



Session Nominated for the 2010 RESNET Conference

Home Energy Ratings

2010-001 Finding a Home for Independent Raters

RESNET Standards require raters 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.

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

2010 – 002 Moving Rater Quality Assurance Into the Future – RESNET’s Proposed Changes

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 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 to RESNET quality assurance standard. This session will introduce the proposed changes prior to their being submitted to the public review and comment process.

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

2010 – 003 Update on RESNET National Building Registry

RESNET is developing a national building registry that will serve as a database for all inspection of homes that are undertaken through the procedures of the RESNET standards. This registry will for the first time be 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.

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

2010 – 004 Introduction to the New RESNET Standard for Performance Testing

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.

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

2010 – 005 Ethics in the Industry

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.

Suggested Presenter: Brett Dillon, IBS Advisors

2010 – 006 Standards, Consensus standards, Specifications, Guides, Best Practices, How do I figure all of these out?

The energy efficiency industry is exploding. As part of the growth, individuals are being hit with documents from all sides. Do I have to follow them? Do I have to meet the requirements? When can I decide? These questions are answered in this session which will provide understanding of the documents and how these various documents are used.

Suggested Presenter: Laverne Dalglish, Building Professionals

2010 – 007 Conducting an infrared inspection using the new RESNET standard

This session will address, in a practical fashion, the details of 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.

Suggested Presenter: John Snell, The Snell Group

2010 – 008 Infrared Thermography: Getting started successfully

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..

Suggested Presenter: John Snell, The Snell Group

2010 – 009 HERS Raters & HVAC

Provides an overview of how to review a Manual J load calculation- what to look for and how far to go. Covers essential overview of Manuals J, S & D from a Rater's perspective.

Suggested Presenter: Brett Dillon, IBS Advisors

2010 – 010 Performing Quality Assurance

Covers the requirements behind performing Quality Assurance on ratings, with details on how to do the actual work of the Quality Assurance Designee.

Suggested Presenter: Brett Dillon, IBS Advisors

2010 – 011 QA Techniques that work for QA Designees

RESNET Standards lack guidance for QA Designees. This session would explain the RESNET Standards which apply to QA Designees. QA Systems and Techniques that work are explained.

Suggested Presenters: Anyone on the RESNET QA and Ethics Committee

2010 – 012 Real-time QAQC – A Continuous Program Improvement Mechanism

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. In the end, 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.

Suggested Presenter: Steve Ellison, ICF International

2010 – 013 REM/Rate Advanced Systems Modeling

Most raters are able to easily model simple HVAC and Hot Water systems. More complicated systems present a challenge. This session would lead raters through the different Mechanical and Solar hot water Equipment Properties in REM and explain the application and examples of each. Some not-so-common system examples could be modeled into REM. (I have some examples that could be used). This session would NOT be for REM/Rate advanced features such as logos on reports batch modification etc. but would concentrate on advanced systems modeling.

Suggested Presenters:

Rob Salcido and Brian Christensen, Architectural Energy Corp

2010 – 014 Using Fully Automated Energy Audit & Energy Rating Systems

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, and especially energy raters & green raters, are being tasked with ever-growing responsibilities including; 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.

Suggested Presenters: Ken Riad, Hathmore Technologies, LLC and Sharla Riad, Accurate Rater Network

2010 – 015 *Realizing the Full Potential of HERS Ratings*

Have you ever wondered what to do with all those old HERS Rating files stored on your computer? Why not put them to work in 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.

Suggested Presenters: Glenn Pease, Southface Energy Institute and Eurihea Speciale, Southface Energy Institute

2010 – 016 *RESNET - Habitat for Humanity-Building America Partnership*

RESNET members who have volunteered with Habitat for Humanity affiliates will describe their experiences and the benefits of participating in this nationwide RESNET partnership that is an extension of DOE's Building America partnership with this non-profit affordable housing provider.

Suggested Presenters:

Janet McIlvaine - Overview

Kevin Gobble - HFH International Sustainability Specialist

Volunteer Raters - TBD with RESNET staff guidance

Suggested moderator - Ed Pollock, US Dept of Energy

2010 – 017 *Energy Efficient Performance Requires Quality Construction*

Good quality construction doesn't always result in energy efficiency but poor quality construction always negatively impacts energy performance. An energy efficient building requires quality construction to achieve designed performance. Each element of the designer's and builder's plan needs to be part of a documented quality management system (QMS). The role of the energy analyst in moving builders in the direction of a documented QMS will be explained with examples from today's market.

Suggested Presenters:

Amber Wood, NAHB Research Center

Jeff Taggart, NAHB Research Center

Craig Drumheller, NAHB Research Center

2010 – 018 HERS 101

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.

Suggested Presenter: Abe Kruger, Kruger Sustainability Group

2010 – 019 Energy Performance Scoring: Where are we going? Who's doing what?

I propose a panel with Steve Baden or Philip Fairey moderating

Ed Pollock, US DOE speaking about what DOE is up to

Sean Penrith, Earth Advantage Institute talking about the City of Seattle's scoring and time of sale

Diane Ferington, Energy Trust of Oregon, share final report finding, the legislative mandates in Oregon driving EPS as well as the current New Home EPS scoring that is in the market

Richard Feasy, VEIC or Bruce Harley, CSG Discuss the "national work group"

Conclude with moderator discussing how RESNET will tie in or feels about the various efforts going on the open it for discussion among the audience.

2010 – 020 Low Volume Raters-what to do?

Low volume raters (less than 25 ratings/year) now have added requirements...let's go over them.

Suggested Presenter: Rogge Miller, Guaranteed Watt Saver

2010 – 021 Success with ENERGY STAR for Home Energy Raters

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.

Suggested Presenter: Kristi Matthews, Advanced Energy

2010 – 022 Changes in the RESNET standard

I'd like to suggest a break out to elaborate on the recent amendments to the HERS standard. Here's the web pg of the list of amendments, I'm figuring you'd need speakers from several of RESNETS committees. It's not intended to be a breakout for and against the amendment, just a review of why adopted and how to implement.

Suggested Presenters: RESNET committee members.

2010 – 023 Use of IR & Blower Door for Energy Inspections

Gary Nelson and I presented a similar session in New Orleans and it was very well received and beneficial. Basically we set up the Blower Door (would need a host house) used the IR imager before the blower door to show IR differences, then used the Blower Door in conjunction with the IR imager to show differences in Insulation anomalies and air infiltration anomalies. We could present this session as either a 4 hour preconference session or as a hourly session as needed during the conference. Gary and I have spoken about this and are on board to help in what ever capacity needed to get useful real world information out to the users of IR and Blower Door equipment.

Suggested Presenters: Bret Monroe, Monroe Infrared Technology Inc. and Gary Nelson, Energy Conservatory

2010 – 024 The State, Utilities and The Provider

A guideline for Provider efforts to promote Energy Ratings and Energy Audits in less than receptive State environments, including weatherization programs. (e.g. Illinois)

Suggested Presenter: George Sullivan, Eco Smart Building

2010 – 025 The HERS standard: Reviewing section 303

I'd like to see more review of the HERS standard, especially section 303, in an "almost line item by line item" way. The presenter can skim over the line items that don't generate questions / discussion. It should be a breakout for HERS providers and their QA designees, the objective of the breakout (or 2) is to generate discussion of the language of the standard generally, and get opinion and interpretation of the items that are not clear. It would NOT be a forum for opposition /opinion against the language, but simply an explanation of what the language is trying to accomplish. I'd like to get a better idea of table 303.2.2, along w/ a review of table 303.4.1.(1). I'd also like a review / update of recent HERS standard changes.

Suggested Presenters: Bruce Harley, Phillip Fairey

2010 – 026 Energy Ratings and Waxman-Markey

Waxman-Markey 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 will play a major role in incentivising utilities to fund energy efficiency improvements as the most cost-effective way to meet requirements of Waxman-Markey.

Suggested Presenter: Wade Byrd, President Performance Building Consulting and Byrd Energy and contractor to the State of Louisiana in development of the state's ARRA energy efficiency program

2010 – 027 Louisiana's ARRA RESNET Home Energy Rating Program

Louisiana has implemented a three-prong energy efficiency program based on RESNET Certified Home Energy Ratings. Incentives for improving the efficiency of new and existing homes are based solely on RESNET Home Energy Ratings and the home energy rating procedures are utilized to implement a new small commercial building energy efficiency program.

Suggested Presenters: Wade Byrd -- President, Performance Building Consulting and Buddy Justice -- La. Dept. Of Natural Resources program manager

Path to Zero Energy Homes

2010 – 028 U.S. Department of Energy's National Builders Challenge

The National Builders Challenge is a challenge to builders to build high performance homes that exceeds ENERGY STAR. This session will explain the program and explore the role that raters play in the program.

Suggested Presenter: Ed Pollock, U.S. Department of Energy

2010 – 029 The Path to Zero Energy Homes – Building America Case Studies

The U.S. Department of Energy's Building America Program is leading the effort to zero energy homes. This session will highlight case studies from Building American teams on homebuilders that achieved zero energy homes.

Suggested Presenters: Building America Team Representatives

2010 – 030 Clearing The Path To HERS 0

How do you get to zero? From my talks with raters, I have literally heard little interest, knowledge or experience about getting to zero. Or at least they are not willing or capable of talking much about what it takes to get to what is, after all, Resnet's goal. The path needs transparency - even when you reach zero. What is your average home energy use anyway? 2 or 3 TV's on 3 or 4 hrs. each day? Whereas, you know exactly what you need with LEEDs. Sure, LEEDs is different, but it's also better known. Making HERS clearer will help it gain wider acceptance and is good PR. Session: What should be done?

