



Course Details

Home Energy Rater Training

Based on RESNET HERS and ENERGY STAR for New Homes

October 29 – November 3, 2018

Missoula, Montana

Why Attend?

- Energy related design elements and equipment are critical to building a home that performs well, is comfortable, and healthy.
- Montana's energy code requires house tightness (blower door) testing. The Montana energy code also requires duct tightness testing unless all ducts and the air handler are located within the thermal envelope.
- Learn home design and construction techniques based on building science principles.
- Become a Home Energy (HERS) Rater. HERS ratings are increasingly being used by major builders nationwide to market and differentiate their homes.
- Become an ENERGY STAR for New Homes Verifier. ENERGY STAR is the most successful "above code" building standard in the country.
- Become certified to conduct performance testing (blower door and duct tightness testing) to support energy code compliance.

This is a comprehensive residential energy efficiency and building performance training based on RESNET Home Energy Rater curriculum and the ENERGY STAR Homes specifications. During and after the training participants will have the option to take tests necessary to become a certified Home Energy Rater (HERS), an ENERGY STAR for New Homes Verifier, and a Performance Tested Comfort Systems (PTCS) technician for new homes. The National Center for Appropriate Technology (NCAT) is a RESNET accredited HERS Rater Training Provider and a HERS (Rater) Quality Assurance Provider. This training is the first step to becoming a HERS Rater. The complete requirements for becoming a certified Home Energy Rater are:

1. Complete accredited HERS Rater Course.
2. Pass the National HERS Rater two-hour Online Exam (\$100; offered at the end of training).
3. Pass the National Rater Practical computer simulation online exam (\$200: taken at test proctoring site of your choice).

4. Pass the RESNET Combustion Appliance Zone (CAZ) computer simulation online Exam (\$50; taken at test proctoring site of your choice).
5. Pass the RESNET Online CAZ Simulation Exam (\$199; taken at test proctoring site of your choice).
6. Associate yourself with a HERS Quality Assurance (QA) Provider.
7. Complete five supervised probationary ratings.

The exam costs noted in steps 2-5 above are established by RESNET and paid directly to RESNET or its simulation software contractor. These costs are not included in the training registration. The cost for processing the three probationary ratings will depend on your chosen provider. During the training you may also elect to take a test required to become an ENERGY STAR Verifier and a test to become a PTCS Technician.

Costs Associated with Being a Rater. Beyond the cost of training and the required exams there are additional costs associated with being a Rater. Each Rater must associate with a HERS Quality Assurance Provider. Providers typically charge an annual fee. NCAT's current annual fee is \$400 and includes use of the rating software. Providers typically charge for each probationary rating. In addition, providers charge for each house submitted by a Rater for rating or certification. All rated homes must be submitted to the provider who reviews the house and enters the house in the national registry. Per house fees range from \$50 to \$100 depending on the nature of the rating, whether ENERGY STAR certification is included, and whether a federal tax credit analysis is included. Some providers have discounts for Raters that submit more than 50 houses per year. The minimum equipment needed to perform Ratings costs about \$4,000 but most Raters spend more for additional equipment such as an infrared camera.

When: October 29 – November 3, 2018
8:00 AM to 5:00 PM Monday-Friday; the National Rater Exam will be administered from 9:00 AM until Noon on Saturday. The CAZ online exam, Rater Practical Exam, and CAZ simulation exam will be scheduled later at a date and test proctoring site of your choosing.

Where: Best Western Grant Creek Inn, Missoula
5280 Grant Creek Rd, 59808 Missoula
406/543-0700

Registration Options:

Basic Registration - \$1500

NorthWestern Energy Service Area Trainee - \$500

To Register: Go to the NCAT www.ncat.org/events/. Select "Home Energy Rater and ENERGY STAR for New Homes Training" and choose the appropriate training date. You should also download the complete *Course Details* document from that site.

For more information about the training contact Dale Horton (daleh@ncat.org) 406-494-8653.

