Provider:	Energy Center of Wisconsin
Conference:	2013 Better Buildings: Better Business Conference Illinois
Date:	December 10-11, 2013

Session Number (User created)	Session Title:	Total minutes of Instruction:	GBCI Topic Category (Pick one only)	Session Description (100 words):	Learning Objectives (Minimum of three)	Speaker 1 (Name, Company)	Speaker 1 Qualifications/Biography (Limit 100 Words)	Speaker 2 (Name, Company)	Speaker 2 Qualifications/Biography (Limit 100 Words)	Speaker 3 (Name, Company)	Speaker 3 Qualifications/Biography (Limit 100 Words)	GBCI CE HOUR APPROVALS			
												Approved GBCI CE Hours	Is session LEED-specific?	Session meets LEED-specific requirements for the following LEED AP Specialties:	COMMENTS
A1	Air sealing beyond the attic	75		We do a great job of air-sealing in the attic, but what about the rest of the house? Why do our best efforts to reduce CFM readings sometimes fall short of our goals? While correctly focusing on stack-effect, technicians tend to ignore factors like wind and HVAC induced-pressure differentials. This session will address these issues, explain complex and confounding situations, and explore retrofit strategies to reduce uncontrolled air-leakage in places other than the attic.	Learn how to locate and effectively seal a larger selection of air-leak sites; Understand the internal and external dynamics that drive air leakage .Learn how to create living spaces that are more comfortable and energy-efficient; Find out how to generate new revenue streams by expanding the scope of retrofit services	Bob Pfeiffer, WECC	Bob Pfeiffer is a BPI proctor for BA, EP, and WHALCt. He is a production-based trainer and training developer. Bob has been involved in all phases of the retrofit industry since 1976, including work with the Home Performance with ENERGY STAR program and the Low-Income Weatherization Program. His field work infuses his classroom sessions with practical tips and real world experiences.					1			
A2	Energy recovery ventilation in residential and commercial buildings (ERV)	75		With IAQ concerns in every home and building and energy prices in flux, what is an energy professional to do? Energy recovery systems can bring in the code required outside air and save energy doing it. In this session we will discuss Energy Recovery Ventilation (ERV) fundamentals, technology choices, and code requirements. Commercial and residential applications will both be discussed.	Identify key applications appropriate for using energy recovery; Understand the different types of energy recovery equipment; Know when an ERV is required by energy code (it is a lot more frequent than with previous state codes); Understand the relationship between the ERV and the primary HVAC equipment in terms of sizing and interconnectivity	Ryan Hoger, Temperature Equipment Corp.	Ryan R. Hoger, LEED AP, has extensive experience with building automation systems (BAS), energy recovery ventilators (ERV), variable refrigerant flow (VRF), demand controlled ventilation (DCV), and other energy conserving HVAC systems. He was the 2007-08 president of the Illinois ASHRAE Chapter and is actively involved with several ASHRAE and gas/electric utility committees.					1			
A3	The role and viability of third-party residential HVAC design, and the path to performance	75		What if every new home in the country was required to have all mechanical systems designed by a third party in order to obtain a residential building permit? How would that affect HVAC contractors and does it "guarantee" homeowner comfort, fewer call backs and low energy use? These are some of the questions we'll discuss as we weigh the benefits and drawbacks of third-party HVAC design. Come prepared for a lively discussion on the pros and cons of this process and the role that energy codes and certifications have on the residential HVAC industry.	Understand the process of third-party residential HVAC design; Describe the effect of third-party HVAC design on the HVAC contractor's role and responsibilities; Explain the pros and cons of third-party residential HVAC design; Understand the role that energy codes and certification programs play in the residential HVAC industry	Chris Laumer-Giddens, LG Squared, Inc.	Chris provides design and consulting services for new and existing single- and multi-family homes throughout North America. He maintains a blog dedicated to best practices of building science, construction, architecture, and HVAC system design and installation. Chris is a registered NCARB certified architect, Building Science Consultant and Educator, Residential HVAC Designer, Home Energy (HERS) Rater, ENERGY STAR Rater, EarthCraft House Technical Advisor, and LEED AP.					1			
A4	New construction details that make the difference	150		The devil is in the details and it is especially apt for new home construction. Learn the finer points of constructing homes to achieve a high level of energy efficiency and IAQ. These details include stopping thermal breaks, reducing air leakage, bringing ducts into the conditioned space and effectively connecting foundations to wall assemblies and wall assemblies to roof systems. We'll show you practical approaches that use commonly found materials to get the job done right.	Identify framing details that make or break a high performance house; Learn to rank the details that make the most difference when trying to achieve the best value for the dollar; Understand how to provide a continuous air barrier and thermal barrier at critical junctures; Identify ways to manage bulk water and allow for drying potential in foundations, wall assemblies and roof systems.	William Turner, Turner Building Science & Design, LLC	Bill Turner has a proven track record in successfully training building industry professionals on indoor air quality and energy efficiency in the construction and/or renovation of homes and other facilities. Bill focuses on building science and sustainability issues including indoor air quality, moisture, building shell design, net-zero buildings, building commissioning, and forensic evaluations.	David Johnston, David Johnston & Co, Inc.	David Johnston has a proven track record in successfully training building industry professionals on indoor air quality and energy efficiency in the construction and/or renovation of homes and other facilities. He has been building and remodeling energy efficient custom homes for the past 30 years and teaches residential construction techniques to adults.			2.5				
A5	High performance mechanical systems for light commercial buildings	75		Advances in building codes and demands from end users have resulted in high performance building enclosures in the light commercial building sector. With high performance enclosures comes the potential for HVAC strategies that can be simpler, less expensive, more efficient, and easier to maintain and control. Often, this "holy grail" of features is not achieved because mechanical systems are not designed or selected to take full advantage of the high performance endosure. We'll define high performance endosures for light commercial buildings and address heating, cooling, ventilation, dehumidification, zoning, comfort and controls—both existing and emerging solutions.	Define high performance enclosures; Understand the five fundamental, independent requirements of modern HVAC systems; Identify several problems with conventional mechanical systems for light commercial buildings; Learn different options and decision making strategies for selecting mechanical systems.	John Straube, Building Science Consulting, Inc.	John is an educator, researcher, consultant and expert witness on energy efficiency, durability and IAQ. He has been involved in the preparation of design and construction guides for numerous organizations, and has published dozens of technical papers in academic peer-reviewed conferences and journals as well as trade journals and magazines.					1			