Suggested Presenter: Barry Rehfeld, Editor, Zero Energy Intelligence.com

2010 – 031 Zero Energy Programs & Projects- Designing and Marketing an Effective Zero Energy Program

The Massachusetts Zero Energy Challenge (ZEC) wrapped up in early 2009. Now, almost a year later, zero energy programs and projects are becoming increasingly popular across the nation. This presentation gives a detailed look at the program design and highlights the individual projects chosen to compete in the ZECChallenge. The first part of this session examines program design including builder outreach and recruitment as well as an overview of the consumer and media based marketing strategy. The second part of the session will provide highlights about the building techniques and technologies of the five participating homes, as well as a comparative analysis of the modeled vs. actual energy consumption/production for each of these houses.

Suggested Presenters: David Ruggiero, ICF International and Marylou Einfalt, ICF International

2010 – 032 Designing and Marketing Effective Zero Energy Programs

The Massachusetts Zero Energy Challenge (ZEC) came to an end in early 2009. Now, almost a year later, zero energy programs and projects are becoming increasingly popular across the nation. This presentation gives a detailed look at the program design and highlights the individual projects chosen to compete in the ZECChallenge. The first part of this session examines program design including builder outreach and recruitment, as well as an overview of the consumer and media based marketing strategy. The second part of the session will provide highlights on the building techniques and technologies of the five participating homes, as well as a comparative analysis of the modeled vs. actual energy consumption and production for each of these houses.

Suggested Presenters: David Ruggiero, ICF International and Marylou Einfalt, ICF International

2010 – 031 *The Role of the German Passivhaus Standard in America*

Presentation Abstract:

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 throws of mandating a national building energy code. Why should the US reinvent the wheel?

Suggested Presenters: T J Hill, T J Hill & Associates Passive House Consultant

2010 – 032 *Zero Energy Homes for Hot and Humid Climates*

Cover the known recommended paths for best cost effective zero energy homes in hot/humid climates such as Texas and Florida.

Suggested Presenter: Florida Solar Energy Center

2010 – 033 *Targeting HERS-Zero*

This session will provide an overview of the principal research findings from Ann Edminster's new book, *Energy Free: Homes for a Small Planet*, "the definitive guide to design, construction, and economics of net-energy-producing homes." *Energy Free* distills lessons learned in case studies from around the country, representing diverse building types, climates, and price points – both new homes and retrofits. Edminster will share with attendees the features, methods, and processes that the NZE pioneers have identified as essential to achieving net-zero energy (HERS 0).

Suggested Presenter: Ann Edminster, Design AVEnues

2010 – 034 *Improving Building Performance and Photovoltaics – How to Make an Effective Marriage*

The path to the zero energy home combines high performance homes and renewable energy sources. This session will present roundtables of raters who have effectively combined both technologies.

Suggested Presenters: Raters with experience in rating homes with photovoltaics

2010 – 035 *The Geos Neighborhood: A Large Scale Master Planned Net-Zero Energy Community*

Geos is an innovative master planned community that emphasizes the importance of neighborhood and utilizes technologies that are right for our time. It is a 220 unit, 25 acre, integrated community where energy from the Earth and the

Sun replaces all fossil fuels. Based on the Passiv Haus standards from Europe, Geos homes will push the envelope of energy efficiency. This presentation will discuss Geos building technologies such as HRV based heating and cooling and Earth Tubes, as well as the neighborhood design that mandates every home have equal access to the sun. We'll also take a look at the cost-benefit analysis showing the entire development as cost-neutral to the surrounding suburban neighborhoods.

Suggested Presenters: Adam Stenftenagel, Sustainably Built, and Michael Tavel, Michael Tavel Architects

2010 – 036 Energy Performance Score (EPS) – One year on the ground for New Homes

The session delivers successes, challenges and lessons learned through the implementation of the EPS for Energy Trust of Oregon's New Homes program. The EPS scorecard reflects the energy consumption and corresponding carbon emission profile for a new home modeled using REM/Rate and third-party tested. Using the EPS, ETO is able to offer scaled builder incentives based on the score for energy savings from above code all the way through to near-zero energy homes. Insight and feedback on the performance metric gained from builders, consumers, policy makers, and stakeholders from home shows and tours around the state are shared. The EPS has pushed a notable share of homes beyond the ENERGY STAR performance level the first phase of implementation. The presentation covers both the elements of program design and program field implementation.

Suggested Presenters: Bob Stull, PECl, Senior Program Manager for ETO New Homes & Products and Sean Penrith, Earth Advantage, Executive Director

Existing Homes

2010 – 037 Including the Home Inspection Industry in Home Energy Performance

Home inspectors offer an opportunity to start the process of improving home performance at the time of sale. Chapter 7 of the RESNET standards creates the Home Energy Survey Professional. This is a perform entry point for home inspectors into the home performance field. This session will explain the opportunities this presents.

Suggested Presenter: Dallas Jones, Home Energy Team

2010 – 038 When Does a New Home becomes an Existing Home and Does Physics Change at that Time?

There is an argument that existing homes must be addressed in a different manner than new homes. This will be a lively discussion if there are differences in applying building science with new and existing homes, and if there are differences what changes are necessary.

Suggested Presenters: Ed Pollock, U.S. Department of Energy; David Lee, Environmental Protection Agency ; Philip Fairey, RESNET and Larry Zarker, BPI

2010 – 039 How to Write a Scope of Work

Covers the details behind writing a clear, concise Scope of Work for performing work on an existing home.

Suggested Presenter: Brett Dillon, IBS Advisors

2010 – 040 Testing the Energy Analysis Tools of Existing Homes: BESTEST-EX Update by NREL

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 affect their market should attend this session.

Suggested Presenter: Dr. Marcus Bianchi, NREL

2010 – 041 RESNET Occupied Homes Software Task Force and Working Group

Internationally there is a great interest in the labeling the energy performance of buildings as a policy initiative. Discussions on this issue has focused on the differences “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. There has been much discussion and some misinformation on this subject This session will separate the myths from the facts and report on RESNET effort to develop guidelines.

Suggested Presenters: Philip Fairey, Florida Solar Energy Center and David Goldstein, NRDC

2010 – 042 RESNET National Energy Audit Standard - Update

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.

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

2010 – 043 Residential Utility Bill Analysis: Opportunities, Limitations, and Future Work

The goal of residential energy audits and large-scale efficiency programs is to decrease overall energy use. Whether applied on a single home or a city-wide scale, utility bill analysis offers tremendous opportunities to identify cost-effective energy efficiency measures (EEMs). As a complement to energy audits, utility bill analysis empowers the auditor to distinguish base-load from weather dependent energy use and “tune” predictive savings calculations. On large scales, utility bill analysis can systematically target inefficient buildings, enabling the analyst to maximize the effectiveness of efficiency programs without walking through a single home. Finally, after EEMs have been implemented, weather normalized utility bill analysis is essential to measure their impacts. Though utility bill analysis is a robust tool for any building expert, its applicability and limitations warrant an honest discussion.

Suggested Presenter: Sean Casey, National Renewable Energy Laboratory

2010 – 044 Third-Party versus Turnkey: A debate on the best way to tackle existing homes

With the implosion of the new construction market, and the realization that we have to greatly improve homes that all already up and being lived in to meet climate and energy goals, we've seen ramped up activity in the existing homes market. It's clear that a variety of business models can work, each with their advantages and disadvantages. This session will explore the similarities and differences of different approaches to shine a light on best practices to achieve results.

Suggested Presenters:
Moderated by Chandler von Shrader, U.S. EPA

1. Mike Rogers, GreenHomes America
2. Keith Williams, Building Services & Consultant,
3. Matt Golden, Sustainable Spaces,
4. Lee O'Neal, CGE Solutions OR Ben Adams, MaGrann Associates

2010 – 045 Comprehensive Home Energy Audit

Cover all necessary material to become certified to perform the Comprehensive Home Energy Audits. Training to be followed by certification test.

Suggested Presenters: IBS Advisors and other interested RESNET trainers.

2010 – 046 Using REM for retrofit analysis

Using REM to do quick and accurate performance calculations is crucial to profitable home improvement analysis.

Explain how to do this and how to calculate the "hidden" fees of home energy audits such as painting, electrical work and plumbing necessary to compute real numbers so that an accurate report can be generated.

Prefer emphasis on hot and humid climates as it seems this area is neglected.

Suggested Presenter: Someone from REMrate.

2010 – 047 Energy Audit Tricks and Techniques

With the myriad numbers and types of tools and methodologies "out there", an energy auditor needs to understand what tools are best used for what diagnostics and diagnosis. For instances, 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 the test be pressurization test or depressurization and what are the merits for each?

Suggested Presenter: Mark Lidd, BareToes LLC

2010 – 048 8 Key Things to Jump Start Your Existing Homes Business

In today's economy and climate, existing homes is where the action is. Yet the existing homes market can be a tough nut to crack. It's even harder if you skip some of the fundamentals. From marketing and sales, to installation and business practices, there are some basic things raters and contractors should do to ensure their businesses thrive, this session will focus on eight simple things

you can start implementing this week, this month, or this quarter, to improve your top line revenue and your bottom line earnings. While targeted at raters and home performance contractors, this would be relevant for HVAC, insulation, and other trade contractors. It would also be useful to program implementers who want to better understand how to help one of their key stakeholders deliver energy-efficiency.

