to Meet the Requirements and How It Impacts Home Ratings**

Presenter: Chunlin Cao, The Dow Chemical Company  
Boxwood

Since the release of the 2009 International Energy Conservation Code (IECC) earlier this year, more and more states and jurisdictions are adopting this more aggressive energy conservation standard. The 2009 IECC residential chapter (Chapter 4) calls for greater levels of insulation for the building envelope and more stringent test requirements for ducts and total house air infiltration, etc. What does it mean for you as raters?

This session will outline: 1) the details of the 2009 IECC changes compared to previous version of IECC 2) the current adoption status of the new 2009 IECC 3) the impact of these changes on residential construction and HERS ratings.

## **Performing Quality Assurance**

Presenter: Brett Dillon, IBS Advisors  
Judicial Room

The rating provider's quality assurance designee plays the critical role in assuring the quality of rating services. This session will cover the requirements behind performing quality assurance on ratings, with details on how to do the actual work of the quality assurance designee. This session is a "must" for all quality assurance designees, rating providers and raters.

(This session will meet the new professional development requirement of a two hour RESNET roundtable for quality assurance designees.)

## **Repeat of Putting Web Generation 2.0 to Work for Your Business**

Presenters: John Baden and Stephanie DeZee, RESNET

Board Room

### **Session 6**

**3:30 — 5:00 p.m.**

## **Frontline Communication 101: Conveying Home Performance Benefits (Home Performance with ENERGY STAR Track)**

Presenter: Keith Williams, Building Services and Consulting, LLC

Capital Ballroom A&B

Regardless of whether you and the customer are on the phone or in their house, there are opportunities to convey the concepts of home performance. But it is not easy, and it is not just having a few key lines in your back pocket. Learn to build on the clues potential customers give you to establish credibility and trust.

## **Success with ENERGY STAR for Home Energy Raters (North Carolina Energy Star Track)**

Presenter: Kristi Matthews, Advanced Energy

Capital Ballroom C

Many builders fail to join ENERGY STAR because they feel that the process is too complicated. In this session, Advanced Energy will introduce a process and a series of tools that may help home energy raters train their builders and subcontractors on the requirements of ENERGY STAR. The success with ENERGY STAR process and tools can also help home energy raters simplify the Thermal Bypass Checklist for the builders and subs, helping each person understand their role in the program.

## **Conducting an Infrared Inspection Using the New RESNET standard**

Presenter: John Snell, The Snell Group

Capital Ballroom D

This session will address the details and methodologies for conducting an infrared home inspection that are detailed in the new RESNET Standard. Included are in depth discussions of requirements for imaging systems, necessary conditions, thermal patterns that may be seen, and reporting requirements. In addition, the two pathways to certification will be addressed.

## **RESNET National Energy Audit Standard – Update**

Presenters: Lee O'Neal, CGE Solutions, Inc, and Dallas Jones, Home Energy Team

Capital Ballroom E

After three years of consensus building, the RESNET Board of Directors adopted a national energy audit standard. The process included a RESNET Task Force on National Standard for Energy Audit for Existing Homes. The standard consists of three categories of certification: In-Home Energy

Survey, Diagnostic Energy Survey, and Comprehensive Energy Audit (energy rating). This session will introduce the changes and explain the updates to the standard.

## **The Pros and Cons of Foam vs. Batt for Interior Basement and Crawl Spaces**

Presenter: Dan Tempas, The Dow Chemical Company  
Capital Ballroom F

The 2009 International Energy Conservation Code (IECC) calls for significant levels of basement and crawl space insulation for most climate zones. Two basic methods for insulating these areas include fiberglass batts or continuous foam plastic insulation. This presentation will discuss the pros and cons of each method to assist raters in recommending the right system in the right place.