A6	Window and door installation practices	75		Ken will demonstrate window and door installations for both replacement and new construction based on ASTM Standard 2112. Become familiar with the concepts of both barrier systems and membrane/drainage systems to ensure the continuity of the building envelope.	Review fenestration product installation materials; Learn installation practices for replacement products; Learn installation practices for new construction products; Understand the final quality control check process.	Kenneth Wiedenfeld, Architectural Testing, Inc.	Ken has been involved with window and door products for more than thirty years. His experience includes sales and service with manufacturers covering several central states as well as a product sales trainer responsible for organizing and delivering seminars across the United States. Ken is an InstallationMasters™ certified instructor.					1			
A7	Will enabled pressure gauges: test faster, smarter and have your results verified over the Internet	75		See blower door test results live – from your office. The new Smart Gauges can communicate with any smart phone and allow code officials or supervisors to see live results and provide a new level of interactive training. Auditors will be able to see the results and control the fan from their phone, without dragging hoses or cables around. Smart Manometers and will communication will become industry requirements.	Learn how to test smarter with more accurate results; Understand how technology can increase production and audit time; See how to verify field results from a remote location; Reduce training time and equipment requirements.	Joe Medosch, Retrotec Inc.	Joe is a comfort consultant and trainer. He provides courses on duct and envelope tightness, the IECC Energy Code and energy efficient building principles to Georgia building officials and contractors. Joe developed and is implementing the new energy management curriculum for use in the Technical College System of Georgia. He is a former energy manager at University of Georgia, Tifton campus and energy management instructor at Moultrie Technical College in Tifton Georgia.					1			
A9	Video marketing for home performance: hands on YouTube workshop	75		Learn to quickly and effectively attract and educate your future clients with online video. In this session, Grace will script, shoot, edit, upload, and advertise a 1-minute video with audience participation. Increase your lead generation, client conversion, and reputation with this simple and ingenious tool.	Understand what should be in your online video; Learn to communicate effectively and charmingly on camera; Watch the streamlined editing and uploading process available with YouTube; Use annotations and advertising to spread your message.	Grace Lunsford, Green Dream Group, LLC	Grace Lunsford is the powerhouse behind Green Dream Group's public relations and video production. As the company's owner, she is focused on improving the quality of new and existing buildings in Chicago through independent, scientific building diagnostics, and in making the city a better place for people in all living situations and all income brackets. Grace presents on business development, branding and marketing, and is an advocate within the national screen actors community. She is also a board member for SAG/AFTRA, the executive producer for Sterling Rock Productions and the founder of the Chicago Acting in Film Meetup.					1			
B1	Combustion safety testing	75		Combustion safety is a critical component of a home's overall safety, especially in high performance homes. This is a Combustion Safety Test (CST) refresher course for Building Analysts and Envelope Professionals. In this presentation, we will discuss CAZ depressurization, as well as the spillage, draft, and carbon monoxide tests as defined by BPI.	Identify venting configurations and their associated depressurization limits; Explain the worst case depressurization procedure according to BPI standards; Explain how each factor contributes to the overall CAZ pressure; Relate the spillage test to the overall CAZ procedure	Joe Konopacki, Insight Property Services, Inc.	Joe Konopacki has more than 20 years of experience with property construction, remodeling, maintenance and management. He is an Illinois-licensed Home Inspector and has inspected a wide range of homes and multi-unit buildings in the Chicago area. Joe is a certified Building Analyst and Envelope Professional through the Building Performance Institute (BPI) and a HERS Rater through the Residential Energy Survey Network (RESNET). He has worked with the Illinois Department of Commerce and Economic Opportunity to provide BPI training in Illinois and established Insight as a BPI training affiliate. Joe has presented on building science topics at industry conferences, for professional groups and homeowners.					1			
B2	Ventilation: sizing and installation for IECC 2012	75		IECC 2012, Energy Star for New Homes, Home Performance with Energy Star for Existing Homes, LEED, NAHB, BPI, RESNET and other certifications/certification bodies require a general knowledge of ventilation systems from both a sizing and installation perspective. Yet, auditors, raters, building code officials, HVAC contractors and many others are left to figure out how to size and prescribe ventilation systems on their own. Learn how to specify the right-sized ventilation system to meet ASHRAE 62.2 and IECC 2012.	Identify four steps to maximize indoor air quality; Learn different methods to meet ventilation requirements of ASHRAE 62.2;Understand the different ventilation methods: exhaust, supply, balanced; Learn how to size and install ERVs or HRVs	Robert Schildgen, Priority Energy	Robert Schildgen has a strong background in residential construction. He is RENET and BPI certified and has audited well over a million square feet of residential space in addition to theaters, day care centers, schools, churches and commercial buildings. Priority Energy was the BPI Quality Assurance team for the City of Rockford's home retrofit initiative sponsored by the Illinois Department of Energy and ARRA. Robert was also one of the consultants to the EPA in formulating Energy Star 3.0 guidelines and has trained and certified countless auditors and builders.					1			
B3	Mechanical systems for low-load housing	75		Building enclosures have improved dramatically (better insulation, better windows and more airtight) resulting in lower peak heating and cooling loads—even in cold climates. In fact, much housing now requires higher output heating devices for domestic hot water than space heating, and annual energy demand for domestic hot water may be larger than space heating. However, conventional heating and cooling equipment isn't sized for these reduced loads. We'll discuss problems with and solutions for low-load HVAC systems.	Define "low load" housing; Identify at least three problems that can arise with mechanical systems in low-load housing; Understand the five independent requirements of a modern functional HVAC system; Learn different options and decision making strategies for mechanical system selection.	John Straube, Building Science Consulting, Inc.	John is an educator, researcher, consultant and expert witness on energy efficiency, durability and IAQ. He has been involved in the preparation of design and construction guides for numerous organizations, and has published dozens of technical papers in academic peer-reviewed conferences and journals as well as trade journals and magazines.					1			
