Energy Codes

(EC-1) 2012 Code: the Good, the Bad, and the Ugly from Maryland, the first state to adopt 2012 IECC
On July 1st 2012, all homes permitted in the state of Maryland were required to meet the stringent IECC 2012 code requirements. After going through the seven stages of grief, builders, Raters, and utilities figured out ways to use the code to each of their respective advantages. This presentation will discuss real world business solutions for raters, compliance options for builders, and methods utilities can use to capture savings above and beyond the 2012 code to keep the program relevant.

Suggested Presenter(s) - Rick Gazica, ICF International

(EC-2) A Feasibility Assessment of the RESNET HERS Index as an Alternative Compliance Path for the IECC
This analysis explores the feasibility of RESNET HERS as an alternative code compliance path by evaluating the impact of certain home elements and the differences between the 2012 IECC and the HERS path, on compliant HERS Indexes.

Suggested Presenter(s) - Vrushali Mendon, Pacific Northwest National Laboratory & Jeremiah Williams, DOE

(EC-3) Air Barrier - Where is it? What is it? Air Barriers should not be a barrier for residential contractors
Air barrier aka Air Control Layer – is it a material or an assembly? Where is it? What is it? Does it change locations? For Northern climates does it matter where on the assembly it should be located? Answers to these questions and the materials most commonly used will be combined to provide a simple clear understanding of the air control layer.
It will cover New Construction and existing structures applications. Recessed can lights, windows, and duct system all have IECC code air leakage requirements, how are they impacting the air control layer.
The presentation will include the most common materials used in assemblies and determine if they function as an air barrier. I will answer the most common question: “Is house wrap an Air Barrier?” I will have my library of materials some are included in interactive props and learning devices that I have created that complete the visual experience. (on display table).
The course will explain the difference between Air Barrier / Vapor Barrier / and permeability.
The presentation will provide guidelines from industry standard including ICC and Air Barrier Association of America and manufacturer requirements.
I will conclude on how to how to test the air control layer and determine the location in the assembly.

*I am not affiliated or represent any of the manufactures or their products.
Learning objectives
#1 Air Barrier defined and applications.
#2 Air Barrier materials and assemblies.
#3 The importance of where the air control layer is in an assembly.
#4 Best practices for testing the Air Barrier and confirming the location.
Industry standard including ICC and Air Barrier Association of America and manufacturer requirements.

Presentation PDF - link [http://db.tt/aO7hkeDr](http://db.tt/aO7hkeDr)

Suggested Presenter(s) - Joe Medosch, EEC llc

(EC-4) Air Leakage Testing: What’s New and What’s Coming?
Energy Codes are moving towards requiring verification for building air leakage performance. To more effectively meet these evolving code requirements, test methods and specifications are also evolving. This presentation will review code requirements for air barrier and air leakage testing in the 2009 IECC, 2012 IECC and what will be in the 2015 IECC. In addition to energy code updates, this presentation will also review progress on ASTM air leakage test method and air barrier specification standards and how they will aid in Energy Code compliance.

Learning Objectives:
- Understand Energy Code air barrier and building air leakage requirements
- Learn air leakage requirement changes coming in the 2015 IECC
- Understand the different air leakage test method standards
- Learn what developments in ASTM air leakage test methods are underway

Suggested Presenter(s) - Theresa Weston, DuPont Building Innovations

(EC-5) BPI’s Transition to ASHRAE 62.2 - 2013
The home performance blogosphere is lit up with chatter over ASHRAE’s 2013 version of 62.2, the mechanical ventilation standard for low rise residential buildings. Due to a change in formula, the 2013 version yields higher ventilation rates than the 2010 version. Debate churns over whether the ventilation rate is too high, whether the infiltration credit in the 2010 version should have been eliminated, whether the 2013 version is right to include alternate methods for calculating minimum ventilation rates.

During this presentation, participants will learn how BPI interprets the new standard, and how it intends to transition to ASHRAE 62.2 - 2013 in all of its standards and certifications. BPI’s process will include a transition period for contractors to obtain training to the new version of the ASHRAE standard and to provide BPI time to upgrade administrative processes to prepare for a full transition.

