



## Winter Weather Can't Stop Weigh-in Charging!

When winter weather hangs icicles over your outdoor condenser, the weigh-in charging method is your best friend. However, the cold snaps also bring a lot of confusion on how and when an installer can use the weigh-in charging method. HERS Raters are often called on to provide an answer. So let's talk.

The installer must follow the manufacturer's instructions, including installing a liquid line filter drier, which is used to adsorb contaminants, such as water/moisture, that can create acids within the refrigerant and corrode metallic components. Filtration also removes particulate matter. But a drier only takes out the contaminants after they are in the system. So how do we keep them out?

The lineset and filter drier must be brazed (think soldering) using a dry nitrogen purge to displace the oxygen in the lines and prevent oxidation and scale formation. Once the system is tight and tested for leaks, a vacuum is pulled to remove air and contaminants from the system. The HERS Rater must observe the installer "pull a vacuum" to 500 microns or less, and it must hold for 5 minutes without rising more than 300 microns.

The installer must calculate how many ounces of refrigerant are needed, based on the length of the installed lineset and the manufacturer's instructions. The HERS Rater observes the installer as he weighs-in the refrigerant using a calibrated digital scale.

The HERS Rater must coordinate closely with the installer to meet at the jobsite – before the weigh-in is done. So, when can a weigh-in be performed?

For systems of a type that **CAN** utilize the standard charge verification

- 1 • Installers may choose to weigh-in regardless of the weather and temperatures
- The HERS Rater must use the standard charge verification (superheat/subcool)

2 When the outdoor temperature is less than 55°F, there are 2 options:

- **Option 1:** Installer performs a HERS Rater observed weigh-in charge –AND– installs an Occupant Controlled Smart Thermostat (OCST) per JA5.
- **Option 2:** Installer performs a weigh-in charge –AND– the HERS Rater returns at a later date during warmer weather and uses the Standard Charge Procedure.

Systems of a type that **CANNOT** utilize the standard charge verification (mini-splits)

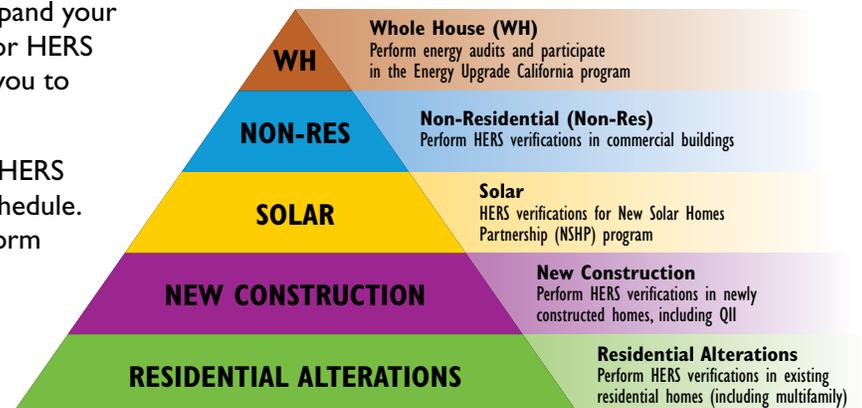
- 3 • Installer performs a HERS Rater observed weigh-in charge.

For a detailed Tech Sheet with code references, visit our online HELP DESK at [calcerts.zendesk.com](http://calcerts.zendesk.com). Use the "Search" field and type in "weigh-in" to locate it.

## Grow, Expand and Exceed in 2018

Earn additional CalCERTS HERS certifications to expand your business in 2018. CalCERTS offers a tier structure for HERS certification. Each additional certification will allow you to perform additional HERS verifications.

Most courses are online so you can earn additional HERS certifications at your own pace and on your own schedule. Once you earn your new certification, you can perform the new HERS verification work in the CalCERTS Registry. Contact the CalCERTS Training group to answer all of your questions: [training@calcerts.com](mailto:training@calcerts.com).