Suggested Presenter: Mike Rogers, GreenHomes America

2010 – 049 Selling Energy-Efficiency to Existing Home Owners

Ratings and home performance services don't save energy unless people buy them! Selling whole house services creates an opportunity for contractors to increase their volume and profitability while reducing customer complaints and callbacks. The key to selling whole house services is an understanding of the home's energy systems, active listening to the homeowner's energy and indoor environmental concerns, and the ability to clearly explain the benefits of the whole house approach.

Suggested Presenter: Mike Rogers, GreenHomes America

2010 – 050 Innovative model for Home Performance and the role of an Energy Advocate

Clean Energy Works Portland – This innovative Home Performance delivery model is being considered by many cities across the nation for deployment of ARRA funded weatherization. In this effort there are no upfront customer costs and it includes on bill repayment. The fund model takes the weatherization package energy savings and amortizes the payment stream such that the monthly energy savings is approximately equal to the monthly payment for the weatherization being done on the home, additionally there is a new role within the transaction called the "Energy Advocate" This session would lay out the delivery model and include results to date of the 500 home pilot that the City of Portland is engaged in.

Suggested Presenters: Diane Ferington Energy Trust of Oregon and Derek Smith, City of Portland

2010 – 051 Home Performance with ENERGY STAR in NC

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.

Suggested Presenter: Brian Coble, Advanced Energy

2010 – 052 Making the Transition from Contractor to Energy Auditor: Stories from the Field

Come to this session to hear a compilation of the experiences of several contractors who have made the transition to Energy Auditors.

Objective 1: Find out what motivated the change

Objective 2: Hear how the planning and preparation went. See what level of commitment, effort and resources went into it.

Objective 3: Learn what kind of impact the change has had on their business.

Presenter: Bill Spohn, TruTech Tools, LTD

2010 – 053 Quality Assurance Texas Style; Overview of the Texas Residential Energy Audit Program QA Process and What They Experienced.

This session will provide an overview of how the Texas Home Energy Rating Organization conducts the Quality Assurance process for the ONCOR Electric Delivery LLC, "Take A Load Off, Texas" Residential Energy Audit Program, using online tools, audit file review, and field evaluations. The discussion will include the results from the first six months of quality assurance review, including what worked and what didn't. Time will be provided for questions and comments.

Suggested Presenter: C. T. Loyd, Technical Director, Texas HERO

2010 – 054 Training for work in existing homes- a new model for getting the job done right!

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.

Suggested Presenter: John Tooley, Advanced Energy

2010 – 055 Energy Audits; Weatherize, Cost Analysis, and Efficiency Upgrade

NRG By Design is a leader in Colorado with experience in both weatherization audits performed as a part of the Energy Solutions Program for the Colorado's Governor Energy Office, and the multi-tiered home energy audit performed for home owners. Nathan Ballenger will articulate what works, what needs to

improve, and how to decide what clients are looking for in a home energy audit. A home energy audit can be as simple as a walk through audit that identifies basic weatherization needs, a basic cost analysis using software to calculate energy load base case to improved case scenerios, or an infinitely detailed analysis of very complex home energy principles. NRG By Design is working in both the government auditing system, and with all RESNET certified energy analysis software, giving a thorough background in the laundry list of home energy auditing.

Suggested Presenter: Nathan Ballenger, NRG By Design

2010 – 056 OptiMiser - The Future of Energy Audit Software

OptiMiser is the newest energy auditing software on the market. Specifically designed for conducting existing home audits, OptiMiser was built for and by energy raters and auditors (along with a serious group of engineers, statisticians and software designers!)

Suggested Presenters: Steve Byers, EnergyLogic and Adam Stenftenagel, Sustainably Built

2010 – 057 2008 Energy Performance Score Pilot: Lessons Learned

The 2008 EPS Pilot conducted in Oregon has provided a great deal of information for research. The study reviewed the utility of different home energy rating metrics compared the accuracy of 4 different residential energy modeling programs: REM/Rate, Home Energy Saver (Full Version), and SIMPLE. The data analysis showed that measuring and entering more detailed information does not necessarily result in greater accuracy when predicting total energy usage in a home. We will discuss whether SIMPLE is really simple after all. The analysis also shows that the metric utilized to express energy efficiency matters. Metrics measuring energy use on a per square foot basis make large homes look efficient. The learning objectives for the presentation are: understanding the potential shortcomings of modeling software, understanding differences between energy efficiency metrics: EPS, HERS Index, Home Energy Index, Home Energy Yardstick, understanding the difference between an asset rating and an operational rating.

Suggested Presenters: David Heslam, Earth Advantage Institute and Michael Blasnik, Consultant

2010 – 058 Increasing Contractor Success in Home Performance with ENERGY STAR Programs: Lessons Painfully Learned

Contractors are the “heart and soul” of residential energy efficiency programs, often getting introduced to the value proposition of adding home performance

contracting to their business via the training, mentoring, marketing, incentives, and quality assurance offered by programs. This session will explore lessons learned from the implementation of Home Performance with ENERGY STAR (HPwES) programs across the country. An expert panelist group will provide insight into past experiences, best practices and lessons painfully learned in the field. HPwES programs can set contractors up for success in the home performance market and this session will take a hard look at past accomplishments, occasional tweaks and improvements which have been made to further develop contractor opportunities. All contractors are encouraged to attend.

Suggested Presenters: Mark Dyen, CSG, Bob Knight, CBPCA, Greg Thomas, PSD, Marc Millian, ICF, and Bill Zwack, Sentech

2010 – 059 Semi - Deep Energy Retrofit in the Northwest

A case study of the remodeling of a 1912 Bungalow in Portland, OR that has gone semi deep energy. For 5 years I have been remodeling this home, spray foam, combo space and hot water radiant heating and all sorts of sustainable attempts at being a good steward of the environment. But all that was not enough and I guilted myself into adding 2" of exterior foam. This presentation looks at the project, in progress, and compares old utility costs, current utility costs and looks to project what further savings may be in store. Session also includes rain screen detail, window flashing challenges and moisture management.

Suggested Presenter: Dan Cote, Conservation Services Group, Applied Building Science

Green Building

2010 – 060 Verifying LEED for Homes Projects: Calling all Green Raters!

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 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.

Suggested Presenters: Jennifer Owens, USGBC and Beth Holst, GBCI,

2010 – 061 Set Yourself Apart: Get Green Certified to the National Green Building Standard

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.

Suggested Presenters: Michelle Desiderio, NAHB Research Center, Kelly Parker, GWS, Builder, TBD

2010 – 062 Green Building: Past, Present and Future

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.

Suggested Presenter: Don Ferrier, Ferrier Custom Homes

2010 – 063 WaterSense: Water-Efficient Homes, a New Era in Building Green

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 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!

Suggested Presenter: Allison Hogge, US EPA's WaterSense Program

2010 – 064 Zero Water Consumption Buildings---- A NEW REVOLUTION

With the shortage of water in the U.S. and other parts of the World it is becoming increasingly necessary to look at new technologies to both conserve water and to use alternative water technologies. This workshop will present new technologies available including use of rainwater and condensate water for commercial

applications.

Suggested Presenter: Terry Janssen, CEO, Ecotech Water, LLC

2010 – 065 EEBA Indoor Air Quality

This workshop will teach participants essential information about indoor air quality as it applies to single family residences. Participants will learn the basics about the full range of potential pollutants and their impact on occupants. They will also learn the four important strategies for controlling and improving indoor air quality. This knowledge will empower builders and other participants to sort through the quagmire of IAQ information that is currently available and give them practical and affordable tools and strategies they can use to help their clients make better decisions and to incorporate healthy indoor initiatives into their building projects. Participants will be equipped to avoid potential risks and identify new opportunities for marketing healthier homes. The information presented in this session will build on the basics of building science covered in the popular EEBA full day Houses That Work session. Participants for this IAQ session are encouraged to attend a HTW I session before taking this session.

An important element of the workshop will be to introduce EPA's new air quality home-labeling program. The "Indoor airPLUS" package, administered under the ENERGY STAR program, is one tool that helps builders sort through a wide range of construction elements and techniques that can impact indoor air quality.

Suggested Presenters: Gord Cooke, Air Solutions and Building Knowledge, Inc. and Justin Wilson, Building Performance Solutions

2010 – 066 Indoor airPLUS: The Next Step in Green Building

Homebuilders and homebuyers across the country are increasingly interested in green building. Under both national and regional programs, green building takes a more holistic look at how homes are built, occupied, and impact the larger community by scoring homes on a number of attributes. These attributes include energy efficiency, water use, building material use, stormwater management, indoor air quality, and other features. However, builders are challenged by how to prioritize their efforts to achieve "green" levels for each attribute. While energy efficiency is often considered to be the first step in striving to build green, homebuyers and builders will look for EPA's Indoor airPLUS (IAP) label as the next step in achieving a green home. The IAP label is a specification developed by EPA to indicate that a new home has been designed to protect from issues like mold, moisture, radon, combustion gases, and other airborne pollutants through more than 30 additional home design and construction features. This session will explain how IAP can be utilized to facilitate compliance with the requirements of prominent green building program while providing a high intrinsic value for homeowners, homebuilders, and society.

Suggested Presenters: Eric Werling, EPA and Casey Murphy, ICF International

2010 – 067 Panel Discussion of Indoor airPlus

A panel discussion of the EPA's air quality component of building an Energy Star home. Panelists will include HERS Raters, an indoor environmental professional (IEP) and an Energy Star builder.

