

BPI Building Analyst Training



October 26-30, 2009

Sponsored by: **Energy Efficiency Arkansas***

Provided by: **Kansas Building Science Institute**

Location: **Fort Smith, Arkansas**

Golden Living Corporate Headquarters

1000 Fianna Way, Fort Smith, AR 72919 (479) 201-2000

*Energy Efficiency Arkansas (EEA) is a partnership between the Arkansas Economic Development Commission's Energy Office and Arkansas's investor-owned electric and gas utilities and electric cooperatives through a ratepayer funded program approved by the Arkansas Public Service Commission.

Comprehensive Energy Auditor Training

This workshop will teach you how to evaluate the energy performance, comfort and safety of a house through a comprehensive, whole-house diagnostic procedure. You will learn about the hidden flaws often found in residential construction that can cause discomfort, high utility bills, moisture problems and indoor air quality problems. You will learn how to use powerful diagnostic tools to find and correct flaws in a building's thermal envelope. You will also learn how to evaluate and sell the economic benefits of solutions to these problems by using powerful energy analysis software -- software that will also provide correct sizing of heating and air conditioning equipment.

Successful completion of this training is the first step toward becoming certified as a building analyst. As a building analyst, you will be able to produce energy analysis reports that will help homebuyers and homeowners determine cost-effective ways to reduce their energy use, and qualify for financing incentives through a variety of private and government loan programs. KBSI is an affiliate of the Building Performance Institute (BPI) which establishes standards for home performance contractors.

Who Should Attend

This workshop is designed for energy auditors, utility customer service representatives, housing inspectors, HVAC contractors, insulators, builders and remodelers. Establish yourself on the cutting edge of housing performance technology and create a marketing edge.

What You Will Learn

- a sound understanding of building science principles and residential energy use
- how to use state-of-the-art diagnostic tools, including the blower door and Duct Blaster™
- how to conduct a comprehensive diagnostic analysis of a home
- how to produce a complete home energy analysis using REM/Design™
- how to produce a comprehensive energy improvement report for a homeowner

Your Instructors

- **Doug Walter** is president of KBSI. He has taught building energy principles for more than 30 years. He is an architect by training, and presents at a number of national building performance conferences. He is a former member of the RESNET board of directors and serves on its training and education committee..
- **Rob DuTeau** is KBSI's director of training. He is a mechanical engineer with a master's degree in petroleum engineering/geothermal. Before joining KBSI he taught mathematics at Friends University.

What to Bring

Each student needs to bring a laptop computer with ability to access the internet. Note: *Residential Energy, 5th edition*, a trial version of REM/Rate™, and a CD containing study resources (including the daily study questions assigned during the training) will be sent to each registrant upon full payment for the course. REM/Rate™ should be installed before the course begins.

Nearby Local Hotel

Hampton Inn Ft Smith

6201-C Rogers Avenue, Fort Smith, AR 72903 (479) 452-2000

Workshop Agenda

Lunch and refreshments are included in your registration. Dress is casual.

Day One

- Introduction to home performance and the BPI standards (Sessions begin at 8:00 a.m.)
- Introduction to residential energy
- Building science and energy flow principles
- Quantifying building energy flows
- Climate and energy use (Sessions end at 5:30p.m.)

Day Two

- Defining the thermal boundary
- Insulation
- Windows and doors
- Air leakage
- Using a blower door to measure air flow and locate air leaks (hands-on)
- Basic pressure diagnostics
- Using a Duct Blaster™ to measure duct leakage (hands-on)

Day Three

- Residential heating systems
- Comparing heating energy costs
- Water heating
- Cooling & summer comfort principles
- Sun angles and shading
- Lights and appliances
- Mechanical ventilation

Day Four

- Understanding construction drawings
- Documenting buildings
- Recommended tools & equipment
- REM/Rate: energy analysis exercise #1
- Selecting energy improvement measures
- Understanding utility rates
- Building Analyst certification steps
- Energy analysis exercise #2: in-field measurement and data collection

Day Five

- Course review
- BPI Building Analyst Professional Exam (9:30 –11:30 AM)
- Energy analysis exercise #2: data entry

Students wishing to take the exam BPI exam must bring a laptop computer running Windows 2000, XP or Vista with wireless internet access capability.

What you will receive

- Building Analyst Training Manual including all lecture slides and many supplemental resources.
- Residential Energy*, 5th edition, by John Krigger and Chris Dorsi
- 7.5 percent discount on Minneapolis Blower Door equipment purchased from The Energy Conservatory.
- Up to six months free use of REM/Rate™ energy analysis software.
- Follow-up technical assistance