## **Habitat for Humanity - Sustainability Initiatives and Progress**

Moderator - Janet McIlvaine, Florida Solar Energy Center

Presenters: Kevin Gobble - Habitat for Humanity International, Thom Philips - Michigan Sustainable Specialist, Ed Brown - Washington State Sustainable Specialist, Andy Bell - Alabama Sustainable Specialist

Capital Ballroom G

Habitat for Humanity will discuss its new Sustainable Building Initiatives, describe energy savings in non-profit affordable housing and explain how Habitat is focusing on cost effective solutions nationwide and lessons learned from a number of projects in three states.

## **The Evolving Relationship Between Energy Codes, Beyond-Code Programs, and Home Energy Ratings**

Presenters: Z. Todd Taylor, Pacific Northwest National Laboratory  
Boxwood

The US DOE and others are working to substantially improve the efficiency of the IECC's residential provisions. The 2009 IECC is estimated to be roughly 12% to 15% more efficient than its 2006 predecessor, and DOE has established goals of 30% and 50% improvement for the 2012 and 2015 IECCs respectively. Advances of this magnitude, as well as structural changes to the code, such as a disallowing of trade-offs between envelope and equipment measures, are drastically changing the relationship between "minimum code" and "advanced" or "beyond-code" homes. This session will explore the possible impacts of code change proposals currently on the table as well as anticipated future changes on code compliance tools, beyond-code qualification programs, and the home energy rating industry.

## ***Real-time QAQC – A Continuous Program Improvement Mechanism***

Presenter: Steve Ellison, ICF International  
Judicial

Active Quality Assurance and Quality Control (QAQC) strategies are essential to improving the performance of energy efficiency initiatives and program impacts. Continuous feedback and

communication with raters, builders and installers is critical to both short term improvements and the ability to execute long-term market transformation programs. This session presents real-life examples of how well-designed QAQC processes have been used to assess and modify the design of a utility sponsored energy-efficiency program. The session starts with outlining valuable information on current building construction and operating practices obtained during the QAQC process. The session then proceeds with examples of real-time identification of issues in the field, the evaluation and analysis of potential problems, and a discussion of corrective action applications. The session will present the comparative multi-year results from multiple climate zones and markets to demonstrate improvements and the positive impacts of the QAQC process.

## **Building Science Masters Certification Training Session VI**

Presenter: John Tooley, Advanced Energy  
Sandalwood

## **Repeat of Putting Web Generation 2 to Work for Your Business**

Presenters: John Baden and Stephanie DeZee, RESNET  
Board Room

## **RESNET Exhibitor Beer Fest**

5:30 - 7:30 p.m. Conference Exhibit Area - Grand Ballroom

## **ENERGY STAR Qualified Homes Evening Roundtable: Proposed Quality Assurance Initiative**

Moderators: Zak Shaded, Environmental Protection Agency, and Daran Wastchak, Chairman of RESNET Quality Assurance and Ethics Committee

7:00 – 9:00 p.m. - Capital Ball Room F

## **Wednesday, February 18, 2009**

### **Continental Breakfast - Exhibits Open**

7:30 - 8:30 a.m. - Grand Ballroom

### **Session 7**

**8:30 — 10:00 a.m.**

### **Estimated Energy Savings That Work (Home Performance with ENERGY STAR Track)**

Presenter: TBD

Capital Ballroom A&B

One of the main things that distinguishes home performance contracting from mainstream home improvement contracting is the comprehensive assessment that educates the customer on a wide range of measures to reduce energy consumption while addressing health and safety and building durability concerns. One of the objectives of the comprehensive assessment is to provide the homeowner with a credible projection of energy savings. In recent years we have seen the introduction of sophisticated home performance auditing software that provides such energy savings projections

In recent years we have seen the introduction of sophisticated home performance auditing software that provides such energy savings projections and builds a financial analysis around them to show the customer the return on their investment. However, few home performance contractors use such software in the field while they are assessing the home and making their sales pitch. Is it possible to develop quick and easy tools that can be used reliably in the field during the initial assessment to close the deal more efficiently? What kinds of methodology should be employed in the development of such tools? The panel will explore the current status of assessment tools, barriers to use, and priorities for research and development.