Suggested Presenters:

Craig Whittaker (moderator): Environmental Solutions Group , Danny Gough (HERS Rater, panelist): Energy Solutions and Gary Silverstein (builder, panelist):Silverstein Construction

2010 – 068 Indoor Air Quality in Green Buildings

Indoor air quality exposure studies show that building materials can result in significant exposures to chemicals that pose potential health risks. The majority of these chemicals, and some which pose the greatest health risks, are not addressed in building codes—and a survey of green building standards reveals that they fail to set any standard for these compounds. In addition, some green building standards and building codes may encourage practices that increase the risk of exposure to harmful chemicals; such as recycling building materials, and higher requirements for flame retardants .Standards neglect semivolatile organic compounds, phthalate plasticizers, brominated flame retardants, perfluorinated compounds, and polychlorinated biphenals. Many of these are carcinogenic, endocrine disruptors, and pose other serious health risks.

Green building standards represent a unique opportunity to set more meaningful indoor air quality standards to protect human health.

The presentation will include an overview of current indoor air quality standards as well as recommendations for future standards. We will also discuss best practices and alternatives to minimize potential exposure to harmful chemical compounds.

Suggested Presenter: Chris Mathis, Mathis Consulting Company

2010 – 069 Green goofs: What were they thinking?

This session will provide a slide show of pictures and discussions of energy and building science no-nos discovered by HERS Raters in the field. We will gather pictures and scenerios from across the country. We will site the contributors. This seminar will provide the new and the experienced with information and humor.

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

2010 – 070 Radon in Green Building

Most inspectors have very little training in radon mitigation and may not understand how some building practices can adversely affect a system's effectiveness. Since the green guidelines and standards cover radon systems, an important presentation would cover the building dynamics that cause radon problems and the system designs required to fix them.

Suggested Presenter: Trudy Y. Smith, Spruce Environmental Technologies, Inc

2010 – 071 Growing From HERs to Multi-Program Green Verification

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. Would like to include a feedback session to get ideas from attendees on how to make the program even better (time permitting).

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

2010 – 072 Building in Nature's Image - Ecological Performance Standards

This presentation develops ecoliteracy in the built environment, describing how Biomimicry, building science, ecological resilience principles, and Ecology apply to the built environment, particularly to energy & energy use in homes & buildings.

The focus is translating the design, building, and community standards of the natural world into practical standards, measures and designs for the built environment. For example, more solar energy strikes the Earth's surface in less than one hour than the amount that humans consume in a year. Nature uses only local, current sunlight and derivatives (with few exceptions) as energy. This session describes how to identify, quantify and design homes that match this Ecological Performance Standard. The aim is to describe a system of Building in Nature's Image, to enhance the holistic performance of our homes.

Suggested Presenter: Kevin Stack, Northeast Green Building Consulting, LLC

2010 – 073 National Historic Trust Green Lab; Dubuque, IA Masterplan and Implementation

Dubuque is leading the 3 National Historic Trust Green Lab Project cities through energy efficiency and renewable energy use. It is redeveloping over one million square feet of mixed use historic buildings to meet the Energy Star Tax credit standard, while working with an international software company to develop an energy dashboard that can be used from city scale to single family or condo in the city for actual realtime energy use. The Dashboard covers traffic, public transit, water, electrical and natural gas power for all of the city and can calculate the carbon footprint of a household or department in the city. Dubuque is currently entering all of their buildings into the Energy Star Portfolio Manager program to track energy use; they are also updating their IECC building codes to require Energy Star as a base level for all new and major renovation projects. Dubuque's larger projects include developing a central open loop geothermal project that uses storm water settlement basins as a heat sink for all buildings in the downtown district, and; Redeveloping the Waste Water Treatment Plant to exceed the Energy Star Waste Water Treatment Plant requirements in a current upgrade, while adding: an open loop geothermal in-line system to heat and cool all of the occupied buildings on site, an 8,000 square foot solar array, and a 1,800 kw small wind system to offset the plant's energy needs. Dubuque is a pioneer in application of Renewable Energy Systems and is currently reviewing the installation of a 10 Mw small wind and solar system to be installed throughout the city owned buildings. Dubuque is implementing an energy efficiency program to reduce the energy use of private and public buildings by at least 50%.

Suggested Presenters: George Sullivan, and Steve Brown

2010 – 074 Energy Savings and Community: Working with Cohousing

The concerns of residents in the growing number of co-operative living communities, such as "cohousing" and "intentional", are numerous and detailed. These are sophisticated, urban, upscale residents who are knowledgeable. This session details their specific energy and environmental concerns, and gives examples from a number of actual engaged developments. Specific marketing and prospect data will be distributed.

Suggested Presenter: David Bellin, Ph.D., Buddha LLC

ENERGY STAR

2010 – 075 ENERGY STAR Qualified Homes 2011 Spec Training: Overview of New Specifications and Compliance Procedures

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.

Suggested Presenters: Sam Rashkin, Glenn Chinery and Zak Shadid, EPA

***2010 – 076 ENERGY STAR Qualified Homes 2011 Spec Training:
Completing Systems: HVAC***

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.

Suggested Presenters: Dean Gamble, iCF International and Ted Leopkey, EPA

***2010 – 077 ENERGY STAR Qualified Homes 2011 Spec Training:
Completing Systems: Water Managed Construction***

For the first time since ENERGY STAR Qualified Homes was introduced in Fall 1995, home builders will prescriptively be required to provide a complete water managed construction system in all labeled homes. Even though the required details do not contribute to energy savings, they are integral to a high-performance home because of dramatically reduced tolerance to drying compared to less air-tight and well-insulated homes. Based on the substantial risk reduction regarding moisture and mold problems, these details are also an important part of the Environmental Protection Agency's new Indoor airPLUS label. This session will review water management details for roofs, walls, and foundations as well as requirements for proper material protection and selection. The logistics integrating field inspection requirements into the existing field verification process will also be discussed.

Suggested Presenters: Sam Rashkin and Eric Werling, EPA

2010 – 078 ENERGY STAR Qualified Homes Training: The Road Ahead: Concept Home

The housing industry is moving exponentially faster to greater energy efficiency and integration of renewable technologies. Building codes across the country are ramping up at the local, state, and national levels including some plans to mandate net zero energy code homes in the not too distant future. Builders today badly need substantial differentiation from existing homes beyond extra ceiling height or designer counter tops to attract new buyers. With ENERGY STAR Qualified Homes 2011 specifications delivering a comprehensive approach to building science, new advanced technology solutions are needed. As a result, the Environmental Protection Agency is releasing a new ENERGY STAR labeling option for new homes called **Concept Home**. It is intended to serve as a ‘farm system’ for future ENERGY STAR specifications by facilitating and nurturing leading edge technologies and construction practices so they may be fully road tested and ready for future specifications. This session will discuss these specifications and how they complete a road map to low carbon homes for the future.

Suggested Presenter: Sam Rashkin, EPA

2010 – 079 ENERGY STAR Qualified Homes Training: Leveraging Local Partners

More than ever, ENERGY STAR Qualified Homes presents a compelling business case to all stakeholders. In particular, it provides builders with an impressive quality and performance advantage compared to their main competition, existing homes. It also provides home builder associations with new technical and marketing solutions to offer their membership. You will learn how to use this value proposition to leverage your local homebuilders’ association and connect with other important stakeholders in the market such as real estate agents, appraisers, and building code officials to host and sponsor special events and training. Yes the soft housing market is presenting unique challenges, but ENERGY STAR Qualified Homes can serve as a powerful solution.

Suggested Presenters: Amber Stewart and Jake Titus, ICF International

2010 – 080 ENERGY STAR Qualified Homes Evening Roundtable: Appraisal Work Group

Reports indicate that undervalued appraisals are blocking as much as 30 percent of all real estate transactions nationally. In particular, the process of using foreclosed property fire-sales is creating a crisis for the industry as appraiser who were too lax providing high valuations during the housing boom have now

completely swung the pendulum the other direction. In addition, there is a long history of ignoring the value of energy efficiency improvements in the appraisal process. This evening session is being convened to discuss this crisis and brainstorm suggestions for how the ENERGY STAR and the HERS industry might team up to more effectively intervene to effect a more rational appraisal process. This includes working with the lending industry to set some standards and guidance for appraisers.

Facilitators: Sam Rashkin and Brian Ng, EPA

2010 – 081 ENERGY STAR Qualified Homes Evening Roundtable: Proposed Quality Initiative

As ENERGY STAR Qualified Homes now moves past one million labeled homes, there are some indications that quality assurance problems are becoming more significant. And without question, the proposed 2011 specifications are substantially more rigorous and involve more quality oversight. As a result, EPA is convening this evening discussion session to have a frank discussion of quality assurance issues observed by raters around the country and to hear what solutions the rating industry may feel EPA should consider for improving the integrity of the ENERGY STAR label. Based on this discussion, EPA will briefly lay out some options for improving quality assurance in preparation for the new specifications.

Facilitators: Zak Shadid and Jon Passe, EPA

2010 – 082 ENERGY STAR Qualified Homes Training: Selling and Marketing 2011 to Consumers

By the end of 2008, more than 76% of U.S. households could recognize the ENERGY STAR label as a symbol of energy efficiency. By associating themselves with the ENERGY STAR label, builders have been able to clearly show value in the homes they sell using messages of affordability, trustworthiness, quality, and responsibility. To continue the trend, the ENERGY STAR 2011 guidelines will create a new level of differentiation and market advantages for builders who participate. Come to this session to learn how to prepare yourself and your builders on communicating this new value using effective sales, marketing, and communication strategies. You will also learn about new resources available from the ENERGY STAR program.