B5	2012 energy conservation code effects on light commercial ventilation equipment	75		Now that changes to the energy code have been made; how do you educate the business owner? The 2012 IECC is designed to increase building efficiency by 20% above the 2009 IECC edition. In order to actually achieve that level of efficiency, greater awareness of the options is necessary. Come to this workshop to explore tools that can help you explain the new requirements. We will review 2012 IECC tables designed to simplify the code requirements when replacing equipment. With a greater understanding of the code comes effective communication of the options, which could put you in a better position to showcase your expertise and demonstrate your leadership.	Determine the climate zone of the space receiving new equipment; Utilize the tables to indicate compliance; Determine the foot notes of the tables for key driven expectations (ie: economizers); Explain building automation and zone control mandates.	Steve Gardner, Building and Fire Code Academy	Steve was a mechanical design professional for more than twenty years and has been a building inspector since 2004. Steve's responsibilities as a Building and Plans Examiner include verifying plans for compliance with the mechanical and energy conservation code.					1			
B6	Sealant concepts for window and door flashing applications	75		Learn how and why sealants and membranes are used with window and door flashing installations. We will demonstrate the use of sealants with flashing applications and how they are a critical component for the prevention of water and air entry to promote durability and energy savings for the building envelope.	Define specific sealant characteristics and performance; Identify distinct sealant applications for window and door flashing installations; Illustrate the do's and dont's when applying sealants; Demonstrate the use of sealants and membranes during installations.	Thomas Harris, Henkel Corporation	Tom has more than 30 years of experience in the window and door industry. He has been a sales and service manager for window, door and skylights and a window and door installation contractor. Tom is an InstallationMasters™ instructor and installation trainer for the OSI WINTaQ window and door flashing systems.					1			
B9	Proactive transactions: sales and service training for energy efficiency professionals	75		Have you conducted two similar audits on the same day only to have one result in work while the other couldn't end fast enough? If so, this session is for you. While you may provide a technically accurate home assessment, you also need skills that encourage customers to follow through on recommendations and understand why they are effective. Participants will learn how emotional intelligence can positively affect technical delivery, and in turn increase conversion rates. This course was built specifically for professionals in this industry using CSG's 29 years of experience in the field.	Understand why many contractors struggle with the nuances of selling home performance; Tailor communication based on the customer's style to connect effectively and build trust; Determine a customer's emotional state at multiple points throughout the home assessment; Communicate the benefits of residential energy efficiency to the customer during the home assessment and reinforce them at the close	Kevin Farrell, Conservation Services Group	Kevin Farrell oversees training for CSG's program staff and trade allies, as well as corporate learning and development training for managers and employees. He is known for his wit and engaging delivery style and has earned global recognition with a Brandon Hall Excellence in Learning Award for Best Innovation in Learning Technology. He holds an MBA from Suffolk University.					1			
C1	Become a building enclosure control freak	150		Building enclosures separate conditioned space from unconditioned spaces. They are responsible for controlling the flows of moisture, air, and heat. When the control layers are designed and installed properly, the results are comfort, healthfulness, durability, and energy efficiency. When control layers are done improperly, those qualities are compromised. In this half-day workshop, we'll take a close look at control layers as well as some of the common control layer problems and solutions in buildings.	Describe the components of the building enclosure and their roles; Describe the main techniques for controlling liquid and vapor forms of water; Learn the details of controlling air leakage at key points in a building enclosure; Explain how different types of insulation satisfy the requirements of one or more control layers.	Allison A Bailes III, Energy Vanguard	Allison Bailes writes the Energy Vanguard Blog in which he covers everything from building science fundamentals to HVAC particulars to big-picture topics like energy security and peak oil. He also authors a weekly column at Green Building Advisor and a monthly column for ACCA's home performance newsletter for contractors. Additionally, Dr. Bailes has a PhD in physics, many years of teaching experience and ran a home performance contracting business.					2.5			
C2	Spray foam insulation: what to use, when, and how	75		Spray foam insulations are neither the universally right choice nor the wrong one to every insulating/air sealing situation. We'll take a comprehensive look at spray foam insulations, including their hygrothermal properties, environmental impacts (blowing agents and flame retardants), health and safety considerations, application issues (such as temperature), and code considerations. We'll also take a look at the same considerations for alternative insulating/air sealing materials/systems.	Identify the pros and cons of spray foam insulations; Distinguish among different types of spray foam insulations, based on their strengths and weaknesses; Evaluate alternatives to spray foam insulations; Become fully informed about spray foam insulation.	Peter Yost, BuildingGreen, Inc.	Peter has been building, researching, teaching, writing, and consulting on high performance homes for more than twenty-five years. His expertise ranges from construction waste management and advanced framing to energy efficiency and building durability. In addition to his responsibilities at GreenBuildingAdvisor.com, Peter is an instructor for the Boston Architectural College's Sustainable Design Certificate program and an adjunct faculty member of the University of Massachusetts Department of Building Materials and Wood Technology program in Amherst.					1			