Field Work Notice: By registering for this training the student declares themselves physically capable of working in the field with a real house. Activities associated with this training include lifting weights up to 40 pounds, climbing ladders, moving in tight areas such as crawlspaces and attics, and other

physically challenging tasks. By registering the student declares that they have no physical conditions that would prevent them from safely participating in these activities.

About the Instructors



Jaime Oldmixon owns and manages Home Energy Services, Inc. based in Missoula, Montana. He is both a builder and Home Energy Rater. He is an accredited Quality Assurance Designee with Residential Energy Services Net Work and has over ten years of experience with both single family and multifamily ratings. He has a Bachelor of Art degree from the University of Texas.



Dale Horton, before joining NCAT, operated an architecture and energy consulting business. He is an architect; a RESNET certified HERS Rater Trainer, and a Performance Tested Comfort Systems (PTCS) Trainer. He conducts energy code training that is certified for continuing education credits by the American Institute of Architects, the International Codes Council, and the Montana Society of Engineers. He has a master's degree in SCIENCE.

Participants must bring the following to the training:

- A copy of **Residential Energy** by John Krigger, et.al., 6th Edition, published by Saturn Resource Management Incorporated (www.srmi.biz). This book can be obtained from Amazon.com. **You are responsible for ordering and bringing a copy of Residential Energy to the class.**
- Laptop Computer with wireless Internet capability. The computer must be capable of opening pdf documents and the REM/Rate software which is Window based. In the past some newer Apple computers with Windows operating programs have also worked fine.
- Calculator
- Note Paper, highlighter pen, sticky-notes

Participants will receive the following at the workshop:

Home Energy Rater Training Manual and Reference Flash Drive by NCAT

REMRATE Software (Demonstration Version) by the Architectural Energy Corporation. A full license for the software will be provided after completion of all HERS Rater requirements. We recommend that you download a free 90-day demonstration version from the following web site before arriving at the class. <http://www.remrate.com/>

Preparation for the Training

There is not enough time during the training to cover all the material associated with home energy rating and ENERGY STAR. You will increase your chances of passing the required exams by studying before the week of training.

This training will cover a lot of material including the administrative topics associated with the HERS Rater program, residential building science principles, combustion appliance zone testing, performance testing, use of HERS rating software, and the ENERGY STAR New Homes program. Unless you already have an excellent background in both residential energy efficiency and residential construction you will be playing catch-up all week without adequate preparation prior to the class. Here are some suggestions:

1. Study Residential Energy, the book noted above, before the training session. Being familiar with the contents of this book is probably the single most useful preparation that you can do. The class is taught with the assumption that you are familiar with all of the terms in the Glossary and all of the geometry formulas in Appendix A-2. You should be capable of calculating house floor areas and volumes including houses with attics, vaulted ceilings, and other non-rectangular shapes using the formulas in the Appendix.

2. It will prove very useful to be familiar with the information on the RESNET web site: http://www.resnet.us/professional/rater/national_rater_test . The National Rater Test will cover material contained in the *2006 Mortgage Industry National Home Energy Rating Systems Standards*. We strongly suggest that you review the following documents before the course:

Mortgage Industry National Home Energy Rating Systems Standards

<http://www.resnet.us/professional/standards/mortgage>

Rater Information

<http://www.resnet.us/professional/rater/what-is-a-hers>

3. The National Rater Test requires calculating building floor areas, surface areas, and building volumes for various house configurations. You should be comfortable with building geometries as well as basic math and trigonometry. You should also be familiar with residential construction and have the ability to read and understand architectural drawings. We will not have time to review these basic skills during the class.

4. Building performance testing includes conducting blower door tests and duct tests. Prior to the class we recommend that you download and review the following manuals from the Energy Conservatory as an introduction to performance testing.

Blower Door Manual:

<http://support.energyconservatory.com/hc/en-us/articles/202775380-Minneapolis-Blower-Door-Manual>

Ductblaster Manual:

<http://support.energyconservatory.com/hc/en-us/articles/202776210-Minneapolis-Duct-Blaster-User-Guide>