## May We Help You?

CalCERTS has a Helpdesk that addresses frequently asked questions (FAQs) from our Registry users. The Helpdesk is located at [calcerts.zendesk.com](http://calcerts.zendesk.com) and has up-to-date articles and FAQs addressing a variety of processes. In order to create a login for the Helpdesk, users only need to provide an email address. Our Registry User Manual is also available in this section and includes step by step instructions for all project types. Click [HERE](#) to see the December 2017 updated Registry User Manual .

The CalCERTS Technical Support Team is available by phone and email to help with Registry related questions. Registry users may contact Tech Support by emailing [tech@calcerts.com](mailto:tech@calcerts.com), or by calling 916.985.3400 ext. \*.

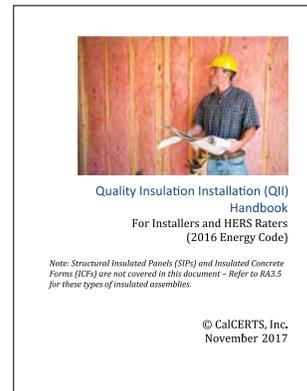
## Introduction to Residential HVAC Systems

CalCERTS is offering an HVAC book for those who want to know more about HVAC systems, but don't have much experience working with them. This book is intended for people such as HVAC salespeople, architects, HERS Raters, code enforcement agents, or energy consultants who want to feel comfortable talking about and working around HVAC systems. The *HVAC 1.0 – Introduction to Residential HVAC Systems* book was written by Russell King, M.E., who has over 23 years of experience in the areas of HVAC design, diagnostics and energy code compliance and consulting. It can be purchased [HERE](#).

## The CalCERTS QII Handbook is Available Now!

By far, the most challenging HERS verification is Quality Insulation Installation (QII). Spelled out in RA3.5 of the Reference Appendices, QII is very precise and complex. Not only does it deal with insulation, but also air sealing, air barriers, and thermal boundaries.

QII will likely be a prescriptive measure for all new homes in the 2019 Code and will become a far more common verification. Raters, installers and general contractors have asked for training on QII and CalCERTS is responding. We have just released a comprehensive manual that will serve as the textbook for online and live training that is still in development. Based on the reorganized text of RA3.5, our manual includes a large amount of explanatory text, examples, and well over 100 photos and diagrams not found in RA3.5. It also includes a section on how to read the Insulation Requirements on a CFIR-PRF-01. At over 60 pages, this Handbook is targeted to HERS Raters, HVAC contractors, architects, and general contractors. Click [HERE](#) to download a PDF copy.



## CalCERTS Training Center



The CalCERTS Training Center (CTC) has hosted some exciting events! In the past month, in addition to CalCERTS HERS Rater Training sessions, the CTC has successfully hosted several training sessions for PG&E, a (5) day MI-BEST training session for the Wollin Group, and a (5) day Build It Green BPI-Building Analyst training session. Although our most recent events have been geared towards similar industry partners, the CTC is available for rent by all types of training and business partners. In addition to instructor led and hands-on training in energy efficiency, our facility is equipped to manage conferences, seminars, business meetings, staff meetings and routine training sessions in most fields.

**Call now to reserve your dates or register for one of our upcoming BPI courses! CalCERTS Training Center, 1301 Bidwell Street, Folsom, CA 95630, 916-932-4209**

### Upcoming Training Session:

#### **BPI-Building Analyst – \$1895**

5 day training course with Andy Wahl (cost includes first attempt at the written and field house exam)

**Date:** April 30 – May 4  
**Time:** 8am – 5pm

#### **BPI-Envelope Professional – \$1195**

4 evening training course with Andy Wahl (cost includes written exam)

**Date:** April 30 – May 3  
**Time:** 6pm – 7:30pm

#### **Building Analyst Field Exam Prep Course – \$395**

1 day prep for field exam with Andy Wahl

**Date:** Saturday, May 5  
**Time:** 8am – 5pm