C3	Illinois energy code for residential HVAC	75		The state of Illinois began following the 2012 International Energy Conservation Code (IECC) earlier this year. There are many new requirements for residential new construction, as well as existing homes. Some of these have had a very profound effect on the HVAC system installation, such as load calculations, duct sealing and insulation, duct leakage performance testing, programmable thermostats, mechanical ventilation, etc. We will review each HVAC requirement in detail and discuss solution strategies.	Understand when the code is applicable and how it is enforced; Learn the major differences between IECC 2009 and 2012; Know the state rules for heating and cooling load calculation (Manuals J and S) requirements; Understand the new performance-based compliance testing requirements for duct and envelop sealing.	Ryan Hoger, Temperature Equipment Corp.	Ryan R. Hoger, LEED AP, has extensive experience with building automation systems (BAS), energy recovery ventilators (ERV), variable refrigerant flow (VRF), demand controlled ventilation (DCV), and other energy conserving HVAC systems. He was the 2007-08 president of the Illinois ASHRAE Chapter and is actively involved with several ASHRAE and gas/electric utility committees.					1			
C4	Ventilation product and control options	75		As construction practices improve and new homes become tighter and more energy efficient, it is imperative that ventilation best practices are employed to control moisture levels and improve indoor air quality. This skill building workshop is designed to help residential building professionals learn how to effectively ventilate homes. Joe will bring a variety of ventilation systems for you to compare features and measure airflow with different duct configurations.	Identify appropriate ventilation equipment for your applications; Employ airflow testing to ensure ventilation efficiency; Discuss duct system design and when sizing is important Learning objective; Choose the latest control strategies for their particular application	Joe Nagan, Home Building Technology Services	Joe provides design evaluations, construction management and building failure analysis. He is certified in residential mechanical ventilation design and installation and advanced building science. Joe provides support and training as the technical director for the Focus on Energy New Homes Program.					1			
C5	Deep energy savings in multifamily buildings	75		Energy efficiency retrofits in multifamily buildings create benefits to building owners, managers, tenants, and contractors alike. Learn how the Energy Savers Multifamily program connects contractors and multifamily building owners to implement energy efficiency improvements. We'll present savings analyses on retrofitted buildings to help contractors make the case for building owners to invest in highly cost-effective energy conservation measures. Find out about current rebate offerings and their applications, other sources of energy efficiency grant funding and financing options, such as on-bill financing.	Identify energy efficiency improvements that generate deep savings; Discover unique strategies for selling energy efficiency investments to multifamily owners; Understand how energy efficiency upgrades can improve tenant comfort and increase building occupancy; Learn where to find expert assistance, low-cost financing, and other funding sources to make energy efficiency projects easy and affordable.	Jason Ransby-Sporn, CNT Energy	Jason manages a team of analysts who provide free building energy assessments as part of the Energy Savers Program. His responsibilities include identifying the most cost-effective efficiency measures, overseeing construction, and ensuring quality control. Jason works one-on-one with building owners to put together a custom financing package for retrofit work which may include low-cost loans, utility rebates, and grant support.					1			
C6	Window and door installation practices	75		Ken will demonstrate window and door installations for both replacement and new construction based on ASTM Standard 2112. Become familiar with the concepts of both barrier systems and membrane/drainage systems to ensure the continuity of the building envelope.	Review fenestration product installation materials; Learn installation practices for replacement products; Learn installation practices for new construction products; Understand the final quality control check process.	Kenneth Wiedenfeld, Architectural Testing, Inc.	Ken has been involved with window and door products for more than thirty years. His experience includes sales and service with manufacturers covering several central states as well as a product sales trainer responsible for organizing and delivering seminars across the United States. Ken is an InstallationMasters™ certified instructor.					1			
C9	Enhancing the learning environment for visual learners	75		Discover innovative strategies for training a workforce that is primarily hands-on and visual in their learning style. Trainers and curriculum developers will learn both high-tech and low-tech methods to enhance training in the classroom, labs, and field.	Use Projected Overlay Presentations (POPs) to enhance existing training props; Apply PowerPoint animation features to improve training sessions for visual learners; Learn how to convert abstract concepts into visual displays; Synchronize story-telling and visual animations to enhance memory retention.	Dale Sherman, EnergyWright	Dale Sherman has been involved with measuring and understanding energy use in buildings for more than 25 years. He applies his diverse experiences, in electronics, hang gliding and skiing instruction, and weatherization research and development, to create energy education tools for school and college classrooms, science education centers, and energy training centers. Dale developed the interactive instrumentation used in the New York State Weatherization Directors Association Training Center state-of-the-art pressure house.					1			

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D2	Duct testing and sealing demonstration	75		IECC 2012 establishes the new mandatory standards for duct leakage in new construction. These metrics are ambitious and can be challenging unless you're prepared. Learn how you can meet IECC 2012 by knowing ahead of time where to spend your time, effort, and materials. In this demonstration, we will walk through the testing procedure, step-by-step. We'll start with a leaky duct system and watch the reduction in real time as various materials are applied.	Understand the IECC 2012 requirements for new home construction and how to calculate them; Learn how to prioritize duct sealing efforts to reduce leakage most effectively; Compare the effectiveness of various sealing methods, materials, and areas of leakage; Understand the duct leakage test procedure and how it fits into the overall construction/renovation process	Joe Konopacki, Insight Property Services, Inc.	Joe Konopacki has more than 20 years of experience with property construction, remodeling, maintenance and management. He is an Illinois-licensed Home Inspector and has inspected a wide range of homes and multi-unit buildings in the Chicago area. Joe is a certified Building Analyst and Envelope Professional through the Building Performance Institute (BPI) and a HERS Rater through the Residential Energy Survey Network (RESNET). He has worked with the Illinois Department of Commerce and Economic Opportunity to provide BPI training in Illinois and established freight as a BPI training affiliate. Joe has presented on building science topics at industry conferences, for professional groups and homeowners.					1			
