



Rater News Winter 2022

Welcome to the Winter 2022 issue of **Rater News**
Brought to you by the Washington State University Energy Program

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News from Jonathan Jones

Happy Holidays! My best to you and yours for a Joyful and Happy Holiday Season



As 2022 comes to a close, I thought I would take a moment to reflect on some of our Program's accomplishments of the past year. We have grown as a RESNET Provider, with new raters listed in Washington and Oregon, as well as other states. This year the WSU Energy Program presented HERS, ENERGY STAR New Residential and Multi-Family trainings, and QA trainings for raters considering becoming QADS. In June, we earned the 2022 ENERGY STAR® Market Leader Award from the U.S. Environmental Protection Agency. In the upcoming year, our team looks forward to offering our raters more training and support as questions arise regarding building practices, new legislation, and changes in building codes. Watch for notification on our upcoming mandatory Annual Meeting, which this year will be held as a virtual webinar for you to view on your schedules. This required meeting will cover relevant WSU Energy Program policy changes, RESNET standards, such as the ANSI/RESNET/ICC 380—2019, the new minimum efficiency standards for HVAC Products, and changes to the 45L Tax Credit. Keep your eye on the WSU Energy Program [Home Energy Raters](#) website for future training opportunities and watch for informative emails coming your way on relevant changes in our industry.



Program News and Announcements

Meet James L. Colombo, Interim Director of the WSU Energy Program

The WSU Energy Program has a new interim director. James Colombo has over 45 years of experience providing technical service, support, and training to customers such as Washington state agencies, universities, citizens, management and employees. He has considerable experience with project management, strategic planning, budgets and business development. Prior to becoming the Interim Director on September 1, 2022, he served as the Manager of the information Technology Department at the WSU Energy Program.

Meet Tyler Poole

The WSU Energy Program is excited to announce Tyler Poole has joined our team at the WSU Energy Program. Tyler recently moved to the Tri-Cities area from Fredericksburg, Virginia where he was a Senior Field Engineer/HERS Rater for PEG, LLC. Tyler will be an Energy Project Analyst and will be working in Building Efficiency and Energy Codes, as well as for the WSU HERS Program. Tyler says he “is beyond excited to join the WSU Energy Team and be on the cutting edge of this industry.”



Megan Kramer

We wish our best to Megan Kramer who made significant contributions to our HERS Program, reviewed your files, and provided answers to many technical questions. Megan will be working for Energy Solutions, an energy consulting company involved in many aspects of transforming the market to combat climate change.

Annual Mandatory Meeting for WSU Energy Program Raters January 24 or 28, 2023

This year’s annual mandatory meeting for NW Raters will be a virtual self-paced online webinar. Topics to be discussed include *an update on the program, software, U.S. Department of Energy (DOE) and U.S. Environmental Protection Agency programs, tax credit changes, and codes and standards*. Meeting details – with a registration link – will soon be sent to our raters only via email.

Rater Reminders

Reminder of Common Rater Responsibilities

As a RESNET provider, RESNET expects the WSU Energy Program raters to meet certain obligations. The WSU Energy Program also has specific guidelines. We would like to take the opportunity here, as we approach the New Year, to remind you of some of those.

- Submit rating files to the WSU Energy Program using the AXIS database within **90 days** of house inspection.
- Complete **18 hours** of RESNET approved professional development every **three years**.
- Blower doors and Duct Blasters® MUST be recalibrated at least every **two years** with supporting documentation submitted to the WSU Energy Program via AXIS and/or direct email to: nwrater@energy.wsu.edu. Blower doors and Duct Blasters® can be recalibrated in

the field. Jonathan Jones can instruct you in, or provide this service for your equipment during a field inspection.