Suggested Presenters: Ga-Young Choi and Amber Stewart, ICF Internation

2010 – 083 ENERGY STAR Qualified Homes Basic Training for Raters

Are you a new rater, or thinking of becoming a rater? This session will help you understand what ENERGY STAR is, what the ENERGY STAR guidelines are,

and how to work with builders to qualify a new home. You'll learn about the performance and prescriptive paths to qualification, the Thermal Bypass Checklist, how to get help, and how to help new builders understand and successfully meet the guidelines.

Suggested Presenters: Jake Titus and Ga-Young Choi, ICF International

2010 – 084 ENERGY STAR Qualified Homes 2011 Spec Training: Completing Systems: Thermal Envelope

For the first time since ENERGY STAR Qualified Homes was introduced in Fall 1995, home builders will prescriptively be required to provide a complete thermal envelope system in all labeled homes. This includes air-tight construction, effective levels of insulation, proper installation of insulation, complete air barriers, minimized thermal bridging, and high-performance windows. With full compliance, this will lead to outstanding results on infrared camera and other diagnostics that will make used homes substantially obsolete. This session will go over the building science behind these new requirements, detailed scopes of work, and expectations regarding rater enforcement.

Suggested Presenters: Sam Rashkin, EPA and Dean Gamble, ICF International

2010 – 085 Energy Star 2010/LEED for Homes/DOE Builders Challenge/NAHB ICC-700 What's the difference

All national programs. All have differences. What is goal of the builder/homeowner or military installation? Explore the options. 15 minutes each presenter. Lots of questions at the end.

Suggested Presenters: Sam Rashkin, EPA, Kelly Parker Guaranteed Watt Saver and Michelle Desiderio, NAHB Research

2010 – 086 Indoor airPLUS: The Whys and Hows of Getting Involved

U.S. EPA studies have shown that levels of air pollution inside the home are often two to five times higher than outdoor levels. Poor air quality is associated with a host of health problems, including eye irritation, headaches, allergies, and respiratory problems such as asthma. In addition, indoor air quality is having a sizable financial impact on the home building industry in the form of litigation associated with mold and other indoor air quality related concerns. Builders can employ a variety of construction practices and technologies to improve indoor air quality, including the proper selection and installation of moisture control systems, HVAC equipment, combustion venting systems, and building materials. According to surveys, consumers are willing to pay up to \$5,000 more for these improvements. EPA created the Indoor airPLUS (IAP) label to help builders meet the growing consumer preference for homes with improved indoor air

quality and energy efficiency. Find out how to participate in this exciting new indoor air quality labeling program by the same people that brought you ENERGY STAR. You will also learn about the marketing resources available to you, including social media strategies.

Suggested Presenters: Eric Werling, EPA and Amber W. Stewart, ICF International

2010 – 087 The Indoor airPLUS Technical Specifications: How to Rate It

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.

Suggested Presenters: Eric Werling, EPA and Casey Murphy, ICF International

2010 – 088 Lessons Learned: ENERGY STAR 2011 Pilot

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.

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

2010 – 089 Real-World Energy Savings with ENERGY STAR and Guaranteed Performance Homes

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.

Suggested Presenter: Melissa Malkin Weber, Advanced Energy

Building Energy Codes

2010 – 090 90% Energy Code Compliance - A Dream Role for Raters

Presentation Abstract:

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!

Suggested Presenter: Mike Barcik, Southface Energy Institute

2010 – 091 2009 IECC: How to Meet the Requirements and How It Impacts Home Ratings

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 talk 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.

Suggested Presenter: Chunlin Cao, The Dow Chemical Company

2010 – 092 The Future of Building Codes: Implementing Performance-Based Energy Codes

Municipalities throughout the world are adopting green building codes that address issues from indoor air quality to energy efficiency. This new generation of building codes is performance-based in nature, providing flexibility to create green, energy efficient homes. Learn about the implementation of cutting-edge energy efficiency codes in places such as Boulder, Colorado and Santa Fe, New Mexico and discover how municipalities nationwide can adopt these performance-based codes to drastically reduce home energy consumption and carbon emissions.

Suggested Presenter: David Neiger, Populus Sustainable Design Consulting

2010 – 093 Building Code Basics for Home Energy Professionals

Building energy improvements involve and are constrained by building codes. Understanding basic structural, mechanical, electrical, and plumbing code provisions, as they relate to energy professionals, will help you provide more and better services to your clients. This session will also discuss how energy professionals and home inspectors can work together to improve services to clients.

Suggested Presenter: Bruce A Barker, Dream Home Consultants, LLC

2010 – 094 Building Code Inspector Education Lessons Learned

ASU Energy Center and Mathis Consulting conducted 29 training seminars for building officials in North Carolina in 2008 and 2009 and learned many lessons. The first of which is while growing in importance energy codes have traditional not been enforced with the same vigor as the life-safety codes. We also learned that North Carolina Building Inspectors are an extremely receptive audience of energy conservation education, in part because many of them have had very little training. Specific issues about training best practices, field training, needed equipment will be discussed.

Suggested Presenter: Chris Mathis, Mathis Consulting Company

2010 – 095 Upcoming North Carolina Residential Code

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.

Suggested Presenter: Chris Mathis, Mathis Consulting Company

2010 – 096 Upcoming North Carolina Commercial Code

The upcoming version of the North Carolina Energy Conservation Code will be 30% more energy efficient than the current code. In the commercial code, system commissioning is a new component that is anticipated to provide significant energy savings. This provision will be discussed along with the other changes to the code.

Suggested Presenter: Chris Mathis, Mathis Consulting Company

Business Development Opportunities

2010 – 097 Online Marketing 101 for Home Energy Professionals

“I know half my advertising budget is wasted. I just don’t know which half.” This famous statement by an advertising executive is unfortunately applicable to our industry of home performance contracting, but unless you intend to rely on word of mouth entirely, advertising is a necessary expense to build and grow your business. Internet marketing has at least a few advantages over traditional formats: it’s usually cheaper, it’s easier to figure out “which half is being wasted” and your customers are there looking for information on home energy improvements. A recent homeowner survey found that 84% of homeowners looking for information about how to make their houses more efficient turn to the internet – more than any other channel. So you need to be there, and you need to be found.

This session will provide an overview of key online marketing concepts, and will give you tactics to take home and put into action, including:

- Advertising at different points in the acquisition funnel (awareness building, search engine placements, paid business leads)
- Channel optimization – how to compare apples to apples, and “find the wasted half”
- Tips on not wasting money on Google
- Search engine optimization to increase your site’s natural search rankings

Suggested Presenter: Scott Case, Evoworx, Inc. Scott Case (Evoworx.com) is a five-year veteran of the online advertising industry. He led technology product management for aQuantive, one of the leaders in the online advertising industry before its \$6 billion acquisition by Microsoft in 2007. Scott spent 2 years in Microsoft advertising before joining Evoworx in 2009. Evoworx.com is a service

that connects homeowners who are interested in making their houses more energy efficient with home performance contractors.

2010 – 098 Energy and The Opportunities in Native Country

Today Native American communities are building and developing new housing, new community centers, hospitals and other facilities. They are using green and energy saving strategies. There are opportunities for consumer education, energy audits, raters and establishing new markets; including technical assistance in the effective use of DOE and HUD Native American recovery grants to build new sustainable models in Indian Country.

Suggested Presenters: Steve Byers, Energy Logic, Rick Mitchell, President Bear Management & Development Services and Stephanie Harmon, President Progress & Associates

2010 – 099 Habitat for Humanity - Sustainability Initiatives and Progress

Habitat's new Sustainable Building Initiatives will describe energy savings in non-profit affordable housing. Explain how Habitat is focusing on cost effective solutions nationwide and lessons learned from a number of projects in three states.

Suggested Presenters:

Kevin Gobble - Overview of Sustainable Building Initiatives, HFHI

Thom Philips - Michigan Sustainable Specialist

Ed Brown - Washington State Sustainable Specialist

Andy Bell - Alabama Sustainable Specialist

Suggested moderator - Janet McIlvaine

2010 – 100 Business Tools for Home Energy Auditors

Demonstration of technological tools that make running a successful custom-service auditing business easy. Client Relationship Management with Salesforce.com, complex templates in Excel, development of systems for time management that allow maximum efficiency with minimum waste, in our own careers as well as our clients buildings!

Suggested Presenter: Corbett Lunsford, Green Dream Group, LLC

2010 – 101 HERS Business 101

How to organize your business for success; different methods of pricing your services for profitability; becoming an ethical leader in your community; how to market your services.

Suggested Presenters: Brett Dillon, IBS Advisors and Tabettha Reyes, My Energy Potential Inc.,

2010 – 102 Selling High Performance Homes

This workshop is an additional offering of the popular EEBA Houses That Work educational series but focused on the needs of new home sales specialists / agents. The session will also be of interest to general full service real estate agents, manufacturer's representatives and housing program or utility personnel. This presentation applies proven sales techniques to the task of helping sales agents educate home buyers on the technical features of High Performance Homes. This will empower home buyers to make better decisions with respect to energy efficiency and other technical advancements. This workshop includes examples, case studies and role plays relevant to both custom and large volume builders and draws on the successes of many builders who have already realized the benefits of selling High Performance Homes. The workshop is applicable to all regions of the country and is readily adaptable to local housing programs and national programs such as ENERGY STAR, Building America and/or LEED for Homes.

Suggested Presenters: Gord Cooke, Air Solutions and Building Knowledge, Inc. and Justin Wilson, Building Performance Solutions

2010 – 103 Top Ten Ways To Market and Sell Energy-Efficient Homes

Energy-efficient homes may look like any other home on the market. However, higher quality, lower energy costs, improved comfort and decreased environmental impacts clearly set energy-efficient homes apart from standard homes. If this is the case, why aren't builders of energy-efficient homes always leading the way in their market? The answer is easy - it comes down to marketing.