## **“ENERGY EFFICIENT HOMES: Predictions, Performance and Real-World Results” - What can we learn from 160,000 houses in Houston? (North Carolina Energy Star Track)**

Presenter: Shaun Hassel, Advanced Energy  
Capital Ballroom C

This session presents detailed energy consumption differences between standard construction, ENERGY STAR and guaranteed performance homes in Phoenix, Arizona and Houston, Texas. The key to these studies is that they use billing histories and actual construction data rather than models to show performance differences across different groups of homes. Evaluating homes programs with real world data allows us to track energy use, compare actual versus predicted performance and identify construction techniques that deliver truly energy efficient buildings. Billing records and other data for more than 200,000 houses were analyzed.

## **Energy Audit Tricks and Techniques**

Presenter: Mark Lidd, BareToes LLC  
Capital Ballroom D

With the myriad of tools and methodologies out there, an energy auditor needs to understand which tools are best used for which diagnostics and diagnosis. For instance, there are smoke pencils, wizard sticks, smoke puffers, cigarettes, et. al. Some are personal preference, and some are best used in certain situations. Another example is there are no less than 6-8 types of instruments to measure vent (register) (supply and return) flow. There is a similar problem with testing methodologies, such as when should a whole duct leakage test be done and should it be a pressurization or depressurization test?

## **Finding a Home for Independent Raters**

Presenters: Steve Byers, EnergyLogic; Kelly Parker, Guaranteed Watt Savers; Doug Walter, Energy and Environmental Rating Alliance

Capital Ballroom E

RESNET Standards require raters that are certified by an accredited rating providers. Many times it is difficult for independent raters to find a provider to certify them and provide quality assurance oversight. This session will feature a number of business models that certify independent raters.

## **Roundtable on Energy Guides for Homes: Where are We Going? Who's Doing What?**

Moderator - Philip Fairey

Presenters: Richard Faesy, Vermont Energy Efficiency Corporation; Diane Ferington, Energy Trust of Oregon; David Kaiserman, LENNAR Homes; Colin McCormick, U.S. Department of Energy and Bryan Howard, [US Green Building Council](#)

Capital Ballroom F

The first portion of the session will be to provide a survey of efforts to develop the energy labeling of homes in the U.S. The session will explore what minimum information is needed on the label to be of value to the consumer, the acceptable cost to produce a label and how a label can effectively catch the consumers' attention. The session will conclude with a moderated discussion of RESNET's role in the effort.

## **Air Sealing: The Impact on Home Rating and Energy Savings**

Presenters: Chunlin Cao and Kate Johnson, The Dow Chemical Company

Capital Ballroom G

Since air leakage accounts for 20-40% of the heating and cooling costs for existing homes, reducing air leakage holds great potential for improving the energy efficiency of existing homes. This presentation shows cost-effective materials and methods to reduce air leakage of existing homes. Field results demonstrate quick, easy, and inexpensive ways for homeowners and professional contractors to implement air sealing that results in energy savings paybacks of less than one year.

## **Be Careful What You Wish For: Opportunities to Support Stimulus Grantees in Using ARRA Funds Effectively**

Presenter: Bill Prindle, ICF International

Boxwood

State and local governments are attempting to spend some \$12 billion in federal grant funds under the American Recovery and Reinvestment Act, more than thirty times the funding levels in recent DOE budgets. Some 2,300 local government grantees are programming funds, with little or no prior experience in the energy efficiency field. RESNET and its members offer vital services that can help make the difference between effective and failed programs. Accurate diagnostic tools, performance benchmarking methods, field verification skills and tools, and tracking and reporting of results are essential to the success of many ARRA-funded programs. This session will explore the key areas in which RESNET and its members can support ARRA grantees, technically and administratively. For example, while many grantees are given awards based on relatively general applications, they face numerous challenges in mounting programs in the field, gaining the expected participation, and in documenting results in ways that meet ARRA reporting requirements. RESNET supports many of the skills and tools needed to meet these challenges, and this session will help RESNET members identify their best bets in working with ARRA grantees during the remainder of their grant periods.