Suggested Presenter(s) - John Jones, Building Performance Institute

(EC-6) Business Opportunities in Energy Codes and Performance Testing
As building energy codes rapidly advance, performance testing of new homes is poised to become the norm rather than the exception. More than half of U.S. states have implemented the 2009 IECC and several more have adopted, or are slated to adopt, the 2012 IECC in the next few years. Raters can capitalize on this growing market by understanding energy code requirements and how to market their
services to builders. This session will cover air sealing verification and duct leakage requirements of the 2009 and 2012 IECC, including blower door testing, duct testing, and required inspections. This session will also provide guidance on how Raters can turn these requirements into money in their pockets. Energy codes are the new home performance program – don’t be left behind. (If this proposal is accepted, I will find a co-presenter to speak about the rater perspective on the business opportunity that code compliance work represents.)

Mike Turns of Performance Systems Development (PSD) has presented at the Pennsylvania Housing Conference, national and regional ACI conferences, and DOE’s Energy Codes conference. As associate director of the Pennsylvania Housing Research Center at Penn State, Mike has trained hundreds of contractors, design professionals and code officials on energy and mechanical codes. As a senior program manager with PSD, Mike currently manages the Pennsylvania and Ohio Energy Efficient New Homes Programs – builder incentive programs that require ENERGY STAR v3.0 certification.

Suggested Presenter(s) - Mike Turns, Performance Systems Development

(EC-7) Changes to Codes that Affect Hot Water Systems
We are in the middle of the 3-year cycle to develop the 2015 codes for the International Code Council (ICC) and the International Association of Plumbing and Mechanical Officials (IAPMO). By the time of the conference we will know what has been approved for inclusion in the 2015 IECC, IRC and the IPC. We will know what has been proposed for the UPC and for the IgCC. This session will provide an update on the relevant provisions that will affect raters.

Suggested Presenter(s) - Gary Klein, Affiliated International Management LLC

(EC-8) Demystifying the IECC 2012 compliance puzzle, A leadership role for Raters
Many states and municipalities across the country are looking at or have already adopted the IECC 2012 which includes more testing, inspections, and documentation than in previous versions of the code. This session will provide a user friendly explanation of what is in the new code and describe the leadership role that Raters can play to assist builders, trade contractors, architects, and even code officials with successful implementation of the many requirements. The presentation will include a panel discuss to share ideas of what is working in various parts of the country and allow for audience questions about specific issues they may be having in their local area.

Suggested Presenter(s) - Daran Wastchak, D.R. Wastchak, LLC

(EC-9) Energy Code Verification as a Business Opportunity
The 2009, 2012 & 2015 IECC codes contain requirements and options that open the door for HERS Raters and other building professionals to play an important role in the code verification process. However, the codes do not define test standards or required professional credentials. Many states have demonstrated a greater willingness to adopt and enforce these codes if there are clear procedures for training and certifying professionals to meet the builders' needs. States, and RESNET, have taken various paths in response to this situation. Presenters will outline opportunities and discuss the role of advocacy in code adoption. One successful example from Georgia will be discussed as well as an update on progress with standards development organizations.

Suggested Presenter(s) - Sydney Roberts, Southface & Pam Cole, PNNL
(EC-10) Future versions of IECC residential and the RESNET Rater
A look at how IECC will evolve through 2030 and the role of the HERS Rater. The session the direction being taken by DOE and others in evolving the energy code, activity in the building industry that is stimulating demand for the HERS rating and the importance of energy modeling. The importance of health and safety in code enforcement will be emphasized when training 3rd party code inspectors.

Suggested Presenter(s) - Bob Chomko, Building Science Institute Inc

(EC-11) How Raters Benefit from the Testing Requirements in the Newest Energy Codes – Duct and Envelope Tightness (DET) Verification
Over thirty states have now adopted the 2009 IECC or better (e.g., IECC 2012 or state specific), but the degree to which performance testing has been implemented varies widely. Truly high performance homes need to do more than pass code on paper. For the first time the energy codes are requiring this essential testing but still leave many questions unanswered.

Southface helped create a minimum testing certification for Duct and Envelope Tightness (DET) Verifiers. The DET Verifier concept has helped successfully implement the required testing and attempted to answer many of the unanswered questions left vaguely by the code. By rapidly training and certifying hundreds of DET Verifiers, making test equipment available state wide for lease, and educating the code enforcement community, Georgia was able to successfully fend off a code pushback effort. Other states and jurisdictions have adopted the DET concept with similar success.

We’ll also discuss how raters have actually prospered by successfully performing the lion’s share of the testing and have picked up business due to the enforcement of the newest energy codes. By providing options, raters are viewed as a valued path to demonstrate compliance.