D3	Time to vent: HVAC experts on energy efficiency opportunities	75		The HVAC industry is uniquely positioned to provide deeper energy savings to homeowners while expanding service capacity. Three industry experts will address energy and municipal codes, third party testing and verification, performance testing and pressure diagnostics, and the transition to home performance. Have your questions answered about energy efficiency in the HVAC industry that goes beyond the installation of new equipment.	Learn how to add additional energy efficiency services to your HVAC business; Understand the issues associated with installing condensing furnaces in Chicago; Discover one contractor's path from HVAC to whole-home services; Learn how performance testing and pressure diagnostics can increase customer satisfaction	Will Baker, Midwest Energy Efficiency Alliance	Will is responsible for managing MEEA's residential energy efficiency programs, including Illinois Home Performance with ENERGY STAR and HVAC SAVE. He is passionate about urban sustainability and energy access issues. Will has a BA in Economics & International Relations from Michigan State University and an MPA in International Energy Management and Policy from Columbia University.	Tim Hanes, ESI, Inc.	Tim has been working in the energy efficiency world for the past 14 years. As a RESNET certified rater, Tim specializes in the whole house approach to energy efficiency. He consults with industry professionals on field testing and analysis of HVAC systems. Tim is a certified geothermal installer and a member of the Iowa Ground Source Heat Pump Association (IGSHPA). He is a trainer for National Comfort Institute and frequently speaks at energy efficiency related conferences and events around the country.	Bill Semlekol, ACCA Illinois State Chapter	Bill has managed all the operations of Duo-Temp, Inc. including strategy development, P & L accountability for back-office operations, field technicians, customer service, accounting, recruitment and training. Bill directed a staff of administrative and sales representatives and field technicians in both the service and installation departments. He is currently the executive director of the ACCA Illinois State chapter and is a licensed home inspector in the state of Illinois.	1			
D4	Understanding moisture dynamics in residential construction	75		Moisture and energy control are two critically important aspects in residential construction. Energy efficiency is required to achieve acceptable comfort and operating costs for homeowners. Moisture control is required both for occupant health and comfort as well as the integrity and durability of the structure. We'll cover the dynamics of moisture movement to understand how to minimize moisture issues through proper design and to properly diagnose any issues that may occur. Discover helpful tools and techniques for dealing with moisture issues.	Understand the dynamics of moisture movement in residential walls; Learn what governs the direction and rate of moisture vapor flow through a wall assembly; Understand the moisture performance of residential wall assemblies and the priorities for moisture control; Discover improved methods for moisture control	James Wells, Tremco Barrier Solutions	James Wells has been in industrial research and development of construction materials since 1981. He has had diverse opportunities to develop both a theoretical understanding of building science, and practical understanding of the performance of building systems. Jim's work includes roofing, insulation, the building envelope, waterproofing, and common construction practices, with a focus on moisture and energy performance and control.					1			
D5	Breaking into the small commercial/industrial market segment	75		Learn how to successfully engage the hard-to-reach small commercial/industrial market and get these businesses to participate in energy efficiency programs. Find out how these businesses think, act, and react to gain perspective on the techniques HVAC and electrical contractors can use to sell energy efficiency to this sector. Anna will discuss what a typical project looks like, what information a customer needs, how to talk about payback and how to break into this market.	Understand what a typical small commercial/industrial customer looks like; Describe what a typical small commercial/industrial energy-efficiency project entails; Learn tools and techniques for presenting and discussing the financial case for energy efficiency; Identify steps to successfully engage small commercial/industrial customers.	Anna Selgert, Nexant, Inc.	Anna collaborates with marketing, outreach, and program and trade ally management professionals to deliver innovative ideas for engaging the small commercial/industrial market segment. She conducts outreach, manages the trade ally network and plans pilot projects for utility energy efficiency programs implemented by Nexant in Illinois.					1			
D7	Multifamily blower door best practices and innovations	75		Occupied multi-family buildings have restrictions which may only allow testing of small portions of the building at one time. Learn how to locate air leakage paths using just one gauge to locate pressure imbalances and then using two blower doors running on automatic. Demonstration will show how multiple fans and pressure gauges can now communicate over Ethernet cables allowing all the test fans and other diagnostic tools to be controlled and data logged from one location. The leakage of entire buildings can be measured this way. The data from some of the world's largest buildings will be presented. This live demonstration will show how to control multiple fans and record all the data. New software, records Baseline data, runs the fans, shuts them off and records thousands of data points automatically and does so without having to be an engineer or software guru. The software makes all the decisions; even allows you to accommodate accidental door openings in the middle of the test. Retrotec proudly promotes Universal Training that focusses on the principals of testing rather than how to use one brand of equipment. Generic demonstrations, trainings and presentations and new learning methods are featured as is live on line support that allows the trainer or support person to take over the operation of equipment via the internet or to analyse time and date stamped data to verify compliant procedures.	Learn how to locate leakage paths in individual units; Find out how to test units with limited access; Understand what can be tested in multi-family and large buildings and how to test; Learn how to run an unlimited number of test fans automatically.	Joe Medosch, Retrotec Inc.	Joe is a comfort consultant and trainer. He provides courses on duct and envelope tightness, the IECC Energy Code and energy efficient building principles to Georgia building officials and contractors. Joe developed and is implementing the new energy management curriculum for use in the Technical College System of Georgia. He is a former energy manager at University of Georgia, Tifton campus and energy management instructor at Moultrie Technical College in Tifton Georgia.	Corbett Lunsford, Green Dream Group, LLC	Corbett Lunsford founded the Green Dream Group's Building Performance Workshop (a BPI Testing Center) and hosts the Building Performance Podcast. He authored Home Performance Diagnostics: the Guide to Advanced Testing, developed the curriculum for the Chicago Southland EPA Brownfields Job Training Program and performed hundreds of comprehensive home performance analyses. Corbett is Executive Director of the Illinois Association of Energy Raters and Home Performance Professionals.					1			