## **Building Science Masters Certification Training Session VI**

Presenter: John Tooley, Advanced Energy

Sandalwood

## Session 8

10:30 a.m. — Noon

### **Home Performance with ENERGY STAR: Today & Tomorrow (Home Performance with ENERGY STAR Track)**

Presenter: Chandler von Schrader, Environmental Protection Agency; Casey Murphy; Dale Hoffmeyer, Environmental Protection Agency and Patricia Plympton, Navigant Consulting

Capital Ballroom A&B

Explore results, lessons learned, and new directions planned for the coming year with Home Performance with ENERGY STAR® program (HPwES). Find out about the national growth of HPwES, and what has been learned after eight years and over 50,000 installations that will either jump start your emerging program or give you guidance on managing your current program. Explore state programs and the importance of regional stakeholder involvement from the state, utilities, manufactures and the contractors.

### **Performance of Revised Duct Design, Save Money and Cool Customers (North Carolina Energy Star Track)**

Presenters: Bruce Eugene Davis, Jeff Tiller, Sean Gray, and Porras -Appalachian State University, Energy Center

Capital Ballroom C

Can we reduce the cost of duct installation, save square feet of conditioned space for other uses, simplify installation, and still maintain a comfortable distribution of air temperatures within a room and between upstairs and downstairs? To explore this question, two side by side, two story open stairwell townhomes with the same floor plan were recruited for this air temperature distribution case study. Neither unit was an end unit. Each was conditioned with a single, two zone, HVAC system. One townhome was kept as the non-intervention unit with returns on both levels and supplies in the ceilings near the windows. The modifications applied to the intervention townhome were to remove the downstairs return, enlarge the upstairs return, and replace the supply registers in the three upstairs bedrooms with shorter duct runs and curved blade diffusers located at the interior walls. Sensors were placed on a grid of nine poles in each bedroom. Sensors were placed at the two feet and six feet levels on each pole. Additional poles were placed throughout each home for a total of 70 sensors [35 poles] per home measuring air temperature at five minute intervals. For the 48 hour period examined, the distribution of air temperatures throughout both townhomes remained similar.

This session will include many photographs, graphs, stories, and useful conclusions.

### **Update on RESNET National Building Registry**

Presenters: Steve Byers, Chair of the RESNET Building Registry Task Force and Randy Martin of R.L. Martin and Associates

Capital Ballroom D

RESNET is developing a national building registry that will serve as a database for all inspections of homes undertaken through the procedures of the RESNET standards. For the first time, this registry will be the central collection point of data on home performance in the U.S. This session will introduce the registry and explore the uses of the data that the registry will contain.

## **Air Leakage Testing: Quicker Easier & Funner**

Presenter: Colin Genge, Retrotec Energy Innovations Ltd.

Capital Ballroom E

A new way to learn about blower-doors and duct-testing that is fast and fun. Trainers can utilize our sparkling visuals and competency-based training methods. New testers can learn in a few fun hours what often takes days in a classroom. Architects and Engineers can learn the significance of air-leakage testing in design. Since most people are 70% visual or more, we have created visuals that don't require words to understand. Now you can use the trainer to ask more advanced questions based on a need to know basis. Walk out refreshed in your new found knowledge.

## **Introduction to the New RESNET Standard for Performance Testing**

Presenters: Lee O'Neal, CGE Solutions, Inc.; Kelly Parker, Guaranteed Watt Savers, Inc; and Rogge Miller, Guaranteed Watt Savers, Inc

Capital Ballroom F

The standard consists of five sections: Use of a Blower Door, Use of Duct Testing Equipment, Combustion Safety Testing, Writing a Scope of Work, and the Use of an Infrared Camera. This session will introduce the new standards and demonstrate the basics of each.