To get the biggest return on their investment, homebuilders must present the features and benefits of energy-efficient homes in varied and innovative ways. Come to this session to learn best practices for selling and marketing energy-efficient homes so that you can best educate those you work with to reach prospective homebuyers using the latest Web 2.0 strategies, how to incorporate energy efficiency into your corporate philosophy and how to engage real estate agents, appraisers and other market allies. You will also learn how to ensure sales professionals are effectively communicating the value of energy efficiency to every customer walking through your door. From small custom builders to marketing professionals working for a large production builder, anyone attending this session will walk away with ideas on how to showcase energy-efficient homes in a new way.

Suggested Presenters: Amber Wysocki, ICF International and Marylou Einfalt, ICF International

2010 – 104 Cost-Effective Marketing

Teaching Energy Raters, Consultants and Certifiers how to cost-effectively market themselves to home builders and home owners without breaking the bank.

Suggested Presenter: To be Determined

2010 – 105 Training Adults Effectively

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

Suggested Presenter: Brett Dillon, IBS Advisors, LLC

2010 – 106 Raters as Marketing Partners

Raters can help their builders, remodelers and real estate professional by being an active partner in marketing and branding green and energy efficient homes. This session will provide the participant hands on, plug and play, marketing ideas that will help your partners increase business and therefore help you grow your business.

Suggested Presenter: Dave Porter, PorterWorks

2010 – 107 The New Partnership: Auditors and Real Estate Professionals

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.

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

2010 – 108 *How to Leverage Stimulus & Utility Incentives*

I will give an overview of the many Stimulus incentive opportunities including Tax Credits, and illustrate how those can be leveraged with utility incentives to maximize the sale and the benefits to home owners/renters.

Suggested Presenter: Bill Simpson, Sr. Program Coordinator, Residential New Construction and Retrofit, Progress Energy Florida

2010 – 109 *The Elephant in the Room--Thriving (or at least surviving) with Utility Rebate Programs*

Utilities programs sweep in and completely change the ground under our companies. I'd like to see a session where presenters talk about what has happened to their companies as utility programs come and go. I want to know how they have coped, and learned to be proactive rather than simply reactive.

Suggested Presenters: TBD

2010 – 110 *Birds of a feather sessions*

Workshops for like minded people to network in the evening after the sessions are over. Examples are: sessions for the different climates to get together. This is a take-off on the "green rater" course that was offered at Resnet 2009 that had people of like climates sit together. This was a fabulous way to network.

Suggested Presenters – TBD

2010 – 111 *Educational opportunities and how to meet the requirements of job re-training for the "Green Collar Industry"*

Educating and job re-training requires a specialized approach to the audience. They have little background and generally require a specific attention to motivation as well as teaching basic concepts for understanding. These people will comprise a greater percentage of the energy retrofit work force. Being merely laborers is not enough to do quality work.

Suggested Presenters: Mark Lidd Baretoes LLC, John Nelson Baretoes LLC, and Lloyd Wynn Anchor Renaissance Institute LLC

2010 – 112 Keeping Educated in a Rapidly Changing Environment

Home performance contracting - by definition - addresses a multitude of issues that affect homeowners, including their home's energy use, moisture movement, indoor air quality, comfort, and durability. It is not sufficient for a contractor to be a jack-of-all building trades, they must be masters of most - and know where to look when searching for answers they don't know. However, intimate knowledge of building science is a necessary but not sufficient competency for success in HPC. Businesses have a variety of other knowledge areas in which they must excel. In addition to the knowledge areas of building science and incentives, HP contractors need to keep abreast of changes in building codes, regulations, new building materials and techniques, modeling and reporting software, evolving customer segments, different business models, new marketing tools (like social networking), and human resource opportunities (e.g., finding recruits who have been trained through new workforce development programs). Attend this presentation to learn where you can keep abreast of the latest news to manage your career and your business.

Suggested Presenter: Casey Murphy, ICF International

2010 – 113 Working with HUD Programs and Initiatives

Opportunities abound for using energy ratings in conjunction with HUD programs including the HOME program. This session will explore opportunities within the array of HUD programs and funding initiatives.

Suggested Presenter: Lawrence (Larry) Gallagher, Operations Specialist
HUD Region VIII Energy Task Force Coordinator

2010 – 114 Advanced Program Design Strategies – Residential New Homes

Adoption of new energy codes by municipalities and states, as well as new rigorous guidelines developed by market leading energy-efficiency programs, are driving utilities to re-evaluate residential new construction program design. This session presents program design scenarios for incentive structures, targeted industry support activities, and communication strategies. The session reviews the process of identifying and mining available data sources, utilizing screening tools or calculators for policy-level assessments, and then completing robust modeling to identify program design opportunities. The session concludes with multiple design and implementation parameters that can be applied to deliver successful market transformation program designs and implementation strategies.

Suggested Presenters: Yash Shukla, ICF International and Dean Gamble, ICF International

2010 – 115 Carbon Management Services

Carbon Management services provides trouble-free, scalable alternative to capturing and managing environmental data. Information from utility bills , receipts, internal process forms and suveys can be gathered electronically and output in a format that integrates directly into your environmental systems.

Suggested Presenter: Tom Hamilton, First Carbon Solutions

2010 – 116 Guaranteed Performance Home Programs

Advanced Energy will present an informational session on several different guaranteed performance programs found around the country. Guaranteed Performance programs give utilities and other program sponsors an advantage through the developed feedback loops through a guarantee. How do programs with guarantees differ than standard programs? What have we learned from the different programs? What are the reactions from builders, homeowners and program sponsors?

Suggested Presenter: Krista Egger, Advanced Energy

2010 – 117 Infrared Business Tips & Insight

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.

Suggested Presenter: Jay Bowen, Infrared Training Center

Building Science

2010 – 118 Advanced Energy's Building Science Masters Certification - EFL

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.

Suggested Presenter: John Tooley, Advanced Energy Corporation

2010 – 119 Houses That Work for Raters

This workshop is a half-day version of the full day Houses That Work session developed with content targeted specifically for the rater community. This session is designed to address the basics of building science and how it is applied in analyzing high performance homes. Raters will be able to identify key building science issues, and how they impact the overall performance and durability of a home at different stages of construction. Raters will understand the technical differences in the criteria for the most common national green building programs and what is required of them to successfully rate and compare homes under the different programs. They will also receive updates and learn of opportunities to get qualified for various programs and how to earn CEU's.

Suggested Presenters: Gord Cooke, Air Solutions and Building Knowledge, Inc. and Justin Wilson, Building Performance Solutions

2010 – 120 Insulation & Air Sealing

This workshop will help participants understand the key principles for ensuring they attain optimal insulation effectiveness in high performance homes. The session will review the basic physics of air, heat and moisture flow and then will cover the essential questions related to creating an effective thermal barrier. Participants will learn the advantages and differences between each type of insulation and will be given valuable techniques and strategies to maximize the performance of each type. A thorough discussion of proper installation methods will be covered including the importance of air sealing and air sealing methods. This presentation will allow participants to discuss insulation issues and their experiences through the use of case studies and group exercises to ensure a wide variety of construction types and systems relevant to the home building industry are covered.

Suggested Presenters: Gord Cooke, Air Solutions and Building Knowledge, Inc. and Justin Wilson, Building Performance Solutions

2010 – 121 Ventilation Strategies

This workshop will build on the basic concepts of indoor air quality and ventilation presented in the Houses That Work full day workshop. The workshop will start with a brief review of the relevance of proper ventilation in high performance homes. Participants will be shown how to properly size ventilation systems in accordance with the applicable ASHRAE 62.2 Ventilation Standard. The various types of ventilation systems and equipment options will be outlined. Participants will be encouraged to discuss ways builders and HVAC contractors can evaluate ventilation options that are appropriate for their climate zone. Builders and their

contractors will take away key ventilation system design parameters and installation methods. Participants will gain a thorough understanding of the cost of ventilation – both installation and operation. Builders will also learn the key benefits of proper ventilation to both they and their homebuyers when they are applied in high performance homes.

Suggested Presenters: Gord Cooke, Air Solutions and Building Knowledge, Inc. and Justin Wilson, Building Performance Solutions

2010 – 122 Water Management

This workshop will help builders and designers apply building science to address the highest risk element of new home construction – water management – keeping buildings dry. The session will review the basic physics of air, heat and moisture flow and then will outline important, cost-effective strategies that will protect builders and their homeowners from water intrusion and material damage. A thorough discussion of topics such as site drainage, house designs that help manage water, proper flashing details, rain screen principles, controlling ground water intrusion and managing interior moisture will be covered. This presentation will allow participants to discuss their experiences with a variety of water management materials and strategies that are appropriate to the climate zone they work in. Information learned at the session will help participants design and build long-lasting, healthy, sustainable buildings.

Suggested Presenters: Gord Cooke, Air Solutions and Building Knowledge, Inc. and Justin Wilson, Building Performance Solutions

2010 – 123 The Hidden Moisture Mover

Most all 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. 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.

Suggested Presenter: Steve Easley

2010 – 124 Air Sealing: The Impact on Home Rating and Energy Savings

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, inexpensive ways for homeowners and professional contractors to implement air sealing that results in energy savings paybacks of less than 1 year.

