Class VII:
Whole House Energy Rater

Class Code: 121203LS

Location:	Southern California Edison Energy Education Center 6090 N. Irwindale Ave. Irwindale, CA 91702
Times:	Day 1 8:00 am-4:00 pm, 8 hours Day 2 8:00 am-4:00 pm, 8 hours Day 3 8:00 am-4:00 pm, 8 hours Day 4 8:00 am-4:00 pm, 8 hours
Instructional Time:	26 Hours of Instruction
CEUs:	2.6 continuing education units are offered by CalCERTS after successful completion
Cost:	$1,075.00 per person*

Phase II of the California Home Energy Rating System (HERS) program guides the production of consistent, accurate, and uniform ratings of existing buildings based on a single statewide rating scale. It ensures that any audit or rating includes reasonable estimates of potential utility bill savings and reliable recommendations on cost-effective measures to improve energy efficiency. It establishes labeling procedures that will meet the needs of homebuyers, homeowners, renters, the real estate industry, and mortgage lenders with an interest in home energy ratings. Only certified individuals, California Whole House Home Energy Raters, are permitted to perform ratings on existing buildings.

***Please Note:**

To complete the process of becoming a CalCERTS Whole House Home Energy Rater, one whole-house rating must be performed by the candidate in one of our Whole House Rater Field Houses under the supervision of a CalCERTS Trainer/Proctor. Please call 916-985-3400 for more information and to schedule your Whole House Rater Field House exercise. There is an additional $300.00 fee for the Whole House Rater Field House exercise portion of your training, which is not included in this Class VII: Whole House Energy Rater course.

You must complete the Whole House Rater Field House exercise including: data collection, diagnostic testing, house measuring, and successful energy modeling in CalRatePro before an individual's Whole House Rater credential will be confirmed and issued.

To complete a Whole House Rating on an existing home in California you must use "approved" software. Currently, there is only one allowable software that can be used to officially rate a home's energy use, CalRatePro, a module within EnergyPro software. If you do not already own EnergySoft you will need to acquire it plus the CalRatePro module to be able to model a home's energy use, legally certify homes, give it a HERS Index score, perform Energy Efficient Mortgages, or meet other program requirements such as Energy Star, LEED, GreenPoint Rated, etc.

*$300 "CalRATE*pro*" (CalCERTS licensed software.) Payment made to EnergySoft.
*Visit www.calcerts.com to download software – scroll to the right and click the link at the very bottom called "*CalRATE*pro". This will take you to the EnergySoft order form.*

Prices subject to change without notice.

There is an additional $200.00 for the EnergyPro Interface if you are NOT already an EnergyPro user.

Similar to any other HERS Rating, there will be an upload charge to generate official certified rating reports from the CalCERTS registry.

*There is an annual $120.00 subscription fee due if you choose to become a CalCERTS HERS Rater. This fee covers your CalCERTS HERS membership and the administrative duties on our part to maintain your records. Project uploads for compliance verifications, whole-house ratings, and/or Energy Star certifications are subject to additional fees.

You can sign up for the class on-line and pay via credit card at: www.calcerts.com or call 916.985.3400 x301

Target Market for this Course:

This class is intended to provide the training and education necessary for existing CalCERTS FV/DT Raters to be able to pass the credential exams and field work in order to become a California Whole-House Home Energy Rater.

Candidates who do well as Whole-House Raters are commonly from the construction trades as they have a better understanding of how homes are constructed and operated. They also have the skills, knowledge and ability as seasoned HERS Compliance Raters to be able to perform the required tests for a Whole-House rating.

Incoming Skills Necessary:

To better prepare candidates for work as California Whole-House Raters, we strongly suggest that those who enter possess some knowledge, skills, and abilities in the California HERS Program, the HVAC industry, and the construction industry. A comprehensive understanding of the diagnostic tests required under the HERS Rater Protocols is also expected to be known and understood.

In the course of your work as a Whole-House Rater you may also be required to have the following knowledge, skills, and abilities which are not taught in any of our CalCERTS trainings:

- High School diploma or GED
- 10th Grade English & Math minimal (especially fractions, percentages, geometry)
- Computer literacy
- Firm grasp of the English language (most codes and regulations are only in English)
- Ability to lift heavy objects (50 lbs. or more)
- Ability to inspect dark, tight, spaces
- Knowledge of and experience in the construction industry (how homes are constructed)
- Ability to properly measure the inside or outside of a home and find it's volume
- Ability and knowledge to identify and evaluate the fenestration (doors and windows) of a home
- Ability and knowledge to locate and identify HVAC equipment and components
- Ability and knowledge to locate and identify major appliances and lighting devices
- Ability and knowledge to find and collect data off appliance name plates
- Ability to draw a legible floor plan of a home while in the field

Learning Objectives:

Class VII: Whole House Home Energy Rater is a 4-day course taught by qualified CalCERTS, Inc. trainers and long-time experts on energy efficiency programs and diagnostic testing. This course will cover the topics necessary for the candidate to be able to inspect and a evaluate an existing or fairly new home for potential energy upgrades, determine a home's present energy characteristics, advise homeowners on how to reduce energy use in their home, model a home's energy use in a state-approved software program, and work as an advisor to contractors, homeowners and other agencies to help identify energy saving potential. Upon successful completion of the

classroom training and the Whole House Rater Field House exercise the candidate will receive a credential from CalCERTS to be able to perform California Whole-House Home Energy Ratings.