## **Federal Efforts to Promote the Labeling of Homes**

Presenters: Lane Burt, Natural Resources Defense Council, Bryan Howard, US Green Building Council and Colin McCormack, U.S. Department of Energy

Capital Ballroom G

The European Union requires the energy rating and labeling of a building at the time of sale or change of occupancy. Congress and the Obama Administration is interested in setting up a building energy performance labeling program in the U.S. This session will explore the various initiatives and the role of the federal government in fostering the concept.

## **What Every Rater Needs to Know About Insulated Siding**

Presenters: Pat Culpepper, Progressive Foam Technologies, and Tim Holt, Progressive Foam Technologies

Boxwood

While Insulated Siding has been in the market for over 15 years, it is a relatively new product innovation. Insulated Siding is a combination of vinyl (PVC) and foam (EPS). Because the EPS foam is contoured to fit precisely behind vinyl siding, it provides optimal energy efficiency, durability, rigidity, and beauty. Insulated Siding addresses a building envelope challenge which most wall insulations do not - it breaks the thermal bridge which takes place through the wood (or steel) frame studs. Additionally, because it requires no potential ozone depleting maintenance products like caulks, stains, and paints, it is GREEN and sustainable. With over 115 million existing homes in the United States (and framed housing the dominant construction practice in the future), Insulated Siding is a viable and economical building product which should be considered in the scope of work after an energy assessment is performed on a home. This product category is readily available as all vinyl siding

manufacturers offer Insulated Siding products. Knowledge of this product category, how it is manufactured, how it performs, and federal government agency recognition (Energy Tax Credit qualifications and EPA Energy Star label designations) is vital information for any certified home energy rater when recommend cost-effective building product solutions, which can improve a home's energy rating.

## **The State of Green Real Estate and Where the Next Opportunities Are**

Presenter: Dr. John Beldock, EcoBrokers

Judicial

The design of this interactive panel provides the RESNET audience (raters and many others) with a very current picture of where we are and what lies ahead of us with green real estate. Where are the opportunities for raters and real estate professionals to continue to work together to build business? Which financing, marketing, and communications tools are available and which truly enhance business development for raters and other professionals involved in serving real estate consumers and investors? Which steps have historically lead to the best business and which fundamentals still apply in the 2010 market? A team of green real estate practitioners examine what is working and where to go for more resources that mean business.

## **Building Science Masters Certification Training Session VII**

Presenter: John Tooley, Advanced Energy

Sandalwood

## **Lunch – Noon – 1:30 p.m. – Various Locations**

### **Session 9**

**1:30 — 3:00 p.m.**

## **Growing Your Business with BPI (Home Performance with ENERGY STAR Track)**

Presenter: Larry Zarker, Building Performance Institute

Capital Ballroom A&B

Certification tells people that you are a knowledgeable and competent home performance professional. Discover how to reduce call backs, increase customer satisfaction, and expand your business. Explore BPI certification options and requirements.

## **Upcoming North Carolina Residential Code (North Carolina Energy Star Track)**

Presenter: Chris Mathis, Mathis Consulting Company

Capital Ballroom C

The upcoming version of the North Carolina Energy Conservation Code will be 30% more energy efficient than the current code. A significant portion of the improvement in the residential comes through building performance measurement. This code has provisions for measurement of air leakage and duct tightness. These provisions and the other aspects of the code will be covered.

## **Realizing the Full Potential of HERS Ratings**

Presenters: Glenn Pease and Eurihea Speciale, Southface Energy Institute

Capital Ballroom D

Have you ever wondered what to do with all those old HERS Rating files stored on your computer? Why not put them to work helping market your services or programs? Learn how the EarthCraft House program used the batch processing capabilities of REM/Rate to show how a code built house stacks up to the average EarthCraft House in the program. Batch reporting can not only help you compile and estimate the average HERS index of a group of files, but can also be compiled to estimate average annual savings of carbon emissions and consumption.