D9	ENERGY STAR version 3.0 made easy	75		Ross Anderson of Residential Science Resources will go over the requirements, challenges, and benefits of ENERGY STAR version 3.0 certification for new homes.	Learn the fundamentals of ENERGY STAR New Homes; Understand the differences between versions 2.0, 2.5, and 3.0; Find out what the challenges are with version 3.0, how to overcome them and avoid pitfalls; Learn what the certification requirements are for HVAC and building contractors	Ross Anderson, Residential Science Resources	Ross Anderson has more than10 years of experience in the building industry as a new construction and remodeling project manager. He has managed projects of all sizes ranging from small residential remodel projects to medium sized commercial projects. Ross serves on the Education committee of MN Greenstar and has presented at the Duluth Energy Design Conference, the Builders Association of the Twin Cities (MN), and the Rochester Area Builders Association (MN). He has had a key role in designing and training for the Nicor Gas and Commonwealth-Edison joint-sponsored Residential New Construction Program in the Greater Chicago area.					1			
E2	Insulating and air sealing best practices	150		Air sealing techniques including dense packing loose fiber insulation into closed cavities can increase comfort and lower energy costs. If not done properly, though, they can create problems. Through lecture and demonstration, Keith will show you air sealing and insulating techniques that get the best results time and time again.	Understand the common installation mistakes that affect insulation performance; Learn proper techniques when dense packing sidewall insulation; See best practice air sealing techniques for a wide variety of attic penetrations; Learn quality control techniques that ensure effectiveness of installed air sealing measures.	Keith Williams, Building Services and Contultant, LLC	Keith is a certified Home Performance specialist, certified Building Performance Institute building analyst and shell specialist, Residential Energy Services Network-certified energy rater and carbon monoxide analyst, and a licensed rental unit energy efficiency compliance inspector in Wisconsin. He provides residential energy related home performance consulting services and gives classroom and in-field, hands-on training in building diagnostics and improvements.					2.5			
E3	Inverter technology: a new generation of heat pumps	75		A new generation of heat pumps is emerging due to the adoption of inverter technology. These systems are capable of heating at close to full capacity with outside temperatures far below freezing. Dual fuel systems are now a cost-saving option for homeowners in colder climates. Join us to learn about the technological advancements that are making heat pumps a viable option in northern climate zones. Several examples will be discussed in detail and compared with the most common HVAC systems being installed today, leading to a better understanding of how heating and cooling costs can be reduced with the more efficient new dual fuel systems.	Introduce and explain inverter technology and how it affects heat pump operation; Compare and contrast different solutions for providing heating and cooling in northern climates; Provide a better understanding of how various HVAC systems impact relative fuel costs; Communicate the benefits and advantages of integrating new heat pumps into contractors' existing home performance offerings.	Kevin Johnston, Conservation Services Group	Kevin Johnston is a program manager for the Ameren Illinois ActOnEnergy® residential energy efficiency programs. He manages two programs designed to reduce therm and kilowatt-hour usage. The programs promote the replacement of inefficient gas and electric HVAC equipment and the reduction of energy usage in multifamily facilities. Kevin studied HVAC/R technology at Pennco Tech Institute and ERG Training Center in New Jersey. He is a BPI-certified Building Analyst and Envelope Professional, as well as NATE certified in seven categories.					1			
E4	Insulation and air sealing for new construction: achievable, reasonable high performance	75		How much, if at all, should we insulate and air seal above code? Where is the sweet spot balancing energy efficiency, moisture management, cost, and client performance expectations? We hear a lot about all sorts of insulating/air sealing systems and approaches but which ones are robust, achievable and reasonable? We'll take a look at the full spectrum of insulation and air sealing in the context of first cost, value, and "buildability."	Evaluate insulation and air sealing systems based on cost, value, and "buildability"; Consider the difference between payback and value transfer in the selection of R-value and air tightness; Understand the contribution of design, specifications, and construction to the ultimate thermal performance of a home or building; Learn how to include moisture considerations as well as thermal performance when selecting insulation and air sealing systems for new construction	Peter Yost, BuildingGreen, Inc.	Peter has been building, researching, teaching, writing, and consulting on high performance homes for more than twenty-five years. His expertise ranges from construction waste management and advanced framing to energy efficiency and building durability. In addition to his responsibilities at GreenBuildingAdvisor.com, Peter is an instructor for the Boston Architectural College's Sustainable Design Certificate program and an adjunct faculty member of the University of Massachusetts Department of Building Materials and Wood Technology program in Amherst.					1			
E5	Energy efficient retrofit solutions for two-pipe steam systems in multifamily buildings	75		Learn comprehensive strategies for improving the efficiency and comfort of buildings heated by two-pipe steam systems from both a programmatic and technical standpoint. While two-pipe steam represents a smaller share of the building stock in the Chicago area than do single-pipe or even hydronic heating systems, the size and age of buildings with two-pipe systems, as well as the potential for converting to hydronic systems suggest considerable potential for savings exists.	Describe the most cost-effective retrofit strategies for two pipe steam systems; Outline the technical feasibility and potential savings for converting two-pipe steam to hydronic; Evaluate the cost-effectiveness of two-pipe steam measures such as trap or vacuum pump replacement; Discuss current incentives available for two-pipe steam retrofits, and how those offerings might be expanded.	Nathan Brown, CNT Energy	Nathan provides energy efficiency services for owners of multifamily buildings. He has been involved in every phase of steam system retrofits, from on-site assessments, to performing utility bill analysis and building energy modeling, to arranging project financing, and engaging with staff from rebate incentive programs. Additionally, Nathan managed the data collection in multifamily for a project assessing the technical potential for energy retrofits in the Chicago market.					1			