Suggested Presenters: Doug Bibee/Chunlin Cao, The Dow Chemical Company

2010 – 125 Closed Crawl Spaces at the Extremes: Measured Performance in Cold and Hot/Humid Climates

This session will present the design, implementation and field results of a three-year DOE/NCEM 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

Suggested Presenter: Maria Mauceri, Advanced Energy

2010 – 126 How to improve the quality of your infrared reports

Getting high quality imagery is an important part of any residential infrared survey and report. Learn techniques and methodologies that will help you improve the data collection and post-processing on these reports from Greg Stockton, who has been making pictures and producing reports for over twenty years.

Suggested Presenter: Greg Stockton, United Infrared, Inc.

2010 – 127 Go Green with Thermal Imaging

Going Green seems to be the “buzz word” today, but what does that have to do with Thermal Imaging? Actually, it has a lot to do with it! Buildings in the U.S. alone account for 39% of U.S. Energy Consumption and another 29% to Industry. The U.S. Department of Energy attributes heating and cooling costs as 40-60% of that bill and an inefficient home simply causes the heating and cooling

systems to work harder. In fact, it is stated that one-third of all heat loss in a building is due to air leakage. Thermal imaging allows us to see what our eyes cannot (air infiltration, duct leakage, plumbing leaks, roof leaks etc.) and when used in conjunction with other tools like a Blower door, you can't help but see where all that wasted energy is going. It is our intent, with this paper, to show you the many ways you can help your clients "Go Green with Thermal Imaging".

Suggested Presenter: Peter Hopkins, United Infrared

2010 – 128 "Truth Behind the Walls" - Determining Insulation Quality Installation

This training will feature how to detect the quality of insulation installation through infrared technology. The topics to be included will be: 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. The session will be led by Peter Hopkins of United Infrared, Inc.

Suggested Presenter: Peter Hopkins, United Infrared

2010 – 129 The Pros and Cons of Foam vs. Batt for Interior Basement and Crawl Spaces

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.

Suggested Presenter: Dan Tempas, The Dow Chemical Company

2010 – 130 What Every Rater Needs to Know About Insulated Siding

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.

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

2010 – 131 Thermal Mass Principals for Hot/Humid Climates

Demonstrate effective use of thermal mass principals in hot/humid climates. Compare products such as concrete block, AAC Concrete and ICF forms. Demonstrate how to model the thermal mass in rating software such as REMrate and Energy Gage.

Suggested Presenters: TBD

2010 – 132 Passive Solar Design and Rating for Hot/Humid Climates

Cover passive solar design for hot/humid climates including possibilities of shading and passive solar heat. Demonstrate how to model these principals in rating software such as REMrate and Energy Gage

Suggested Presenters: TBD

2010 – 133 Mini split AC design and installation principals

Mini split ACs have many benefits for those interested in maximizing efficiency. (Many of these units are SEER 21 and HSPF 10 and there are no ducts). However, there doesn't seem to be much info on how to best install these in homes with regards to maintaining desired airflow and temperature throughout the house. Also recommend presenter cover testing procedures for programs such as E Star Indoor Air Quality.

Suggested Presenters: TBD

2010 – 134 Solar Hot Air - low cost renewables for all households

After conservation and efficiency, Solar Hot Air panels can provide renewable

energy from the sun, cost-effectively capturing and delivering BTUs into a home to reduce the amount of heating fuel needed. Central Vermont Community Action has worked with solar hot air panels for nearly 30 years, and in this workshop they will share some of their successes along with a few “learning experiences”. Learn how to evaluate the solar potential of a site and estimate the energy savings, plus the ins and outs of solar hot air panel installations.

Suggested Presenters: Paul Zabriskie, EnergySmart of Vermont

2010 – 135 Insulated Vinyl Siding: Latest Research, Testing and Application

This program will review findings of research conducted on insulated vinyl siding, including results from the New York State Energy Research and Development Authority’s (NYSERDA) High Performance Residential Development Challenge, Department of Energy sponsored studies as well as research conducted through the NAHB Research Center. Additionally, members of the industry will provide the latest information on the development of standards and product testing and how insulated vinyl siding can be used to meet the requirements of the energy code.

Suggested Presenters: Matt Dobson, VSI (moderator), Mike Moore, PE, LEED AP, Newport Partners; Alan Hoying, Plygem Industries, Craig Drumheller, NAHB Research Center and Drew Brandt, LEED AP, CertainTeed Corp

2010 – 136 Air Infiltration Prevention – What the test results showed

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.

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

2010 – 137 Seal Fireplace Dampers With Weatherstripping to Conserve Energy

Fireplaces are the largest intentional opening in the home, costing U.S. families over \$6,000,000,000 each year in wasted energy costs. Like a door or window, fireplaces are openings to the outdoors and should be weatherstripped to prevent the loss of heated and/or cooled air. By weatherstripping the fireplace, several

benefits are achieved including improved comfort, energy conservation, reduced energy costs, reduced noise, and improved indoor air quality.

Suggested Presenter: Mark D. Tyrol, P.E. / Fireplace Plug - Battic Door Energy Conservation Products

2010 – 138 Principals of residential ventilation and their role in new and existing homes

Ventilation for indoor air quality, health, comfort and building durability is a key component of tight, energy efficient, new buildings and energy efficient, retrofitted, existing 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.

Suggested Presenter: Paul Raymer, Heyoka Solutions

2010 – 139 Whole-House HVAC Skills for Raters & Inspectors

Detail on HVAC load calc., duct design, duct sealing, ventilation, combustion analysis.....

Suggested Presenter: David Slater, Stream Residential Air and Energy Experts

2010 – 140 Performance of Revised Duct Design, Save Money and Cool Customers

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 with 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 9 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. Lots of photographs, graphs, stories, and useful conclusions.

Suggested Presenters: Bruce Eugene Davis [co-authors Jeff Tiller, Sean Gray, Erica Porras] Appalachian State University, Energy Center

2010 – 141 Air Leakage Effects on Energy Efficiency and HERS Ratings

The effects of air leakage on residential air infiltration are long known, but have recently come under more scrutiny as the industry seeks to increase the stringency of energy codes. This presentation will examine the air leakage reduction that can be achieved by incorporating an external air barrier material into standard construction. The import of this level of air leakage reduction will be discussed in terms of the potential energy savings in different climate zones and the how these energy savings would be reflected in HERS ratings.

Suggested Presenter: Theresa Weston, DuPont Building Innovations

2010 – 142 Measure and Verify AC Load Reduction in A Utility Based Program

Using a simple 3 step process technicians can quickly evaluate, optimize and verify peak AC system performance even in less than ideal conditions. The tools used allow techs to "see the science" and better understand what corrective measures are necessary. Contractors currently using this system in a utility sponsored program are achieving better customer satisfaction, increased sales opportunities as well as compliance with the program goals and objectives. See how the measurement of measure airflow and electrical power contribute to program success by giving contractors immediate feedback as to the effectiveness of their work.

Objective 1: Learn the basics behind good AC good measurements and what they tell you about system performance

Objective 2: Hear how 50 contractors have put these techniques to work to enhance their businesses by reducing their customers' energy bills & improve their comfort.

Objective 3: Learn how one utility has put this program to use to reduce baseload.

Suggested Presenters: Joe Kuonen, CleaResult Consulting and Bill Spohn, TruTech Tools, LTD

2010 – 143 Air Leakage Testing: Quicker Easier & Funner

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.

Suggested Presenter: Colin Genge, Retrotec Energy Innovations Ltd.

2010 – 144 How Spray Foam Simplifies Thermal Bypass Inspections

HERS Raters are increasingly coming across spray foam as an insulating and air sealing component in building envelope assemblies. The purpose of this session will be to illustrate where and how spray foam systems simplify construction processes and by extension inspection requirements. The session will also give pointers as to the key inspection items raters should be noting in their inspection of foam insulation installations.

Suggested Presenter: Paul Duffy, M.A.Sc., P.Eng., Vice President, Engineering Icnylene Inc., Member of Board of Directors of CRESNET

2010 – 145 The Thermal Behavior of Pitched Roofs - Monier Roof Physics Software

Monier's Roof Physics software predicts the transient heat, air and moisture (HAM) transport in the building envelope. It includes all mechanisms of transport and takes full account of the air movement in the construction, including buoyancy and wind driven air flows. The software, developed over several years, has been validated against field and laboratory experiments. Several examples of the use of the software are presented and show the performance of different roof constructions in a range of climates. The results show the influence of solar reflectivity, insulation, ventilation, airtightness and thermal mass on the thermal performance of pitched roofs.

Monier Technical Centre carries out research and development for the Monier Group, which with business operations in 46 countries of the world, is the world's largest producer of pitched roof products. Operating as MonierLifetile in the USA we are active in studying the energy performance of roofs, working closely with Oak Ridge National Laboratory.

Suggested Presenter: Dr Nigel Cherry, Monier Technical Centre Ltd

2010 – 146 Effect of Proper Window Installation on Energy Efficiency

Common industry knowledge is that over 90% of window and door failure (water and moisture intrusion and energy loss) is due to faulty installation, yet there is inadequate control over installation. The 5 barriers in a wall (water, moisture, air, thermal and vapor) need to be properly integrated with the same 5 barriers inherent in every window and door to effect a weather tight, energy efficient installation. This session reviews these principles and techniques based on proven science and field experience.

Suggested Presenter: John H Jervis - Managing Director of AWDI who since 1989 has certified over 7,000 installers, and is the recipient of the only Federally Registered Certification Mark for fenestration installation and Consumer Reports' recommendation for consumers to use their certified installers.