## **Insiders Tips on the U.S. Department of Energy's Builders Challenge: Building and Differentiating High Performance Homes in a Competitive Marketplace**

Presenters: Edward Pollock, U.S. Department of Energy and James Lyons, Newport Partners, LLC

Capital Ballroom E

The session will focus on strategies and techniques for meeting the Builders Challenge, including achieving net-zero energy homes and utilizing the U.S. Department of Energy's Building America Builders Challenge. The session will showcase the role of home energy raters in the Builders Challenge process and how raters can best participate. The session will discuss utilizing the Builders Challenge to differentiate extremely high performance homes from others in a competitive marketplace. The session will cover using Builders Challenge Technology Information Packages to educate clients, using the web site to look for new business leads, strategies for dealing with tricky quality criteria, dual certifications, and more.

## **Infrared Business Tips & Insight**

Presenter: Jay Bowen, Infrared Training Center

Capital Ballroom F

With increasing energy costs, thermal imaging cameras have quickly become prevalent for commercial and residential building inspection. Understanding the process of applying thermography and performing surveys efficiently and profitably is covered. This session will explore the numerous applications for thermal imaging technology beyond inspecting building envelopes. Discovering markets and revenue streams that augment the infrared building inspection are discussed. Examples will be given for each application and the basic conditions required.

## **EEMs & EIMs – The Next Generation**

Presenters: Allison A. Bailes III, PhD, Energy Vanguard; Geoff Ferland, EcoLend; and Charlie Brister, Frontier Energy Services

Capital Ballroom G

Every rater learns about Energy Efficiency Mortgages (EEMs) and Energy Improvement mortgages (EIMs) in their initial training. For most, this seems to be nothing more than a relic, as few raters have actually worked on one of these loans. With builders still looking for a bottom in the new construction market, however, this is a great time to promote these products. A high percentage of

existing home sales are good candidates for EIMs, and realtors are eager to learn about anything that might help them sell more houses. In this session, we'll look at:

- a brief history of EEMs & EIMs
- opportunities for growth in the market
- requirements of these loans
- means of determining cost effectiveness (present value, SIR, simple payback)
- what raters need to know
- how to sell them

## **Building Performance and National Energy Legislation**

Presenters: Steve Baden, RESNET and Lane Burt, Natural Resources Defense Council

Boxwood

Congress is considering important national energy and climate legislation. Proposals in the U.S. Senate and House can have a dramatic effect on the demand for building performance verification and has the potential to provide a long-term sustainable funding source for energy efficiency improvements to new and existing homes. RESNET home energy ratings with proper verification protocols have an opportunity to play a major role in utility and governments' programs to fund energy efficiency improvements as the most cost-effective way to meet requirements of the proposed legislation.

## **The New Partnership: Auditors and Real Estate Professionals**

Presenters: Candace Lightner, REALTOR, Energy Smart Real Estate Specialist, and Lee O'Neal, CGE Solutions

Judicial

Residential buildings annually use more than 20% of the nation's energy. And yet, less is being done about existing homes than new construction. How do we reach the homeowner? While there are a number of projects doing just that, one player that has largely been ignored is the REALTOR. According to recent figures, REALTORS sell between six and seven million existing homes annually and the National Association of REALTORS (NAR) has more than 1.3 million members. What does this mean for you? How can you make your neighborhood REALTOR a partner in educating the homeowner about the value of your services? The real estate industry is poised to play a far more active role in meeting the growing demand for energy efficiency and "green" features in existing homes. The time is now for Raters and REALTORS to join forces and transform energy wasteful existing housing stock to more comfortable, healthy, energy efficient homes that will contribute to our nation's energy independence.

## **Building Science Masters Certification Training Session VII**

Presenter: John Tooley, Advanced Energy

Sandalwood

### **Session 10**

3:30 — 5:00 p.m.