E6	Sealant Concepts for Window and Door Flashing Applications	75		Learn how and why sealants and membranes are used with window and door flashing installations. We will demonstrate the use of sealants with flashing applications and how they are a critical component for the prevention of water and air entry to promote durability and energy savings for the building envelope.	Define specific sealant characteristics and performance; Identify distinct sealant applications for window and door flashing installations; Illustrate the do's and dont's when applying sealants; Demonstrate the use of sealants and membranes during installations.	Thomas Harris, Henkel Corporation	Tom has more than 30 years of experience in the window and door industry. He has been a sales and service manager for window, door and skylights and a window and door installation contractor. Tom is an InstallationMasters™ instructor and installation trainer for the OSI WINTeQ window and door flashing systems.					1			
E9	Rapid-fire case studies from the 2013 GreenBuilt Home Tour	75		This fast-moving engaging session will profile some of Chicagoland's leading homes from the successful first GreenBuilt Home Tour. Hear from seven project teams in this "Pecha/Kucha" style session that will present key design and construction details. Case studies include homes that achieved certifications including ENERGY STAR, LEED for Homes, NGBS, and Passive House and more.	Learn about Chicagoland's annual green home tour; Understand the basic differences in third-party certified homes; Identify construction techniques used in high-performance homes; Compare homes using performance-based metrics	Jason La Fleur, Alliance for Environmental Sustainability	Jason La Fleur directs education programs and helps project teams throughout the upper Midwest build third-party verified green homes that meet LEED and ENERGY STAR standards. Additionally, he chairs the US Green Building Council (USGBC) Illinois chapter's Residential Green Building committee. Jason speaks frequently on residential green building, and was the 2010 recipient of the USGBC Illinois chapter's "Green Speak" Award.					1			
F1	The evolving building science behind R-value	75		We all know that R-value is a measure of a material's resistance to conductive heat flow. But did you know that in many insulation types the R-value gets better as the outdoor temperature drops? What factors, other than installation, affect insulation performance? We'll look at the parameters that can change the R-value of insulation, how the common insulation types are affected, and how to adapt your specifications to get the best performance from your insulated building assemblies.	Define R-value; Describe why R-value is not a constant; List the main factors that affect R-value; Describe the R-value characteristics of different types of insulation materials.	Allison A Bailes III, Energy Vanguard	Allison Bailes writes the Energy Vanguard Blog in which he covers everything from building science fundamentals to HVAC particulars to big-picture topics like energy security and peak oil. He also authors a weekly column at Green Building Advisor and a monthly column for ACCA's home performance newsletter for contractors. Additionally, Dr. Bailes has a PhD in physics, many years of teaching experience and ran a home performance contracting business.					1			
F3	Total system efficiency	75		The actual efficiency of the heating and cooling system is defined as the product of both the furnace/AC and the duct/distribution system. By neglecting the distribution system, furnace and AC upgrades often fail to provide the projected energy savings. We'll cover testing and improvements to the heating and cooling distribution system. Also, IECC 2012 duct testing requirements for new homes and existing home retrofits and the stricter Energy Star 3.0 standards, auditors and raters will benefit from increased duct/distribution system testing and diagnosis.	Learn how to use prescriptive and performance-based testing to determine duct and HVAC system efficiency; Calculate total system efficiency by including HVAC and duct system; Learn how to test the duct/distribution system for IECC, Energy Star and other energy efficiency standards; Understand how to make duct/distribution system improvements using mastic, aerosol and duct insulation methods.	Robert Schildgen, Priority Energy	Robert Schildgen has a strong background in residential construction. He is RENET and BPI certified and has audited well over a million square feet of residential space in addition to theaters, day care centers, schools, churches and commercial buildings. Priority Energy was the BPI Quality Assurance team for the City of Rockford's home retrofit initiative sponsored by the Illinois Department of Energy and ARRA. Robert was also one of the consultants to the EPA in formulating Energy Star 3.0 guidelines and has trained and certified countless auditors and builders.					1			
F4	Pathways to compliance with the 2012 IECC	75		Get an overview of the 2012 IECC and learn an easy to understand approach to pathways for compliance. In this presentation, geared for designers, builders and code enforcement officials, we'll present overviews of the requirements to comply with the code and each compliance path as well as tips to help ensure smooth plan review and legitimate code compliance.	Understand the paths to comply with the IECC; Know what documentation should be submitted for permits and certificate of occupancy; Understand the IECC air sealing measures and ways to comply with the code requirements; Understand the IECC duct and mechanical system requirements and how to comply with the code.	Matthew Brown, Energy Diagnostics, Inc.	Matthew has been involved in the code compliance and code creation field since 2004 and has been teaching classes on the energy codes in Illinois, Indiana, and Michigan since 2009. He has extensive knowledge of each state's energy code, building codes and amendments. In 2010 Mathew became a Certified HERS Rater and ICC certified residential energy specialist, then in 2012 he became a Quality Assured Professional technical trainer for HVAC contractors.					1			
F5	How is multifamily building air leakage different from single family homes?	75		What steps are required to transition from single family home to multifamily building air leakage reduction work? Currently one of the steepest learning curves in building science, John and Don will address multifamily air leakage reduction challenges in comparison to single family homes including greater air leakage volume, and varied multifamily construction methods and styles, as well as building configurations and ventilation systems. Detailed real-world examples of multifamily building leakage reduction strategies, approaches, testing and quality assurance will demonstrate multifamily building air sealing successes and failures. Clearly illustrating actual situations, this presentation will cover everything from setting up to test to verifying the results of multifamily building air sealing work.	Identify air sealing and ventilation strategies that differ from single family homes; Describe how to conduct blower door testing in multifamily buildings; Discuss multifamily air sealing strategies that work and don't work; Explain how to ensure quality air sealing work is completed in a multifamily building.	