2010-147 Putting Science back into Building Science

How RESNET can integrate the real-world experience of building science investigations into their toolbox

Lots of basic and advanced science is lacking in the toolbox of the Residential Energy Services industry -- AND THIS CAUSES LOTS OF PROBLEMS!!

Consider, that as energy conservation professionals we are

- Not required to measure attic pressure when measuring duct leakage.
- Not clearly or consistently mandated to open or close vents, fireplaces and combustion-air ducts during a blower door test.
- Encouraged to recommend impermeable underlayments for roofs
- Designing Walls and roof systems by "rules of thumb" instead of deeper analysis.
- Bewildered by moisture's direct and indirect effects on human health.
- Promoting Energy Efficiency, largely instead of Control, to maximize Energy Conservation -- despite the fact that Energy Conservation via Control is faster, more cost-effective and less problematic.
- Doing more testing instead of learning how to choose tests based upon customer need.
- Promoting more insulation without concern that this will always lower energy consumption.
- Recommending insulation to be placed where it will raise energy bills and/or create moisture problems.

The public

- Regularly hears recommendations for attic fans
- Installs darks roofs in concert with common building codes.

- Replaces windows to save money.
- Implements government or utility-incentivized weatherization strategies that IGNORANTLY trade lower energy bills for much more expensive termite infestations or asthma.
- Is confused about how to buy/implement Energy Conservation.

I believe these problems result from a set of fundamental deficiencies in the basic (COMMON knowledge) SCIENCE, of how buildings work to provide light, heat, cooling and other comforts for their residents and how those buildings protect themselves and their inhabitants from the natural environment.

Here is a core or summary list that stimulates and significantly spans the issues.

- Incomplete/Inaccurate list of basic principles that drive energy flows in homes.
- Confusing/mixing basic heat flows and their driving forces with that of another.
- Lack of fundamental understanding of the effects of moisture on comfort.
- Fundamental modeling errors for energy flows of buildings.

More specifically, here is a list of commonly-held, but incorrect beliefs that I think are generating wrong-thinking about energy

- Neither Advection nor Evapo-transpiration/Condensation are fundamental heat flow mechanisms.
- Moisture travels in the same direction as Heat.
- Convection models Infiltration.
- Air flows in the same direction as heat.
- All heat flows from regions of higher temperature to regions of lower temperature.
- Pressure has no effect on evaporation.
- Moisture has no effect on R-value.
- Human comfort in cold weather is not affected by humidity.
- One can ignore heat flow from a building to and from the ground.
- The primary heat flows in an attic can be understood via convection and conduction.
- Passing through dew-point is needed for dehumidification.
- High moisture capacity insulation is bad for building durability.
- Insulation on the floor of an attic performs well without air barriers above it.
- High-efficiency lighting does not need special cooling.

My talk will delve into some of these problems and draw connections between the errors in fundamental, scientific thinking and how this wrong-thinking has degraded our professional activities and consequently undermined the best interests of our clients.

Suggested Presenter: Myron Katz, Ph.D., Building Science Innovators, LLC

2010 – 148 *The K-SEC Model . . . safest experiment in the energy industry, today!*

In 1992, I founded the SOLAR DEVELOPMENT COOPERATIVE a for-profit design firm dedicated to mainstream deployment of quality BI-PV Solar Architecture supported by a reliable service industry in the US and global marketplace. In 2005, I released an 875-page book entitled "Electricity BEYOND THE CURVE OF DEREGULATION" to share my experience. When Clint Eastwood had to call a meeting with CA Governor Davis to get his rebate and consumer net metering, my concerns about depending upon fragmented venerable consumers to deploy Building-integrated PhotoVoltaics [BI-PV] were clear. January 2005, I founded the Kansas Solar Development Cooperatives, Inc. a three-phase non-profit deployment program to bring 1,050.5 MWp BI-PV Solar to Kansas by 2020. Find out more about this wonderful \$3.5 Billion opportunity for KS and the US called "The K-SEC Model . . . safest experiment in the energy industry, today!"

Suggested Presenter: Eileen M. Smith, M.Smith, M.Arch., Kansas Solar Electric Co-operatives, Inc.

2010 – 149 *Why Manual J is Just a Good Start*

A Manual-J load calculation is a very important first step to ensuring 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.

Suggested Presenter: Mark Hutchins, Conservation Services Group

2010 – 150 *Raising the Bar: Improving Your HVAC IQ*

In their HERS training, most raters spend only about half a day on HVAC, the majority of which is on right-sizing and testing for duct leakage. Once out in the "real world," many find their HVAC preparation to be woefully inadequate. Or worse, they don't fully understand just how inadequate their HVAC training

actually is. Right-sizing and duct leakage are certainly important, but numerous interrelated issues can crop up and create liability for the rater. For example, a right-sized heating & cooling system must be accompanied by a properly designed duct system. Another is that sealing an undersized duct system can reduce system performance or cause the evaporator coil to freeze up. In this session, we'll explore these topics and more, and open the discussion on how to better prepare HERS raters and auditors to tackle HVAC challenges, especially in light of anticipated changes to the ENERGY STAR New Homes program. We'll also look at the issue from two different perspectives: Allison Bailes became a HERS rater with little background in HVAC and has picked up a lot on his way to becoming a rating provider, whereas David Butler came to the home performance industry from the other direction — as an engineer with significant HVAC experience.

Suggested Presenter: Allison A. Bailes III, PhD, Energy Vanguard and David Butler, Optimal Building Systems, LLC

Commercial Buildings

2010 – 151 COMNET: Supporting Existing Commercial Building Energy Rating Systems

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.

Suggested Presenters: Cliff Majersik, IMT, Courtney Moriarta, RESNET, David Goldstein, NRDC, Nick Zigelbaum, NRDC, and Lane Burt, NRDC

Policy Issues

2010 – 152 Overview of National Climate and Energy Legislation

Energy is again in the forefront of the national policy debate. The House has passed a national energy and climate bill and the Senate is considering similar legislation. This session will guide us through the confusion and debate and spell out the provisions dealing with building energy performance.

Suggested Presenter: Lane Burt, NRDC

2010 – 153 Result of Climate Negotiations at Copenhagen and What It can Mean to Building Energy Performance

The Kyoto Climate Treaty is set to expire in 2012, In 2010 the United Nations will be hosting global negotiations on the successor treaty in Copenhagen, Denmark. There is a concerted push to have the new treaty more effectively address building performance. This session will provide an update to the negotiations and efforts to have the treaty address building energy performance.

Suggested Presenters: Steve Baden, RESNET and David Goldstein, NRDC

2010 – 154 National Energy Efficiency Portfolio Standards

There is increasing support in Congress for requirements that regulated utilities must meet a certain percentage of their demand through energy efficiency and renewable energy. This session will explain the various policy initiatives and explore the implications for improving building energy performance.

Suggested Presenter: Bill Prindle, ICF International

2010 – 155 Efforts to Promote the Labeling of Homes

The European Union requires the energy rating and labeling of a building at the time of sale or change of occupancy. There is interest in Congress and the Obama Administration to set up 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.

Suggested Presenters: Ed Pollock, U.S. Department of Energy, David Lee, EPA, and Lane Burt, NRDC

2010 – 156 Green Jobs and Home Energy Performance

There is great interest in creating a green and sustainable economy. This session will explore the opportunities that the home energy performance can present in the national movement to create green jobs.

Suggested Presenters: To be Determined

2010 – 157 RESNET/BPI/Affordable Comfort/EEBA/Efficiency First – How to Develop an Effective Alliance

There are a number of organizations that have been formed to foster home energy performance through standard setting, accreditation, education and advocacy. Is there a way that these organizations ally and create a single voice for the industry? This session will explore what approaches can be taken.

Suggested Presenters: Larry Zarker, BPI; Steve Baden, RESNET; Helen Perrine, Affordable Comfort; Kathleen Guidera, EEBA; and Matt Golden, Efficiency First

2010 – 158 Energy Efficiency Potential in North Carolina

Consuming over 40% of total energy production, our nation's buildings present one of the biggest opportunities for energy savings. Making our homes more efficient is one of the most effective ways to immediately decrease energy consumption and create jobs, while improving the lives of those who receive services. This presentation will give an overview of what residential energy efficiency can mean for NC in terms of economic and environmental benefits; and give examples of successful programs across the nation, that are making an impact on residential energy use. We'll also discuss the challenges and barriers related to different kinds of efficiency programs, and give potential solutions in the forms of best practices, legislative priorities, and cross-cutting approaches to help move these programs forward; so they can reach more people and save even more energy.

Suggested Presenter: Joan Walker, Mathis Consulting Company

Financing

2010 – 159 National Rebate Program for Improving Building Performance

Congressman Peter Welch (D-VT) has introduced the Retrofit for Energy and Environmental Performance (REEP) that will provide rebates for improving existing buildings energy performance. The REEP bill is included in the House energy and climate bill and enjoys wide support including RESNET, BPI and

Efficiency First. This session will explore the provisions of REEP and define its impact on the building performance industry.

Suggested Presenter: Lane Burt, NRDC

2010 – 160 HUD's Energy Efficient Mortgage Initiative

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 in the mortgage product.

Suggested Presenter: Michael Friedberg, HUD

2010 – 161 EEMs & EIMs – The Next Generation

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

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

2010 – 162 The Latest on Appraising & Lending on Green and Energy Efficient Homes

Propelled by market demand, energy costs, consumer awakening and governmental focus and funds - the advent of a true green mortgage is closer. This session will provide you the most current information on what's happening in appraising and financing green and energy efficient buildings.

Suggested Presenter: Dave Porter, PorterWorks