## **The Role of the German Passivhaus Standard in America**

Presenter: T J Hill, T J Hill & Associates Passive House Consultant  
Capital Ballroom A&B

Increasingly, Europe is moving toward adopting the German Passivhaus standard for energy efficiency in building as its 2016 standard for residential building. The US is in the throes of mandating a national building energy code. Why should the US reinvent the wheel?

## **Home Performance with ENERGY STAR in NC (North Carolina Energy Star Track)**

Presenter: Brian Coble, Advanced Energy  
Capital Ballroom C

This session will cover the NC Home Performance with ENERGY STAR program in North Carolina. Advanced Energy will describe the program in detail, how it works, what markets will be targeted, how to get involved, who is participating.

## **Using Fully Automated Energy Audit & Energy Rating Systems**

Presenters: Ken Riead, Hathmore Technologies, LLC and Sharla Riead, Accurate Rater Network  
Capital Ballroom D

The advent of fully automated energy audit/energy rating systems is upon us. Fully automated programs will make it possible to schedule, conduct, track and report energy audits & ratings through reliable, paperless systems. Utilization of such systems will allow transparency, accountability, tracking of Davis-Bacon (prevailing wage), and customized reporting. More importantly, robust systems can automatically adjust for things such as climate zones, local, regional or state-wide energy programs and/or codes, targeted work-force availability by zip code, county, city or other geographic designation, etc. This session will detail one such system, Energy Automated Retrofit Management (EnergyARM), and will describe similar available systems. Energy auditors, especially energy raters & green raters, are being tasked with ever-growing responsibilities including the creation of cost-effective energy improvement analysis within constraints of specific programs, developing work orders, locating and/or tracking energy contractors, keeping detailed records, finalizing results, submitting multiple reports and archival of resulting files. Running a small business is hard enough without added administrative burdens. Fully automated audit/rating tracking systems can alleviate much of this. Attend this session to find out how.

## **Advanced Lighting: the Next Energy Frontier**

Presenter: Jeff Schwartz, ICF International  
Capital Ballroom E

As building technology progresses to make envelopes and mechanical systems more efficient, lighting begins to comprise an increasing proportion of household energy use. Due to the amount of energy light fixtures use, they become key features to focus on when looking to increase the energy efficiency of a home. This presentation will take a look at where advanced lighting technologies are headed, new design techniques, and discuss how the ENERGY STAR Advanced Lighting Package offers a turnkey design specification and a true marketing advantage.

## **Lessons Learned: ENERGY STAR 2011 Pilot**

Presenters: Mike Berry, ICF International; Steve Ellison, ICF International and Geoff Hartman, ICF International

Capital Ballroom F

A number of utility sponsored ENERGY STAR for New Homes Programs from across the country have come together, with support from ICF International, to run a coordinated set of pilot studies of the forthcoming ENERGY STAR specification. The objective of these pilot studies is to take a proactive approach to preparing these utility programs and their participants for specification change that will be taking place in 2011. By working with select builders and raters to construct and verify homes that meet these forthcoming guidelines, the participating utilities will be able to gather direct, local information that identify the challenges and discover best practices for transitioning to this more rigorous specification and enable adequate planning and preparation to minimize program disruptions and ensure goal achievement. This presentation will share the results of this pilot study including how to reduce costs, expedite construction, and reduce waste. It will also share tips for successfully installing difficult details and for smoothly transitioning your company to the 2011 Guidelines.

## **Building Science Masters Certification Training Session VIII**

Presenter: John Tooley, Advanced Energy  
Sandalwood

## **Free Shuttle to Downtown Raleigh—Tuesday Evening**

On Tuesday, February 23rd, a bus that runs on 100% biofuel will be taking people from the Hilton North Raleigh to downtown Raleigh for an evening of entertainment. It will also make trips back downtown to pick you up and take you back to the Hilton. It will be making trips from 7 PM until 10 PM. For dining and entertainment options in downtown Raleigh click on <http://www.resnet.us/conference/2010/raleigh.htm>