- Manometers must be recalibrated by a qualified lab. Both Retrotec and The Energy Conservatory (TEC) provide these services.
 - **Retrotec DM32** recalibrate every **five years**
 - **Retrotec DM** obsolete, but if you are using them, recalibrate every **two years**
 - **TEC DG-1000** recalibrate every **four years**
 - **TEC DG-700** recalibrate every **two years**

Pro Tip: TEC currently offers raters the chance to send in their old DG-700 manometers and get a \$300.00 discount on a new DG-1000. The DG-1000 uses both Blue Tooth and Wi-Fi.

For your convenience, we have created an [Equipment Calibration Worksheet](#) to help you track equipment calibrations.

Digital Testing for HVAC Systems Installation *by Megan Kramer*

As your RESNET HERS Provider, we ask that all tests be digital to eliminate the error associated with the single-point adjusted manual method of calculation. You can use a laptop, a tablet, or a phone. You can use Bluetooth/Wi-Fi or corded. The app is free. The cord to phone connection is about \$15. If you purchase a travel printer, you can even print out the report and leave it for the Authority Having Jurisdiction (building department). If you use a laptop, you can also modify your REM files at the same time reducing office time.

Also, as a reminder, the following field data (see [RESNET's MINHERS Addendum 54: Revision of chapter 9 HVAC System Installation Grading Quality Assurance](#)) need to be kept and available upon request.

904.3.2.4.3.1 At minimum, the Rating Provider shall collect, review, and maintain (for a period of three years) the following supporting documentation for each file QA:

Date and time of the inspection/test

The name of the Certified Rater or RFI conducting the inspection/test

Plans (or alternative documentation showing building dimensions)

RESNET Home Energy Rating Standard Disclosure

Photos of the following building features where applicable to the rated Dwelling Unit. Where photos lack sufficient detail, the Quality Assurance Designee shall require additional supporting documentation. Building assemblies as required by ANSI/RESNET 301 Appendix B Inspection Procedures for Minimum Rated Features.

- a. All heating, cooling, and service hot water equipment, including nameplate/model number
- b. Dwelling Unit Mechanical Ventilation System, including nameplate/model number and controls
- c. Infiltration test result or automated test report

- d. Duct leakage test result(s) for each system
- e. Dwelling Unit Mechanical Ventilation System test result(s) for each system
- f. The building's front, back, right, left elevations
- g. Appliances (refrigerator, dishwasher, washer, dryer), including nameplate/model number

Update on Revised Requirements to Earn the 45L Tax Credit

The Section 45L Tax Credit for Energy Efficient New Homes has been updated and extended through 2032. For homes and units acquired on or after January 1, 2023, the base level tax credit will be specifically tied to ENERGY STAR certification for single-family (\$2,500), and multifamily homes (\$500; or \$2,500 when prevailing wage requirements are met). To earn this credit, make sure to use the Energy Star Certified Homes Program Version applicable in your state. After January 1, 2022 raters in Oregon and Washington use v3.2, Rev. 11; and after January 1, 2024 v.3.2, Rev. 12. For raters active in other states check the [Energy Star Residential New Construction Program Requirements](#).

In addition, aim to further reduce your HERS Index Scores. Achieve Grade I Installation of HVAC systems by certifying your homes to the new ANSI RESNET/ACCA/ICC standard 310. Previously HVAC systems were rated based on nameplate information, and not impacted by how the system was designed and installed. The new ANSI RESNET/ACCA/ICC Standard 310 rewards high-quality HVAC design and installation with HERS points. For more information, check out this helpful [ANSI RESNET/ACCA/ICC Standard 310 Infographic](#). Standard 310 training is required and consists of a four-part series of online self-guided modules (approximately 4.5 hours) available via the [RESNET Training Portal](#). ANSI RESNET/ACCA/ICC Standard 310 will also be required for [DOE Zero Energy Homes](#). DOE Zero Energy Ready homes will qualify for a \$5,000 tax credit.



Check RESNET's article [45L Tax Credit for Energy Efficient Homes Extended and Improved](#) for more details and links on the 45L Tax Credit.

