

## *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").

### 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.

## What you will receive



- Home Energy Rater Manual including all lecture slides and many supplemental resources.
- Residential Energy*, 4<sup>th</sup> edition, by John Krigger and Chris Dorsi
- 7.5 percent discount on Minneapolis Blower Door equipment purchased from The Energy Conservatory.
- Up to one year free use of REM/Rate™ energy analysis software.
- Follow-up technical assistance
- Well-designed, comprehensive training delivered by experienced, dedicated trainers.
- NOTE: *Residential Energy*, 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.



## Certification requirements

To receive your energy rater certification, you must meet the following requirements:

- A score of 80 percent or higher on the open book, on-line RESNET National Rater Exam.
- Satisfactory completion of five probationary ratings, one of which is conducted during the training. Four additional ratings must be submitted within six months of the exam date. Evaluation of these ratings is included in the registration fee.
- Sign Memorandum of Agreement with a RESNET-accredited HERS provider.

## Registration

Attendance is limited to 12, so please register early. Registration fee is refunded only if notice is received seven days before the workshop. Prior to seven days, there is a \$150 cancellation fee.

For more information please call, toll-free:

**877-537-2425**

Kansas Building Science Institute is committed to making services, activities and programs accessible to all participants. If you have special requirements due to disabilities or dietary restrictions, please contact KBSI at least two weeks before the start of the workshop.

## Registration Form - Home Energy Rater Training and Certification

\_\_\_\_\_  
Name

\_\_\_\_\_  
Company/Agency

\_\_\_\_\_  
Address

\_\_\_\_\_  
City State Zip

\_\_\_\_\_  
Work Phone Work Fax

\_\_\_\_\_  
Cell Phone (for last-minute or emergency contact only)

\_\_\_\_\_  
e-mail address

Register by returning this form to:  
Kansas Building Science Institute  
PO Box 1264  
Manhattan, KS 66505-1264

Or fax to: 866-220-3704

Please indicate choice of session. Registration fee is \$1,250 per person (\$50 discount per person for more than one registration from same company).

Jan. 26-30, 2009	___	Aug. 17-21, 2009
Mar. 9-13, 2009	___	Sept. 14-18, 2009
Apr. 6-10, 2009	___	Oct. 12-16, 2009
May 4-8, 2009	___	Nov. 16-20, 2009
June 15-19, 2009	___	Dec. 7-11, 2009
___ Jul. 13-17, 2009		

\_\_\_ Sign me up for RESNET exam (\$50)  
\_\_\_ Use KBSI laptop computer (\$50)

Please indicate method of payment:

\_\_\_ Check enclosed payable to KBSI  
\_\_\_ Send invoice\*  
\_\_\_ Charge to: \_\_\_ VISA \_\_\_ MC \_\_\_ Amex \_\_\_ Disc.

\_\_\_\_\_  
Print Cardholder's Name as it appears on card

\_\_\_\_\_  
Card Number

\_\_\_\_\_  
Exp. Date

\* If e-mail address is provided, invoice will be sent electronically