Suggested Presenter(s) - Mike Barcik & Bourke Reeve, Southface

(EC-12) Incorporating Drain Water Heat Recovery in the Energy Code
A review of the recent Ontario Energy Code update to include drain water heat recovery (DWHR) as a prescriptive trade off for other energy savings measures will be reviewed along with an update on the progress to recognize DWHR for future IECC inclusion.

Suggested Presenter(s) - Rod Buchalter, Renewability Energy Inc

(EC-13) Selling Performance Based Code Compliance - Raters Perspective
Show successes Energy Diagnostics has had in utilizing Performance based code to drive up sales of ratings and rating packages. Discuss basic pitfalls and methods to be successful. Show raters how to grow their business utilizing the code as the core background.

Suggested Presenter(s) - Matthew Brown & Matt Gingrich, Energy Diagnostics Inc

(EC-14) Testing, Testing 1, 2, 3, (4, 5, 6…); A surge of verification testing in new codes and efficiency standards.
In the past, it was easy to develop a ‘high efficiency’ home applying quick and easy strategies such as increased insulation and higher efficiency mechanical systems. Today, the upper echelon of energy efficiency is relying more and more on HERS verification testing rather than improved equipment. Energy Codes are pushing this change. From ENERGY STAR 3.0, to California’s 2013 Title 24 Standards, to
DOE Challenge Home, to IECC 2012 - verification tests are taking the front seat. The expertise, manpower, and quality control needed to manage increased verification testing has significant implications for the HERS rater’s business model. Join us to learn more about this changing code landscape and how it’s changing the business of HERS rating.

Suggested Presenter(s) - Matthew Christie, TRC Energy Services & Bill Lilly, California Living and Energy

Come hear one man’s journey through the 2015 energy code hearings. The process, the intent, and the juxtaposition between how codes are really used and how and why codes are created. Tantalizing stories about lobbying, camaraderie, technical rigor or not, two minute elevator speeches and more.

Suggested Presenter(s) - Robby Schwarz, EnergyLogic

(EC-16) Time Marches On – Getting Closer to the 2012 IECC!
While the 2009 IECC is currently the most common energy code, as time passes the 2012 IECC is gaining traction, presently adopted in five states and gaining in implementation impact. The 2012 IECC is doable but tough – total duct leakage must be < 4%! Air sealing and insulation demands advanced framing such as insulated headers and corners, must be visually inspected and must be proven tight with a blower door test of < 3 ACH50 for the majority of the country! Finally, intentional whole house ventilation is effectively required but doesn’t completely synch up with ASHRAE 62.2; learn the details and distinctions of this oh so crucial set of new requirements. Remember, the 2012 “minimum” code exceeds ENERGY STAR in several aspects!
This session focuses on the energy code essentials. Participants will know the prescriptive code requirements (good windows and lots of R-value). And we’ll discuss how older simple UA trade-offs, such as REScheck, are limited and somewhat obsolete making way for simulated performance trade-offs such as those performed by HERS raters on a daily basis.
However, even though over thirty states have now adopted the 2009 IECC or better, the degree to which performance testing has been implemented varies widely – true high performance homes need to do more than pass code “on paper”. We’ll share lessons learned as Southface helped create a minimum testing certification for Duct and Envelope Tightness (DET) Verifiers. We’ll also discuss how raters are still successfully able to perform the lion’s share of the testing and have picked up business due to the enforcement of the newest energy code.

Mike and Ray promise to help you stay informed – this stuff is coming!

Suggested Presenter(s) - Mike Barcik & Ray Ivy, Southface

(EC-17) Title: Now Where did I put that Energy Code Resource?
Over the last few years, there has been an increase in the number of available energy codes resources, materials, websites, and whatnot. Wouldn’t it be nice to know what already exists so you don’t have to waste time recreating the wheel, or better yet, know how to find it easily? This session will give a brief overview of the latest versions of the energy code as well as condense the available resources available to consumers, builders, code officials, policy makers, and other interested parties into a quick reference guide.

Suggested Presenter(s) - Roxanne Greeson, Southeast Energy Efficiency Alliance
(EC-18) When a Raters Embraces the Energy Code it’s Good Business!
The fundamentals of building science have been codified and the IECC is now really a building program all in its own. Air flow, moisture flow, and thermal flow. How can we understand the IECC and the Simulated performacne path from a building science perspective to help our Rating businesses grow and be sustainable.

Suggested Presenter(s) - Robby Schwarz, EnergyLogic