RESNET NEWS

2023 RESNET Mission, Goals and Priorities

Check out RESNET's 2023 *Mission, Goals, and Priorities* adopted by the RESNET Board of Directors October 7, 2022: https://natresnet.wpenginepowered.com/wp-content/uploads/RESNET_2023_MissionGoalsPriorities_11-01-2022.pdf

RESNET Carbon Rating Index

A first-of-its-kind carbon rating index addresses critical issue of greenhouse gas emissions. The RESNET Carbon Index provides a more accurate metric to measure emissions: it addresses when energy is used in a home, as well as how much can be reduced. A RESNET accredited HERS software

program will take the information entered for a HERS Rating and calculate the Carbon Rating Index Score. No additional inspections are needed. For more information, view the RESNET Carbon Index Infographic [here](#).

ANSI/RESNET/ICC 301 2022 Addendum B CO2e Rating Index

This ANSI standard was developed in cooperation with the Natural Resources Defense Council (NRDC), the Consortium for Energy Efficiency (CEE), the California Energy Commission (CEC), and the National Renewable Energy Laboratory (NREL). For more information [click here](#).



RESNET® and Phius Collaborate to Encourage Certified HERS® Raters to Be Phius Certified

RESNET is pleased to announce its recent collaboration with Passive House Institute US (Phius) to promote the construction of sustainable and affordable homes. RESNET encourages Certified RESNET HERS Raters to expand their career and business opportunities by becoming Phius Certified Raters and Phius Certified Verifiers via Phius Certified Rater and Verifier Training—*EIN Presswire*, Nov. 1, 2022: <https://www.news10.com/business/press-releases/ein-presswire/598931029/resnet-and-phius-collaborate-to-encourage-certified-hers-raters-to-be-phius-certified/>



RESNET and Building Talent Foundation Announce New Collaboration to Promote HERS® Career Opportunities

The Residential Energy Network, Inc. (RESNET) and the Building Talent Foundation (BTF) announced a new collaboration to promote Home Energy Ratings System (HERS) careers, connect job-seekers with employers in the sector, and improve engagement and retention. A key component of the collaboration will be a RESNET-branded landing page on JobsToBuild.com, BTF's career platform. Through this branded landing page, RESNET providers and rating companies will have no-cost access and priority job listings on the platform, allowing them to promote HERS careers and connect with qualified candidates—Building Talent Foundation [Press Release], November 15, 2022: <https://www.buildingtf.org/news>

Technical Q&As Washington State Energy Code

Answered by WSU Technical Staff

I am building a new detached, heated workshop on my residential lot. My workshop does not include a kitchen or sleeping facilities. How does the WSEC-R apply to my project?

Per Section R101.2 "Scope," [WSEC-R](#) applies to "all residential buildings and the building sites and associated systems and equipment," so the code **does** apply to detached garages and workshops like your project. However, a few sections pertain only to dwelling units, defined in the code as a "single unit providing complete independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking and sanitation." Because your workshop does not include all of these provisions, those sections that apply *only to dwelling units* would not apply to your project.

In reading the WSEC-R, pay attention to the phrase “dwelling unit.” Wherever a requirement is “per dwelling unit” or applies to “each dwelling,” it does not apply to your workshop.

Do I need to achieve energy credits and fuel normalization credits for my workshop?

No, you do not need to achieve the credits specified in Section R406 “Additional Energy Efficiency Requirements.” This is because Section R406.3 refers to “each dwelling unit in a residential building” as needing to achieve the minimum number of credits. Because your workshop does not include a dwelling unit, this section does not apply.

What are the insulation and fenestration requirements for my workshop?

Because your workshop has a heating system – even if you intend to heat it infrequently – it is considered a conditioned space and is required to meet the envelope insulation and fenestration requirements for building thermal envelopes in Sections R402.1.1 through R402.1.6. If you are following the prescriptive path, these baseline code requirements are summarized in Table R402.1.1.

Does the heating system for my workshop need to meet all requirements of Section R403?

