

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 precise sizing of heating and air conditioning equipment.

Energy Rater Certification

Successful completion of this training is the first step toward becoming certified as a professional home energy rater. As an energy rater, you will be able to produce energy rating reports that will help homebuyers and homeowners qualify for financing incentives through a variety of private and government loan programs. KBSI's home energy rater training is accredited by the Residential Energy Services Network (RESNET). KBSI also is an affiliate of the Building Performance Institute (BPI).

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 for yourself.

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/Rate™
- how to produce Energy Code compliance reports
- how to certify a home for the EPA Energy Star labeled homes program
- how to certify a home for the EPACK 2005 builder tax credit

Your instructors

- **Doug Walter** is president of KBSI. He has taught building energy principles for more than 25 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.
- **Tom Mahoney** is KBSI's rating services director. He has a degree in mechanical engineering and an associate degree in solar engineering technology.

Workshop Agenda

Day One

- Introduction to home energy ratings
- Introduction to residential energy
- Building science and energy flow principles
- Telltale House demonstration
- Quantifying building energy flows
- Climate and energy use



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)

The training is conducted at the KBSI Training Center, 200 Zeandale Rd., Manhattan, Kansas. Sessions begin at 8:00 a.m.

Participants traveling by air should fly to Kansas City International Airport (MCI), then travel to Manhattan via ground shuttle or rental car. Manhattan is two hours west of Kansas City on I-70. Return flights should be scheduled for no earlier than 6:30 p.m. on Friday. Complete travel, lodging and weather information can be found on KBSI's web site (click on "Links").

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

Rev. 8/20/10

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: rating exercise #1
- Selecting energy improvement measures
- Understanding utility rates
- Rater certification steps
- Rating exercise #2: in-field measurement and data collection

Day Five

- Course review
 - RESNET National Rater Exam (9:30 – 11:30 AM)
 - Rating exercise #2: data entry
 - Energy Star
 - EPACT 2005 builder tax credit
- Adjourn at 3:30 pm

The RESNET National Rater Exam will be offered on the final day of the training. There is a separate \$50 fee for the exam payable at the time of registration or at the beginning of the exam.

Students wishing to take the exam must bring a laptop computer running Windows 2000, XP or Vista with wireless internet access capability. KBSI has a small number of laptop computers available for use by students for a fee of \$50.

Students wishing not to take the exam during the training may take it at a later date at an approved testing facility. The fee for a proctored exam is \$100.