Prerequisites (for achieving a HERS Whole-House Rater credential):

You must be a 2008 CalCERTS Compliance (HERS I) Rater for Alterations **and** Newly Constructed Homes

Although **NOT** required, the following courses can also help Raters become more valuable to potential clients:

a. Class VIII: Energy Efficient Mortgage

b. Class IX: Special Energy Programs / Energy Star 3

Additional study, and practice with the diagnostic equipment and energy modeling software will be necessary for most candidates to feel comfortable and confident as a Whole-House Rater.

Topics Covered in This Class:

- Basic energy efficiency training
- Inspection and evaluation of the existing conditions of the home's energy-related features
- Analysis of the energy impact of those features
- Identification of potential energy efficiency improvements for that home
- Evaluation of the cost-effectiveness of each improvement
- Recommendations to the homeowner of the cost effective improvements
- Designation of a rating score of the comparative energy efficiency of the home
- Production of a label that communicates the HERS rating of the home
- Verify solar panel installations, count modules
- Performance testing solar arrays using pyranometers
- Verify tilt, azimuth of arrays
- Read/verify kW output on different inverters
- Demonstrate minimal shading verification

Some of the state mandated HERS tests/inspections are not covered in this class if they are specific to a certain credential (e.g., the identification of ice storage air conditioners is only required for Newly Constructed Buildings inspections). These topics are covered in the appropriate class.

Standards of Student Evaluation (for individual certificate issuance):

At the end of the Class VII: Whole House Energy Rater training, on Day 3, all participants will take an open-book, multiple-choice written exam based upon; all the written materials provided to the student, the presentations in class, and the verbal education by the Trainer(s) within the classroom and the lab (if applicable).

CalCERTS HERS Rater Written Exam Policies

These rules are intended to ensure fairness, accuracy, consistency and validity of exam results. Failure to abide by these rules could result in ejection, or other disciplinary action.

1. At the beginning of each exam, the proctor will announce the time allowed for the exam. The time allowed is based on the number of questions on the exam. (i.e. 20 questions = 1 hour)
2. The written exam must be taken on the day of instruction (or on the last day if multiple day delivery), no exceptions.

3. A score of 80% overall is required to pass the CalCERTS written exam.
4. Students will not be informed which questions they have missed. They will only be informed of their score and whether they passed or failed.
5. Students must *Pass* the written Exam before they are able to move on and take any associated *Field House Exam*.
6. Candidates must be prepared to show a valid Photo ID.
7. No cell phones may be used during the exam. Calculators will be provided.
8. No laptop computers may be used during the written exam.
9. The CalCERTS training manuals are the only written materials that may be referenced during the written exam. No other books or notes may be used. The answers to every question may be found or deduced from information in the training manuals. No other materials are needed to pass the exam.
10. Students may leave the room during the exam to use the restroom, but must hand over exam packet to Proctor until their return.
11. Students may NOT write in training manual or exam booklet during exam. Scratch paper will be provided.
12. THERE IS NO TALKING OR COMMUNICATING ALLOWED WITH OTHER STUDENTS DURING THE EXAM. This is a professional level exam. You must demonstrate your knowledge of the subject matter without assistance. You may NOT assist others during the exam.
13. There are multiple versions of the exam. They are similar to each other in terms of the topics covered and types of questions. Students will take a different version than those sitting to either side of them.
14. ALL exam packets must be turned in to proctor at the end of the exam.
15. Under no circumstances may exam packets leave the control of the Proctor.

***Written Exam* Re-test Policies**

1. Students will be given one re-test opportunity to pass each written exam (the initial attempt plus one re-test attempt).
2. Students must wait at least 48 hours to re-take the exam.
3. There will be a $50 charge for each re-test attempt.
4. All of the above exam policies apply to the re-tests as well (except item #2 above).
5. Students who do not pass the second attempt of any written exam must retake the entire class (at full price) and pass the written exam if they wish to continue their pursuit of becoming a Certified HERS Rater.
6. If a student does not pass the written exam after retaking the course for the 2nd time, they will be excluded from becoming a CalCERTS Certified HERS Rater indefinitely.

Materials utilized in this Course:

Each participant will be given a Student Binder with all the applicable written course materials as described in the Course Outline above.

Candidates must bring to class their own laptop computer with the "CalRATE*pro*" software program already installed and working. It is strongly encouraged that you load the software and get familiar with how it works before coming to class.

If you do not own a laptop computer, please call 916-985-3400 x301 and we MAY be able to arrange for you to use one for this class. Candidates must also bring to class a tape measure, graph paper, straight-edge, pencil, pen, calculator, clipboard, and notepad.

Any required diagnostic testing equipment and associated sundries will be provided by CalCERTS, Inc. Students are welcome to bring their own equipment if they'd like (may not be appropriate for all classes).

For questions about any of our trainings call 916-985-3400 x301 or e-mail training@calcerts.com.