The heating system for your workshop will need to meet *most* requirements of Section R403. But again, a couple of those requirements are “per dwelling unit.” For example, each separate heating and cooling system is required to have at least one thermostat per Section R403.1. However, thermostats are only required to be *programmable* for dwelling units, per R403.1.1.

Another requirement that applies only to dwelling units is Section R403.7.1, which requires a ductless heat pump in the largest zone of dwellings heated primarily by electric resistance.

Does my workshop require a mechanical ventilation system?

Requirements for a whole-house mechanical ventilation system are given in the [International Residential Code](#). Section M1505.4 says, “Each *dwelling unit* shall be equipped with a ventilation system.” So again, this requirement does not apply to your workshop.

My workshop building includes an unheated garage. Does the garage need to be insulated, too?

Only the building’s thermal envelope must meet the insulation and fenestration requirements in Section 402. The thermal envelope consists of the “below-grade walls, above-grade walls, floors, ceiling, roofs, and any other building element assemblies that enclose conditioned space or provide a boundary between conditioned space and exempt or unconditioned space.” The garage, being unheated, is therefore not part of the thermal envelope and its exterior building components do not need to be insulated. The heated workshop needs to be fully insulated, however, including the partition between the workshop and the garage. The perimeter of the slab along the partition must be insulated to minimum code requirements, too. As a general principle, treat an adjacent unheated space in the same manner as the outdoors when considering insulation requirements.

What if I am altering an existing workshop that is heated?

Alterations to an existing heated building must comply with the code for new construction, with several exceptions as summarized in Section R503. Our [Alterations \(Remodel\) Worksheet](#) guides you through these exceptions. Alterations are not required to achieve energy credits and fuel normalization credits, regardless of whether it is a dwelling unit or not.

What if I am converting an existing unheated workshop to a heated space?

Converting an unheated space to a heated space is considered an addition and must meet requirements of Section R502 with a few exceptions. The responses to all of the questions above (except for the one on alterations) apply when converting an unheated workshop to heated workshop.

Upcoming Training Opportunities

The Sustainable Home Building Accelerator: Online Series Begins January 4, 2023

From Fine Homebuilding and the Green Building Advisor, this intensive, interactive online series of courses is designed to rapidly advance your knowledge of sustainable home design and construction. Whether you are an architect, builder, or a homeowner, we will give you the information and confidence to design and build well-crafted, practical homes that maximize performance and comfort.

- Create a Smart Project Plan and Design January 4, 2023 RESNET 3 PD Credits
- Select the Right Building Assemblies January 18, 2023 RESNET 3 PD Credits
- Choose High-Performance Mechanicals February 1, 2023 RESNET 2 PD Credits

For more information and to register: [Click here](#).

Sustainable Homes Professional Online Training

Sustainable Homes Professional (SHP) is an in-depth, interactive, and field-tested online training program for industry professionals who are looking to take their residential projects and building craft to the next level of quality.

Previously an 84-hour in-person training, the SHP training program was redesigned into a condensed, self-paced online format.



Training topics covered in SHP are designed to maximize the health, comfort, durability, savings, and sustainability benefits for your home buyer/owner clients. Sign up now with this code – 100THANKS – to save \$100 (first come first serve, 20 spots available). For more information and to register: [Click here](#).

WSU Energy Program Training

The WSU Energy Program provides online and on-site in person trainings to help certified home energy raters to expand their careers. Watch for upcoming training announcements and keep your eye on our [training page](#) for news of events.