Don Hynek, Wisconsin Division of Energy Services	Don Hynek, MPA, is a specialist in multifamily blower door testing and multifamily energy and building performance programs. His extensive apartment and condo research and training work has supported Wisconsin's and the U.S. Department of Energy's ENERGY STAR and Rebuild America programs to deliver durable, safe, comfortable and energy efficient buildings to Wisconsin's residents. Don is a field monitor for weatherization agencies in central and northeastern Wisconsin. He provides technical feedback to agencies on their weatherization work and assists weatherization agencies in developing their technical capabilities. Don holds a bachelor's degree in political science, a master of public affairs degree from the University of Wisconsin–Madison, and a certificate from the energy analysis program at the Nelson Institute for Environmental Studies, University of Wisconsin–Madison.	John Porterfield, eZing, Inc.	John Porterfield has extensive building science experience. As vice president of eZing, Inc. John offers independent guidance on best practices and energy performance testing. He also serves as an owner representative during installation, specification and energy auditing. John is on the editorial advisory board of Home Energy Magazine, a subject-matter expert for the test instrument for the National Renewable Energy Laboratory Energy Auditor Certification . John is author of How to House Doctor, the first systematic guide to use blower door and infrared imaging to detect and correct building energy efficiency defects.					1			
F7	Wifi enabled pressure gauges: test faster, smarter and have your results verified over the Internet	75		See blower door test results live – from your office. The new Smart Gauges can communicate with any smart phone and allow code officials or supervisors to see live results and provide a new level of interactive training. Auditors will be able to see the results and control the fan from their phone, without dragging hoses or cables around. Smart Manometers and wifi communication will become industry requirements.	Learn how to test smarter with more accurate results; Understand how technology can increase production and audit time; See how to verify field results from a remote location; Reduce training time and equipment requirements.	Joe Medosch, Retrotec Inc.	Joe is a comfort consultant and trainer. He provides courses on duct and envelope tightness, the IECC Energy Code and energy efficient building principles to Georgia building officials and contractors. Joe developed and is implementing the new energy management curriculum for use in the Technical College System of Georgia. He is a former energy manager at University of Georgia, Tifton campus and energy management instructor at Moultrie Technical College in Tifton Georgia.					1			
F9	Navigating energy efficiency programs and certifications	75		There are many energy efficiency programs and certifications available today - RESNET, BPI, NATE, etc. It can be hard to navigate this landscape, so let us help you find your path by looking at the big picture. In this panel discussion, we gather a diverse group of experts to compare several common certifications and programs. Find out their requirements and benefits, but most importantly, find out which ones work best for you.	Learn the history of today's certifications to understand how they will impact construction in the future; Identify key differences and similarities among several of the certifications available; Understand the focus, scope, benefits, and requirements of many of these certifications; Identify which certifications are most applicable to you, then design the best career paths to meet your business needs.	Corbett Lunsford, Green Dream Group, LLC	Corbett Lunsford founded the Green Dream Group's Building Performance Workshop (a BPI Testing Center) and hosts the Building Performance Podcast. He authored Home Performance Diagnostics: the Guide to Advanced Testing, developed the curriculum for the Chicago Southland EPA Brownfields Job Training Program and performed hundreds of comprehensive home performance analyses. Corbett is Executive Director of the Illinois Association of Energy Raters and Home Performance Professionals.	Joe Konopacki, Insight Property Services, Inc.	Joe Konopacki has more than 20 years of experience with property construction, remodeling, maintenance and management. He is an Illinois-licensed Home Inspector and has inspected a wide range of homes and multi-unit buildings in the Chicago area. Joe is a certified Building Analyst and Envelope Professional through the Building Performance Institute (BPI) and a HERS Rater through the Residential Energy Survey Network (RESNET). He has worked with the Illinois Department of Commerce and Economic Opportunity to provide BPI training in Illinois and established freight as a BPI training affiliate. Joe has presented on building science topics at industry conferences, for professional groups and homeowners.					1			
Pre-con	ACCA approved residential load calculations	225		Learn how to select the correct construction values when entering data in ACCA approved load calculation software. Find out how to enter NFRC-rated glass as well as how to determine generic values. We'll complete several examples during this training. This will be a hands-on class so please bring a Windows-based laptop with a mouse. Demo software will be available to use.	Select correct construction values for an accurate ACCA MJ8 load calculation; Understanding Adequate Exposure Diversity (AED) in MJ8; Learn why it's important to include internal loads as well as ventilation calculations; Complete an accurate ACCA approved residential load calculation	Jerry Faw, Adtek Software Company	Jerry has successfully operated a HVAC, plumbing, and electrical company for more than 40 years. For more than 20 years he has been creating software for this industry that is not only practical, but also professional and easy-to-use in the field.					3.5			

Provider:	Energy Center of Wisconsin											GBCI CE HOUR APPROVALS			
Conference:	2013 Better Buildings: Better Business Conference Illinois														
Pre-con2	Renovations: achieving major reductions in energy use and improving indoor air quality	225		This session will address both energy efficiency and indoor air quality for residential renovations and new construction. Learn the building science behind energy efficiency and healthy indoor air quality construction concepts. We'll discuss details related to foundations, walls, roofs, ventilation, heating and cooling.	Recognize conditions related to energy use and indoor pollutants; Identify both energy efficiency drivers and good indoor air quality drivers; Trainers will cover building science & constructions details related to foundations, walls, roof, ventilation, heating,& cooling; Participants will participate in small group case study evaluations and present results.	David Johnston, David Johnston & Co, Inc.	David Johnston has a proven track record in successfully training building industry professionals on indoor air quality and energy efficiency in the construction and/or renovation of homes and other facilities. He has been building and remodeling energy efficient custom homes for the past 30 years and teaches residential construction techniques to adults.	William Turner, Turner Building Science & Design, LLC	Bill Turner has a proven track record in successfully training building industry professionals on indoor air quality and energy efficiency in the construction and/or renovation of homes and other facilities. Bill focuses on building science and sustainability issues including indoor air quality, moisture, building shell design, net-zero buildings, building commissioning, and forensic evaluations.			3.5			