ENERGY STAR Residential New Construction webinars

Visit the Residential New Construction ENERGY STAR recorded webinars webpage for all recently recorded webinars:

https://www.energystar.gov/partner_resources/residential_new/educational_resources/energy_star_webinars/recorded_webinars

Newsbriefs

New Tool Calculates Greenhouse Gas Emissions from Buildings: RESNET's New Tool is called the CO2e Rating Index and is the First of its Kind

A building science expert with the FSEC Energy Research Center is part of a team that recently developed a first-of-its-kind tool that can calculate how much carbon dioxide buildings and homes produce. "Climate change is a real problem, and the leading cause of it is carbon dioxide emissions," says Philip Fairey, Deputy Director of FSEC, Florida's premier energy research center at the University of Central Florida. "Fairey is a board member of the Residential Energy Services Network, or RESNET, which created the tool. RESNET's new tool is called



the CO2e Rating Index and is the first of its kind—Stephanie Salmon, *UCF Today*, October 19, 2022: <https://www.ucf.edu/news/new-tool-calculates-greenhouse-gas-emissions-from-buildings/>

Tool Calculates CO2 Emissions from Buildings

A U.S. team has developed what is claimed to be a first-of-its-kind tool that can calculate how much carbon dioxide buildings and homes produce. The new CO2e Rating Index tool will allow researchers to calculate energy efficiency on a whole new level, the developers say. For example, it can calculate and compare the emissions from one house using renewable energy against one that is not energy-efficient. In that way, it can produce estimates showing how much renewable electrification can reduce carbon emissions on a day-by-day basis—*Cooling Post*, October 19, 2022:

<https://www.coolingpost.com/features/tool-calculates-co2-emissions-from-buildings/>

The Fine Homebuilding Interview: James Metoyer

James Metoyer, executive director of the Oregon-based nonprofit EnerCity Collaborative (ECC), works with youth and adult construction-training programs, community-based organizations, and other nonprofits to help professionals find careers in weatherization, residential energy auditing, deep-energy retrofitting, and net-zero building, and to ensure that BIPOC (black, indigenous, and people of color) communities have equitable access to healthy, sustainable, and energy-efficient housing—

Aaron Fagan, *Fine Homebuilding*, Nov. 2022: <https://www.finehomebuilding.com/2022/10/12/the-fine-homebuilding-interview-james-metoyer>

Washington Building Council Votes to Require Heat Pumps in New Homes and Apartments

New homes and apartments in Washington will be required to install heat pumps beginning in July, the Washington State Building Code Council ruled Friday. The council voted 9-5 last week on the ruling, a decision that could help the state further reduce carbon emissions by electrifying the heating systems of new buildings. The council, which is appointed by the governor, voted in April to revise the state's building code to require heat pumps in large and commercial buildings—Nicholas Turner,

Seattle Times, November 7, 2022: <https://www.seattletimes.com/seattle-news/environment/wa-building-council-votes-to-require-heat-pumps-in-new-homes-and-apartments/>

City Approves Mandatory Home Energy Score Program for Sellers

Beginning July 1, 2023, people selling their homes in Bend, Oregon will be required to obtain a home energy score to tell potential buyers how efficient — or not — their homes are—Anna Kaminski, *The Bulletin*, December 8, 2022: https://www.bendbulletin.com/localstate/city-approves-mandatory-home-energy-score-program-for-sellers/article_70237676-773c-11ed-93c6-ff493c48924d.html#:~:text=Beginning%20July%201%2C%202023%2C%20people%20selling%20their%20homes,council%E2%80%99s%20climate%20action%20goals.%20Digital%20subscription%20only%20%2418%2Fmth

Conferences and Events

NAHB International Builders' Show January 31 – February 2, 2023 Las Vegas, NV

NAHB International Builders' Show® (IBS) is the largest home building show in North America. This three-day event brings professionals, products and home building trends together under one roof. For more information and to register: <https://www.buildersshow.com/>

2023 National Home Performance Conference & Trade Show April 17-20, Seattle, WA

We will be in Seattle, WA in April of 2023 for our national conference. Each year, this event brings together contractors, weatherization professionals, trainers, program administrators, energy auditors, and others working in residential energy efficiency for the latest developments and education in the industry. Sign up today and join us for four days of opportunities you will not want to miss. For more information and to register: <https://events.building-performance.org/national/>

Your WSU Energy Program Provider Team

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We welcome rater's questions, comments or ideas for articles. Please send to: NWrater@energy.wsu.edu

